CONTRATTI ENEA CON LA COMMISSIONE EUROPEA

Dati Riassuntivi 2019

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PREFAZIONE

Sono lieta di presentare il rapporto 'Contratti ENEA con la Commissione Europea – dati riassuntivi 2019' che definisce il quadro delle attività finanziate da programmi dell'Unione Europea a cui l'ENEA ha partecipato nel 2019.

Ho assunto la carica di Responsabile il 1°ottobre 2019 e la maggior parte del lavoro svolto per redigere il presente rapporto è stato svolto sotto la guida del mio predecessore, Dario Chello, che desidero ringraziare.

Brevemente desidero richiamare alcuni passaggi del 2019. La crisi climatica è rimasta al primo posto dell'agenda politica nel 2019 e si è rafforzata la richiesta di un'azione globale più ambiziosa.

L'UE si è dimostrata un leader sulla scena mondiale in materia di clima grazie all'adozione di una normativa che consente non solo di realizzare ma di andare al di là degli impegni assunti con l'accordo di Parigi e grazie all'introduzione di una strategia a lungo termine per rendere l'Europa il primo continente a impatto climatico zero entro il 2050: a dicembre 2019 vi è stata la presentazione del Green Deal europeo, la politica faro della Commissione, come evidenziato dalla Pres. Von der Leyen.

Il completamento dell'Unione dell'energia ha consolidato la posizione dell'Europa quale leader mondiale in materia di efficienza energetica e tecnologie rinnovabili e costituirà la base della transizione verso l'energia pulita in tutti i settori dell'economia. In base alle nuove norme in materia di governance, gli Stati membri hanno sottoposto alla Commissione, per valutazione, il primo progetto dei loro piani energetici e climatici.

L'UE sta accelerando la transizione verso un'economia circolare grazie al completamento di tutte le 54 azioni previste dal piano d'azione dell'Unione europea per l'economia circolare. Le nuove norme dell'UE che vietano determinati prodotti di plastica monouso sono entrate in vigore a luglio e dovrebbero ora essere recepite negli ordinamenti nazionali degli Stati membri.

L'UE ha proseguito gli sforzi per rafforzare i finanziamenti in modo da introdurre sul mercato tecnologie innovative a basse emissioni di carbonio, e sono stati compiuti buoni progressi nella decarbonizzazione del settore dei trasporti grazie all'adozione di misure importanti per ridurre le emissioni di CO_2 dei veicoli stradali e della navigazione.

Tra le attività in ambito UE che hanno caratterizzato per l'ENEA il 2019, si segnala l'assegnazione della "KIC Urban Mobility ((2019-2026) da parte dell'Istituto Europeo di Innovazione e Tecnologia (EIT) al Consorzio MOBiLus, cui ENEA fa parte, ha dato vita al "Polo europeo di sviluppo di tecnologie e soluzioni innovative per i problemi della mobilità sostenibile nelle aree urbane". Investimenti di 1,6 miliardi di euro, con un massimo del 25% finanziati dall'EIT. I primi risultati sono attesi già dal 2020.

E' stata inoltre aggiudicata la gara "EuropeAid/138560/DH/SER/DZ" riguardante l'assistenza tecnica alla Repubblica Democratica di Algeria in materia di fonti rinnovabili di energia e efficienza energetica. Le attività si svilupperanno sull'arco di un triennio per un controvalore di 8.243.455 milioni di euro.

Si sta negoziandola seconda fase del progetto europeo meetMED (Mitigation Enabling Energy Transition in the Mediterranean Region) che ha l'obiettivo di facilitare la transizione energetica nella regione Euro-Mediterranea per il tramite di un sensibile incremento delle fonti rinnovabili di energia e della efficienza energetica nel mix energetico della regione all'orizzonte 2040. MEDENER, l'associazione delle agenzie nazionali dei Paesi del Mediterraneo per RES & EE, per la quale ENEA assicura la Presidenza ed il Segretariato Generale, e RCREEE, il centro regionale per RES & EE basato al Cairo, sono i due partner fondamentali del progetto.

Bruxelles, 31 luglio 2020

Avv. Federica Porcellana
Responsabile Servizio Unione Europea e Organismi Internazionali

I N D I C E

NOTA INTRODUTTIVA

Nel 2019 è proseguito il percorso di definizione del prossimo programma quadro ricerca e innovazione, Horizon Europe, con l'approvazione in aprile del Parlamento Europeo di un testo «consolidato» sui contenuti di Horizon Europe per i sette anni dal 2021 al 2027. E' stata quindi avviata la pianificazione strategica (*strategic planning)* per la definizione dei programmi di lavoro e la pubblicazione dei primi bandi di finanziamento all'inizio del 2021.

I Programmi Quadro, per la dotazione finanziaria rilevante e l'articolazione su gran parte delle materie di competenza dell'Agenzia, rappresentano tradizionalmente per l'ENEA la maggiore fonte di finanziamento dall'Unione Europea, anche se l'Agenzia è presente con ruoli, funzioni e competenze diverse in numerose iniziative dell'Unione Europea quali i programmi di iniziativa comunitaria e i programmi correlati alla ricerca.

Come ogni anno, per presentare il quadro delle attività in corso finanziate da strumenti UE è redatto e pubblicato il rapporto 'Contratti ENEA con la Commissione Europea' che contiene dati di sintesi aggregati e informazioni di dettaglio sui progetti cofinanziati dall'UE e formalizzati attraverso specifici contratti. Tali dati sono elaborati sulla base dei contenuti della banca dati progetti UE (progettiue.enea.it) che, costantemente aggiornata, raccoglie e rende omogenee informazioni relative a tutti i contratti stipulati da ENEA con la CE dal 2000 in poi nell'ambito di programmi di ricerca o altre iniziative. Le informazioni disponibili sui singoli contratti sono acquisite principalmente attraverso l'analisi della documentazione contrattuale e dei documenti di approvazione interna.

Ad oggi sono presenti nella banca dati informazioni complete relative a più di mille progetti e relativi partner di diversi Paesi; ciò rende possibile elaborare dati di sintesi sulla partecipazione ENEA ai programmi di ricerca e ad altre iniziative cofinanziate da fondi dell'Unione Europea ed elaborare report complessi come, tra l'altro, l'analisi del partenariato nazionale ed internazionale dell'ENEA per tipologia, per area geografica e per progetto.

La banca dati costituisce quindi uno strumento per l'analisi e la condivisione delle informazioni sui progetti in corso e può fornire ai vertici dell'Agenzia elementi utili anche alla formulazione di strategie e alla definizione di accordi con partner nazionali e internazionali. E' inoltre possibile produrre elaborazioni ad hoc relative all'esperienza specifica dell'Agenzia in determinate aree geografiche e/o ambiti di ricerca, da produrre per esempio come 'referenze' dell'ENEA, indispensabili nel caso della partecipazione a *tender* CE ma anche a *call of proposals* di specifici programmi nazionali, europei e internazionali.

Nell'elaborazione del presente rapporto sono stati considerati tutti i contratti stipulati da ENEA, in vigore nel corso del 2019, finanziati dai diversi strumenti messi a disposizione dall'Unione Europea; i dati sono organizzati in tre diverse sezioni: nuovi contratti stipulati nel 2019, dati di sintesi sulla performance ENEA in H2020 dal 2014 a dicembre 2019, tutti i contratti in corso nel 2019.

Una sezione è dedicata inoltre alla partecipazione dell'ENEA al Consorzio EUROfusion che, per entità del finanziamento e modalità di aggiudicazione e funzionamento, non è assimilabile agli altri progetti ed è oggetto di approfondimento specifico nella sezione 4; per questi motivi il cofinanziamento riconosciuto a ENEA non è incluso nei dati di sintesi elaborati.

Completano infine la pubblicazione due specifici allegati, relativi rispettivamente ai partecipanti per Paese e alle schede sintetiche di ciascuno dei centosettantatré progetti in corso.

2. CONTRATTI STIPULATI NEL 2019

Nel 2019 sono stati stipulati con la Commissione Europea (CE) cinquantotto nuovi contratti, relativi ad altrettanti progetti cofinanziati nell'ambito di programmi diversi, per un contributo totale di circa 15,5 milioni di euro da ripartire nell'arco pluriennale di validità di ciascun contratto (tab.1) che rappresenta il valore più alto registrato fino ad oggi.
Il contributo acquisito dall'ENEA nel 2019 deriva per il 57% da programmi di Horizon 2020 (H2020), il restante da Euratom fissione (11%) e da altri programmi (tab. 1 e fig. 1); tra questi ultimi, il contributo maggiore deriva dal programma European Neighbourhood (ENI) che ha finanziato il contratto di assistenza tecnica alla Repubblica Democratica dell'Algeria in materia di fonti rinnovabili ed efficienza energetica, seguito dal programma Connecting Europe Facility (CEF) e dal programma LIFE che finanziano due progetti ciascuno. Sono stati attivati tre ulteriori progetti nell'ambito del programma Interreg del Fondo Europeo di Sviluppo Regionale; tale programma favorisce la collaborazione e lo scambio di idee e buone pratiche, in particolare tra le autorità pubbliche di tutta Europa, al fine di trovare soluzioni per il miglioramento delle politiche e delle strategie a beneficio della cittadinanza europea.
La fig. 2 evidenzia il contributo derivante all'ENEA da ciascuno dei programmi, distinguendo tra attività finanziate da H2020 e attività finanziate da altri programmi.
La figura 3 mostra il numero di progetti stipulati ed il contributo acquisito dall'ENEA dal 2007 al 2019; da considerare che il numero di progetti finanziati e l'entità del contributo acquisito da ENEA sono determinati anche dal susseguirsi delle scadenze dei bandi e dal budget stanziato dai singoli programmi.

Contributo a ENEA per programma*

Contratti stipulati nel 2019 - importi riferiti all'intero periodo di validità contrattuale

	Programma	Numero contratti	Contributo a ENEA (in EUR)
Horizon 2020	Climate Action, Environment, Resource Efficiency, Raw Materials	2	3.158.531
	European Research Infrastructures	3	1.857.934
	Energy	8	872.362
	JTI - Hydrogen	3	646.813
	Secure Societies	1	564.606
	Future and Emerging Technologies (FET)	1	511.250
	Nanotechn., Adv Materials, Adv Manufacturing and Processing, and Biotech	1	509.748
	Food Security, Sustainable Agriculture…. and the Bioeconomy	1	331.138
	EIT European Inst. of Technology - KIC Raw Materials	7	168.758
	EIT European Inst. of Technology - Climate KIC	4	99.207
	Innovation in Small and Medium Enterprises	1	83.318
	Spreading Excellence and Widening Participation	1	54.250
	Totale H2020	**33**	**8.857.915**
Euratom	Euratom fission	7	1.700.042
	Euratom F4E-Fusion for energy	1	110.000
	Totale Euratom	**8**	**1.810.042**
Altri Programmi	ENI - European Neighbourhood Instruments	1	2.060.864
	CEF (Connecting Europe Facility) - TELECOM	2	734.544
	LIFE	2	379.449
	Interreg MED	2	374.149
	UIA - Urban Innovative Action	1	367.000
	Competitiveness for SMEs (COSME)	1	277.677
	Interreg Italy-Croatia	1	262.233
	Settimo Programma Quadro - ERA NET	1	76.787
	EMPIR - European Metrology Programme for Innovation and Research	1	72.348
	ISFP - Internal Security Fund Police	1	68.975
	Erasmus +	1	55.666
	Copernicus	1	40.161
	EMFF - European Maritime and Fisheries Fund	1	13.500
	URBACT III	1	7.070
	Totale altri programmi	**17**	**4.790.423**
Totale contratti stipulati nel 2019		**58**	**15.458.380**

Tab. 1

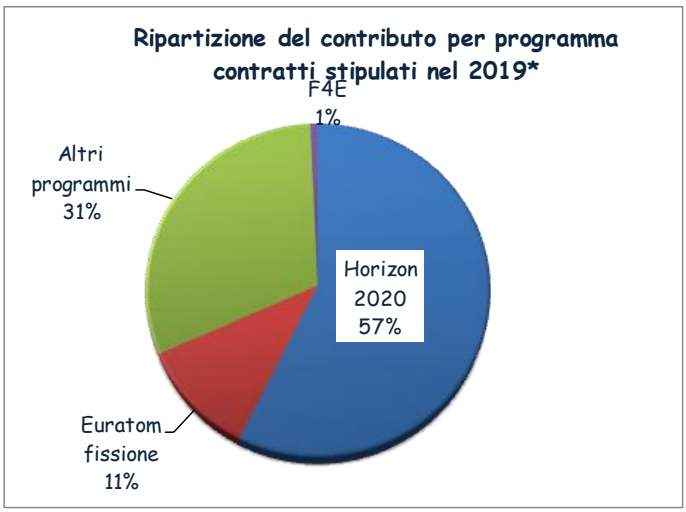
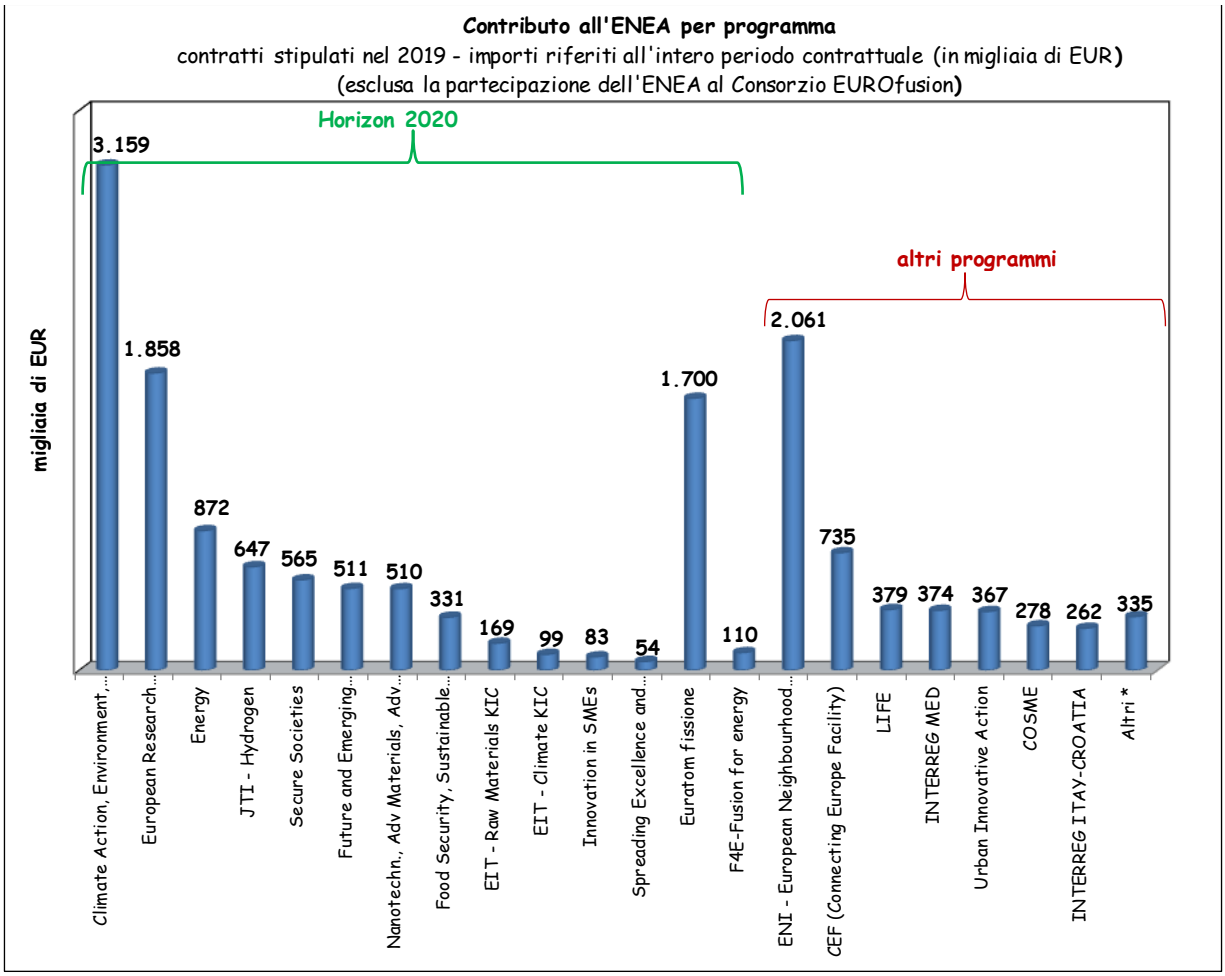


Fig. 1

(*) escluso il finanziamento a ENEA per la partecipazione al Consorzio EUROfusion



* Altri: 7PQ ERA-NET, EMPIR, ISFP, ERASMUS+, Copernicus, EMFF, URBACT III

Fig. 2

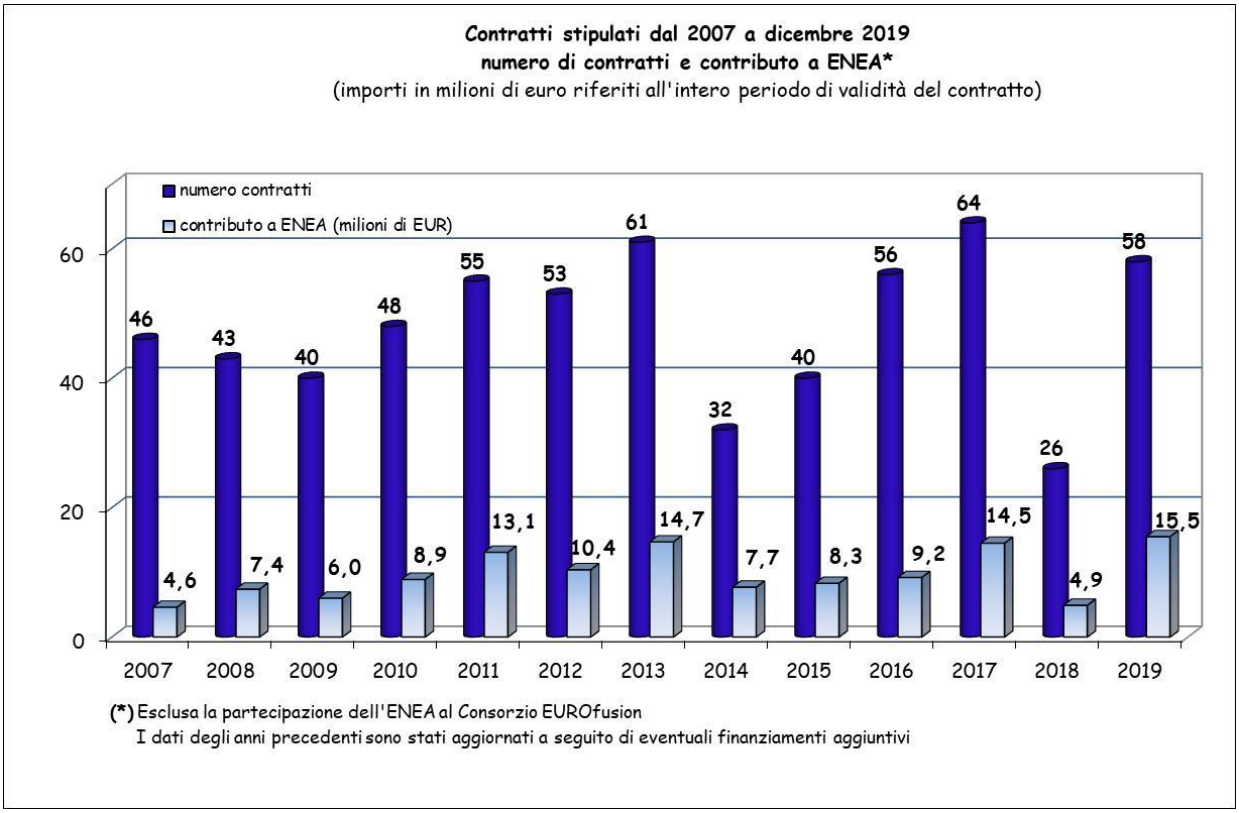


Fig. 3

3. LA PERFORMANCE ENEA IN HORIZON 2020

Horizon 2020 (H2020) è il Programma Quadro dell'Unione Europea per la Ricerca e Innovazione per il periodo 2014-2020, con una dotazione finanziaria complessiva che supera gli 80 miliardi di euro.
L'implementazione del programma è basata su programmi di lavoro biennali che includono inviti a presentare proposte su specifici argomenti, descrivendo gli obiettivi che i progetti devono raggiungere e l'impatto atteso. I progetti sono sottoposti ad un processo di valutazione che prevede tre criteri (eccellenza, impatto e implementazione); al termine della valutazione è stilata una graduatoria e i progetti con il maggior punteggio sono dichiarati finanziabili mentre ulteriori progetti eccellenti, non finanziati in genere per indisponibilità di fondi, sono classificati in *'reserve list'* in previsione di ulteriori fondi per il loro finanziamento.
Dal 2014 a dicembre 2019 l'ENEA ha presentato (come coordinatore o come partner) seicentosessantotto progetti in totale, di cui centotrentacinque coordinati da ENEA, una media quindi di centoventuno progetti per anno; nei primi sei mesi del 2020 sono stati presentati più di cento progetti[1], attratti anche dall'aumento di bilancio messo a disposizione da H2020 che, in quest'ultimo anno, è di circa 13,5 miliardi di euro (+8,8% rispetto al 2019) a cui si aggiunge un ulteriore miliardo di euro stanziato dalla *Green Deal call* di settembre. Il tasso medio di successo dell'ENEA nel periodo 2014-2019 è pari al 21%, maggiore quindi di quello medio dei partecipanti italiani (12%) e di quello UE (12,6)[2].I contratti stipulati dal 2014 a dicembre 2019 sono centosessantacinque per un grant totale a ENEA di 37,5 milioni di euro (progettiue.enea.it).
Ulteriori ventinove contratti sono in corso di stipula, derivanti da proposte H2020 approvate alla fine del 2019 o nei primi mesi del 2020 per un cofinanziamento a ENEA previsto di circa 7 milioni di euro.
Al primo posto tra i temi di H2020 in cui l'Agenzia è presente e da cui deriva il maggior contributo si colloca il programma *Climate Action, Environment, Resource Efficiency and Raw Materials* (18%), seguito da *Secure, Clean and Efficient Energy* (16%) e *European Infrastructures* (10%); *Euratom fission and radioprotection* raggiungono insieme il 16% . Il contributo ricevuto per progetti finanziati dallo *European Institute of Technology* (EIT) attraverso le *Knowledge and Innovation Communities* (KIC) *Climate e Raw Materials* (di cui ENEA è *core partner*) rappresenta il 6% (fig. 5).
Il contributo medio derivante dai contratti a partecipazione è pari a 250.000 euro circa; quando l'ENEA è coordinatore il contributo medio aumenta in modo significativo, superando i 500.000 euro.
Ulteriori finanziamenti pari a circa 6 milioni di euro sono stati assegnati a ENEA dal 2014 al 2019 per la partecipazione alle attività finanziate dalla *Joint Technology Initiative Fusion for Energy* (JTI F4E), soggetti a procedure diverse di selezione e non presenti sul *Funding and Tenders Portal*.

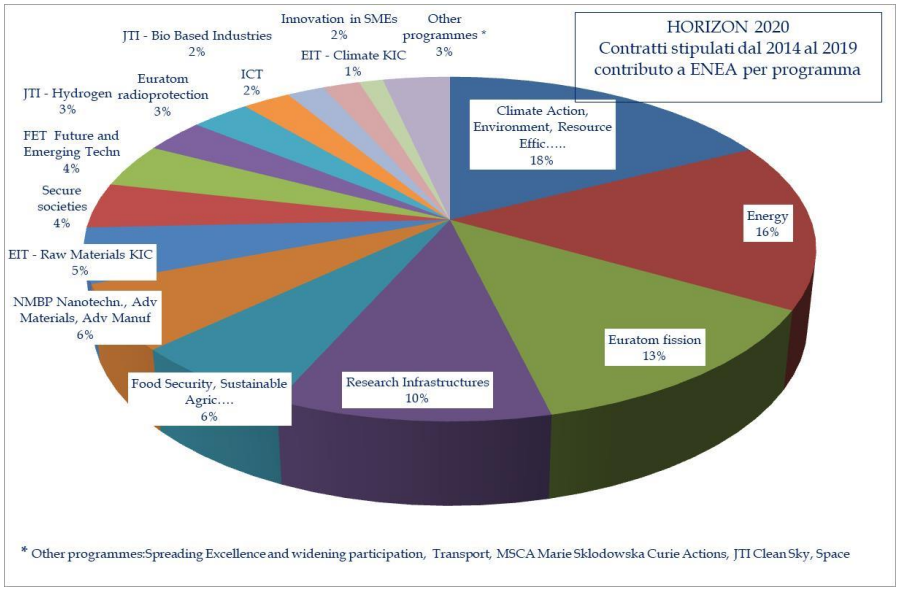


Fig. 4

[1] EC Funding and tender portal, aprile 2020
[2] H2020 Country Profile IT, aprile 2020

4. LA PARTECIPAZIONE DELL'ENEA AL CONSORZIO EUROfusion

EUROfusion - *European Consortium for the Development of Fusion Energy* è il Consorzio europeo a cui l'Euratom ha affidato, con Grant Agreement n. 633053, il programma fusione di Horizon 2020 per il periodo dal 2014 al 2018, poi prolungato fino al 31 dicembre 2022.
EUROfusion deve attuare la *Road Map* europea sulla fusione; in particolare, l'attività di ricerca del Consorzio è mirata alla prosecuzione delle attività del progetto ITER (*International Thermonuclear Experimental Reactor*) a Cadarache (Francia) e al sostegno delle attività del *Joint European Torus* (JET) a Culham (Regno Unito). EUROfusion supporterà inoltre la realizzazione del reattore dimostrativo DEMO (Demonstration Fusion Power Reactor), intorno al 2050.
Al Consorzio partecipano 26 Stati Membri più la Svizzera e l'Ucraina con un totale di 30 partner, coordinati dal Max-Plank Institute fur Plasmaphysik[3].
Circa ulteriori 150 'parti terze' partecipano alle attività di ricerca del Consorzio EUROfusion. Per ciascun Paese è stato individuato un '*Programme Manager'* che coordina le attività delle organizzazioni del proprio Paese; l'ENEA è stato designato dal Ministero per lo Sviluppo Economico '*Programme Manager'* per le attività italiane e coordina sedici partner:

CNR	Università di Genova
Politecnico di Milano	Uniroma 3
Università di Milano	Università La Sapienza
Consorzio RFX	Università di Palermo
Consorzio CREATE	Università di Pisa
Università Tor Vergata	LT-Calcoli
Politecnico di Torino	Ansaldo Nucleare
Università di Catania	CSM

In particolare l'ENEA, nell'ambito del progetto internazionale ITER, coordina le attività presso il Centro di Frascati. La ricerca in questo settore impegna circa 200 dipendenti ed è focalizzata, tra l'altro, sulle tecnologie della fusione a confinamento magnetico e inerziale.
Per il 2019, il bilancio del *grant agreement* prevede per l'Italia attività con un costo di 29 milioni di euro circa, a fronte del quale la CE riconosce un contributo complessivo massimo di 16 milioni di euro circa; di questo importo, compete all'ENEA per le attività svolte un importo di 4,4 milioni di euro circa. (determinazione n 32/FSN/2019).

[3] https://www.euro-fusion.org

5. CONTRATTI IN CORSO NEL 2019

a. Quadro generale

Le attività ENEA in corso nel 2019 cofinanziate da programmi UE sono riconducibili a centosettantatre progetti (tab.2), di cui centoquindici iniziati in anni precedenti e ancora in corso. Il cofinanziamento comunitario totale a ENEA è di circa 45,5 milioni di euro, da ripartire nell'arco pluriennale di validità di ciascun contratto e rappresenta quindi il valore complessivo del contributo riconosciuto a ENEA per l'intero periodo di validità del progetto.
I progetti finanziati dal programma H2020 apportano un contributo di 27,4 milioni di euro circa, pari al 60% del totale; ulteriori 6 milioni di euro circa derivano da progetti finanziati da bandi del programma Euratom fissione e radioprotezione, a cui si aggiungono 1,8 milioni di euro derivanti dalla partecipazione a progetti della JTU Fusion4Energy.
Non è incluso il contributo riconosciuto a ENEA nell'ambito della partecipazione al consorzio EUROfusion (ulteriori 4,4 milioni di euro), già descritto alla sezione 4 di questa pubblicazione.
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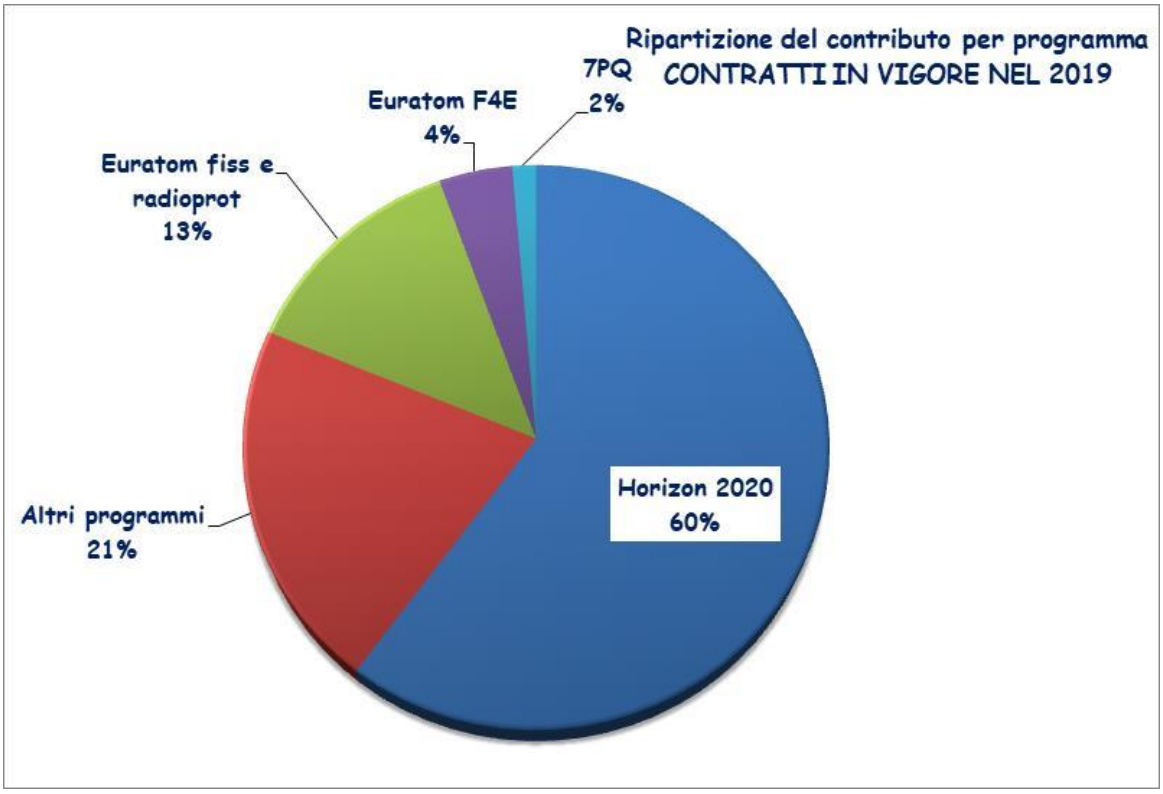


Fig. 5

Contributo a ENEA per programma*

Contratti in corso nel 2019 **-** importi riferiti all'intero periodo di validità contrattuale

	Programma	Numero contratti	Contributo a ENEA (in EUR)
Horizon 2020	Climate Action, Environment, Resource Efficiency Raw Materials	13	6.588.127
	Energy	26	5.401.059
	European Research Infrastructures	9	3.246.174
	Nanotechn., Adv Materials, Adv Manufacturing and Processing, and Biotech	5	2.310.023
	Food Security, Sustainable Agriculture… and the Bioeconomy	3	1.912.513
	Secure Societies	4	1.591.294
	Future and Emerging Technologies (FET)	3	1.551.148
	Joint Technology Initiatives - Hydrogen	6	1.184.938
	Information and Communication Technologies	2	933.000
	Joint Technology Initiatives - Bio Based Industries	1	733.200
	EIT European Inst. of Technology - KIC Raw Materials	10	710.613
	EIT European Inst. of Technology - Climate KIC	7	430.680
	Spreading Excellence and Widening Participation	3	360.781
	MSCA Marie Skłodowska Curie Actions	4	329.077
	Innovation in Small and Medium Enterprises	1	83.318
	COST European Cooperation in Science and Technology**	3	0
	Totale H2020	**100**	**27.365.945**
Euratom	Euratom fission	20	4.860.238
	Euratom F4E fusion for energy	5	1.895.039
	Euratom radioprotection	2	1.157.624
	Totale Euratom	**27**	**7.912.901**
Altri Programmi	ENI - European Neighbourhood Instruments	2	2.160.634
	LIFE	7	1.590.518
	Interreg MED	6	1.213.773
	UIA - Urban Innovative Actions	2	924.510
	CEF (Connecting Europe Facility) - TELECOM	2	734.544
	Interreg Central Europe	3	662.812
	EMPIR - European Metrology Programme for Innovation and Research	6	475.618
	Competitiveness for SMEs (COSME)	1	277.677
	Interreg Alpine Space	1	272.306
	Interreg Italy-Croatia	1	262.233
	Interreg Maritime IT-FR	1	179.627
	Interreg-IPA-CBC Italy-Albania-Montenegro	1	161.500
	Interreg Europe	1	141.664
	ISF - Instrument for Stability	1	132.577
	Copernicus	2	106.627
	Marine strategic framework directive	1	81.202
	ISFP - Internal Security Fund Police	1	68.975
	Erasmus+	1	55.666
	Interreg ALCOTRA	1	40.000
	EMFF - European Maritime and Fisheries Fund	1	13.500
	URBACT III	1	7.070
	Totale altri programmi	**43**	**9.563.033**
	Settimo PQ (ERA-NET e JTI-Hydrogen)	3	612.199
	Totale contratti in corso nel 2019	**173**	**45.454.078**

Tab. 2

b. Aree tematiche

Tutti i progetti contenuti nella banca dati sono stati classificati anche in base all'area tematica a cui afferiscono, identificata indipendentemente dallo strumento di finanziamento.
La figura 6 mostra quindi l'aggregazione dei progetti in aree tematiche, evidenziando le aree da cui deriva il maggiore contributo ad ENEA.
Dall'analisi risulta che il maggior contributo CE a ENEA per i progetti in corso (42%) deriva dai progetti che ricadono nell'area energia (42%), seguita dall'area ambiente con il 20% e dalle aree scienze della vita e materiali con il 6% circa ciascuna, seguite da ICT. Da notare che, rispetto agli anni precedenti, si nota una leggera diminuzione dell'area tematica energia (-2%) a favore dell'area tematica ambiente (+6,5%) e un leggero incremento dell'area ICT (+2%).
Per le due aree principali, energia e ambiente, è stata considerata un'ulteriore suddivisione per sotto aree, consentendo di verificare che, per quanto riguarda l'area tematica energia, al primo posto per contributo ricevuto sono le sotto aree energie rinnovabili e efficienza energetica, seguite dalla sicurezza della fissione (fig. 7).
Nell'area ambiente, il maggior contributo all'ENEA deriva da progetti relativi al cambiamento climatico, all'ambiente marino e alla qualità dell'aria (fig. 8).

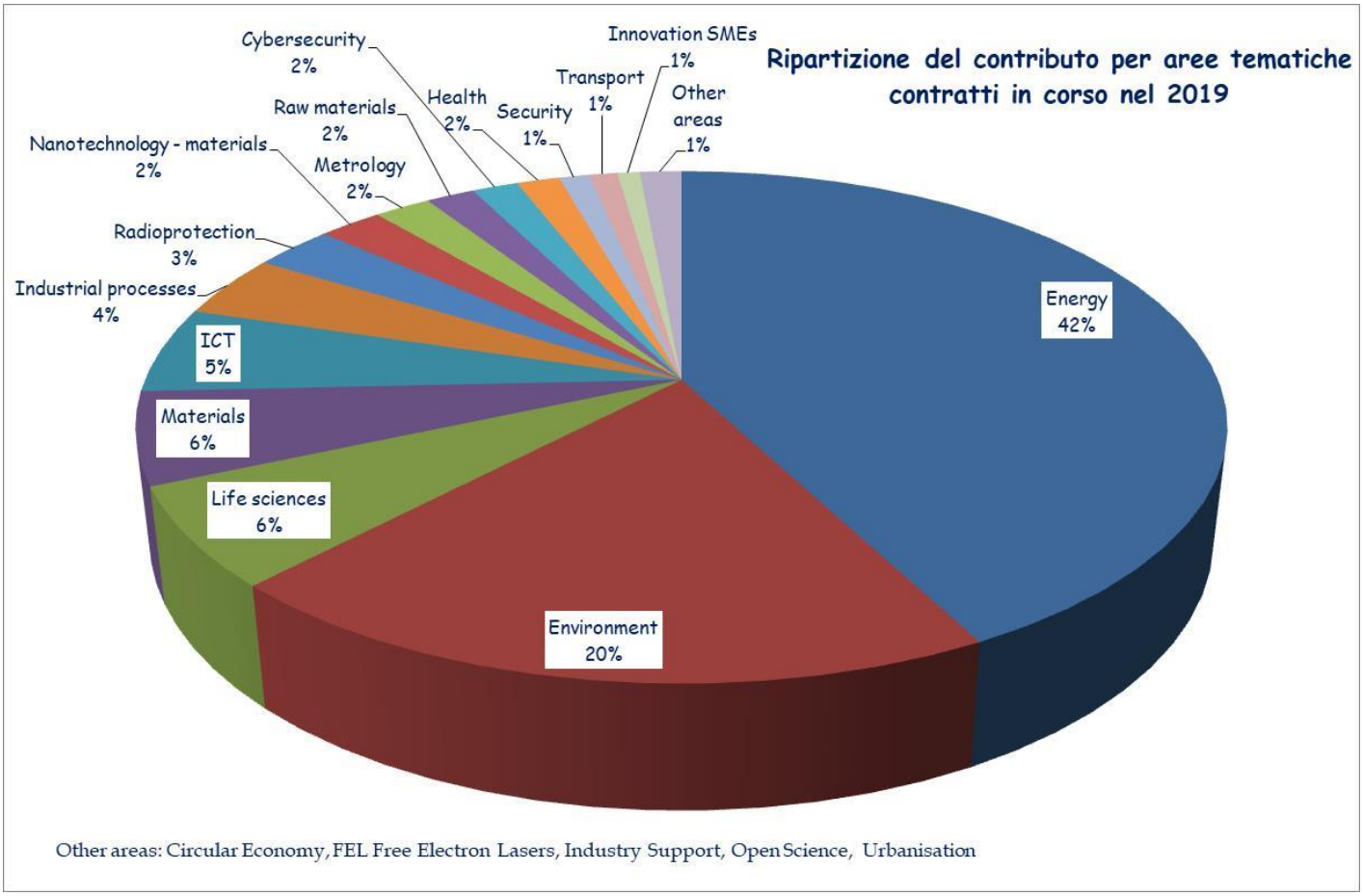


Fig. 6

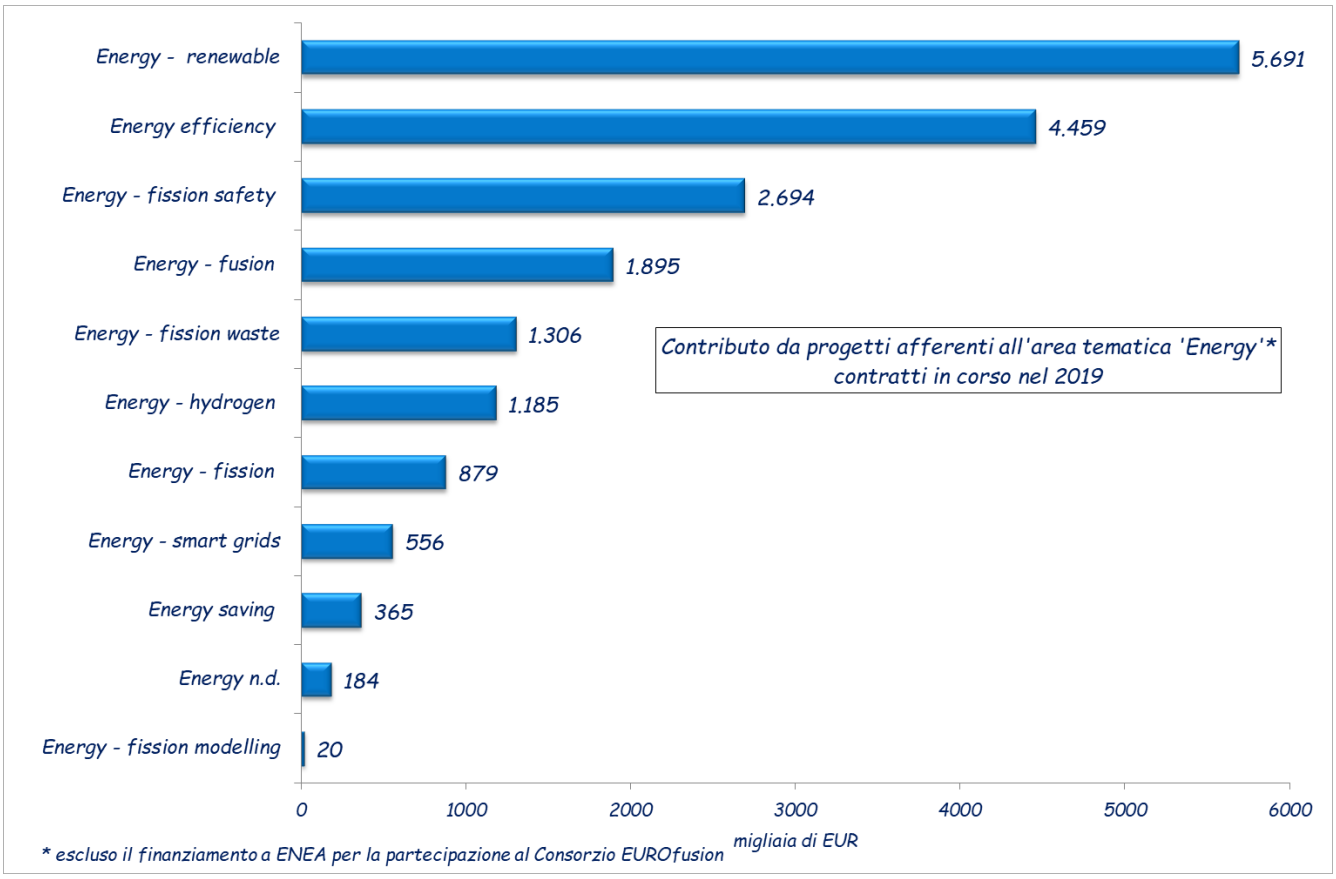

Energy - renewable
5.691
Energy efficiency
4.459
Energy - fission safety
2.694
Energy - fusion
1.895
Energy - fission waste
1.306
Energy - hydrogen
1.185
Energy - fission
879
Energy - smart grids
556
Energy saving
365
Energy n.d.
184
Energy - fission modelling
20
Contributo da progetti afferenti all'area tematica 'Energy'* contratti in corso nel 2019
0
1000
2000
3000
4000
5000
6000
migliaia di EUR
* escluso il finanziamento a ENEA per la partecipazione al Consorzio EUROfusion

Fig. 7

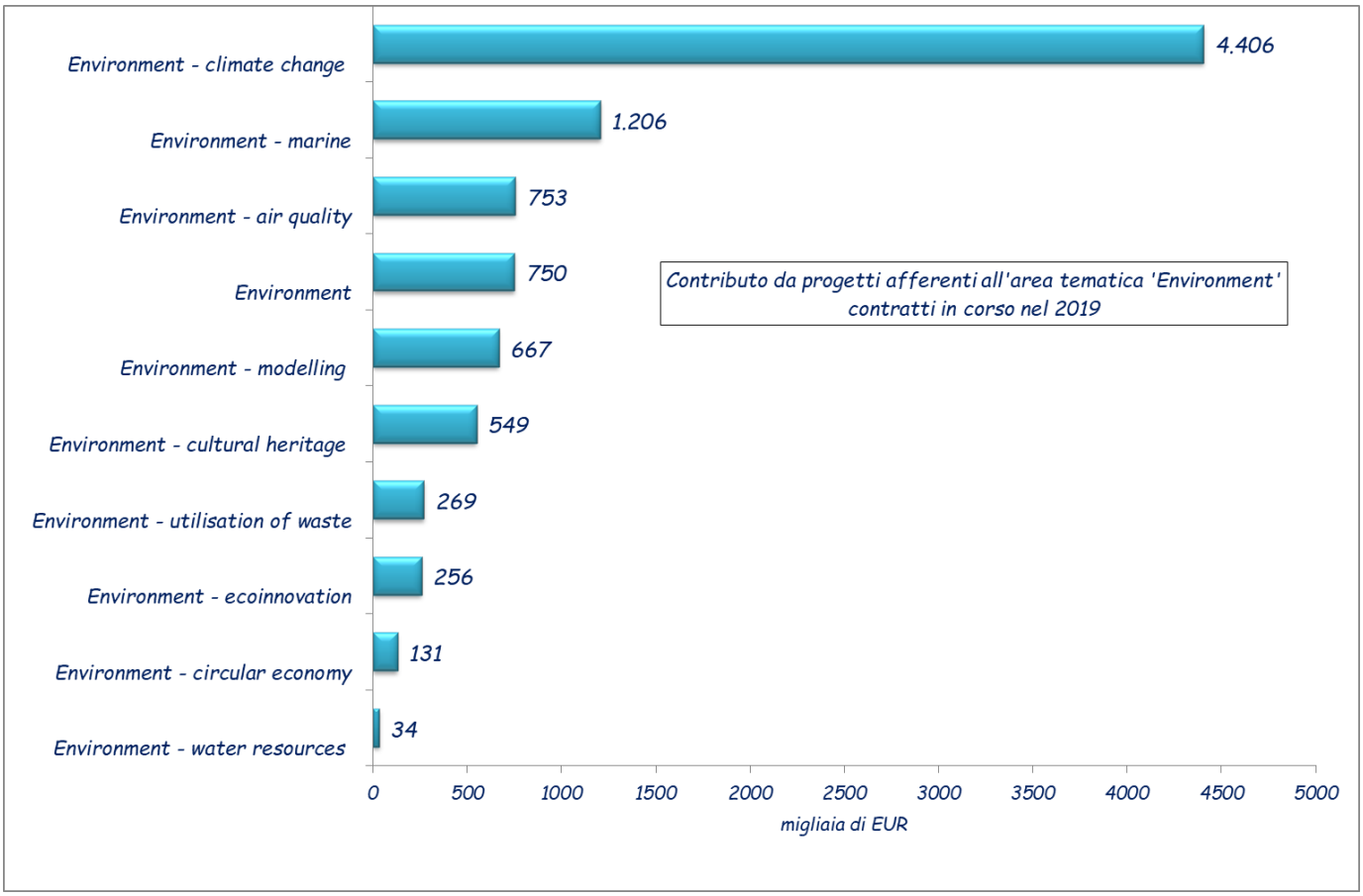

Environment - climate change
4.406
Environment - marine
1.206
Environment - air quality
753
Environment
750
Environment - modelling
667
Environment - cultural heritage
549
Environment - utilisation of waste
269
Environment - ecoinnovation
256
Environment - circular economy
131
Environment - water resources
34
Contributo da progetti afferenti all'area tematica 'Environment' contratti in corso nel 2019
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
migliaia di EUR

Fig. 8

c. Partenariato

I progetti finanziati da programmi dell'Unione Europea sono tipicamente multi partner e transnazionali; per quanto riguarda in particolare Horizon 2020 i requisiti minimi di partecipazione prevedono almeno tre partner di tre diversi Stati membri o Stati associati, con alcune eccezioni per azioni specifiche. Nel 2019 l'ENEA ha partecipato a centosettantatré progetti che hanno coinvolto complessivamente circa milletrecento partner di sessantatré diversi Paesi diversi e organizzazioni internazionali per più di duemila partecipazioni.
La tabella 3 riporta il numero di contratti, di partner e di partecipazioni per Paese; i Paesi con il maggior numero di partecipazioni, oltre l'Italia, sono la Francia e la Germania, seguiti da Spagna e Regno Unito.
Tra i Paesi candidati all'adesione all'Unione Europea la Turchia è quello con cui l'ENEA collabora maggiormente (tredici progetti).
Nell'area mediterranea, undici diversi partner israeliani partecipano a nove progetti e in quattro progetti troviamo partner del Marocco; due progetti con partner di Algeria, Giordania e Tunisia; un progetto in collaborazione con partner dell'Egitto e del Libano.
In particolare, in quest'area dal 2018 è attivo il progetto meetMED, proposto e coordinato dall'Associazione MEDENER di cui l'ENEA ha la Presidenza; il progetto ha l'obiettivo di facilitare la transizione energetica nei Paesi euro-mediterranei attraverso un sensibile incremento delle fonti rinnovabili e dell'efficienza energetica nel mix energetico dell'area entro il 2040.
Tra i Paesi europei extra UE le collaborazioni più numerose sono con due dei Paesi associati al programma Horizon 2020, Svizzera e Norvegia (rispettivamente 34 e 27 progetti), Ucraina (cinque progetti) Islanda (quattro progetti) e Bosnia-Erzegovina, Georgia e Moldavia (due progetti ciascuno); un progetto con partner russi e uno con partner del Liechtenstein.
Non mancano le collaborazioni con il resto del mondo: Cina e Giappone (tre progetti), Australia, Canada, Corea del Sud, Stati Uniti d'America, Sudafrica e Taiwan (due progetti); un progetto ciascuno con Brasile, Colombia, Kenya, Perù.
Nell'ultimo decennio il numero di Paesi con cui l'ENEA collabora nell'ambito dei programmi dell'Unione Europea si è mantenuto stabile, con una particolare attenzione negli ultimi anni ai rapporti con i Paesi candidati e associati, i Paesi europei extra UE e i Paesi dell'area mediterranea (figg. 9-12).
Le rappresentazioni delle figure 13 e 14 riportano invece la tipologia di attività prevalente dei partner internazionali e italiani dell'ENEA.
La rete di relazioni che l'ENEA ha stabilito a livello internazionale è significativa: le organizzazioni di ricerca internazionali rappresentano il 31,5% del partenariato internazionale, seguiti dalle università e istituti di alta formazione (21%), dai partner pubblici (12%) e dalle industrie (10%).
Tra i partner italiani dell'ENEA invece i centri di ricerca rappresentano il 19%, seguiti dalle università e istituti di alta formazione(16%), dagli enti locali (15%) e dalle industrie (entrambi 14 %). Le piccole e medie industrie (PMI) costituiscono soltanto il 2% dei partner italiani anche se si sottolinea che, per mancanza di informazioni, non sempre è stato possibile identificare quali tra i partner possono essere definiti PMI, secondo i requisiti stabiliti dalla UE[4].

[4] La categoria delle microimprese, delle piccole imprese e delle medie imprese (PMI) è costituita da imprese che occupano meno di 250 persone, il cui fatturato annuo non supera i 50 milioni di EUR e/o il cui totale di bilancio annuo non supera i 43 milioni di EUR (estratto dell'articolo 2 dell'allegato alla raccomandazione 2003/361/CE).

Tab. 3

Paesi partner dell'ENEA: numero di contratti, partner e partecipazioni (contratti in corso nel 2018)

Paesi		*Numero contratti*	*Numero partner*	*Numero partecipazioni*
Membri dell'Unione Europea	Austria	39	35	50
	Belgio	68	65	106
	Bulgaria	19	14	21
	Cipro	20	16	23
	Croazia	18	18	24
	Danimarca	29	25	39
	Estonia	13	10	16
	Finlandia	42	29	59
	Francia	98	100	210
	Germania	98	110	203
	Grecia	44	37	61
	Irlanda	21	17	23
	Italia (ENEA escluso)	173	222	323
	Lettonia	12	11	13
	Lituania	16	12	18
	Lussemburgo	7	8	9
	Malta	8	7	8
	Paesi Bassi	53	48	86
	Polonia	39	33	46
	Portogallo	40	33	53
	Regno Unito[1]	70	86	127
	Repubblica Ceca	34	25	46
	Romania	30	26	36
	Slovacchia	11	14	14
	Slovenia	25	22	34
	Spagna	89	116	176
	Svezia	41	29	52
	Ungheria	19	17	23

[1] Paese terzo dal 1° feb 2020

Paesi		Numero contratti	Numero partner	Numero partecipazioni
Candidati adesione UE	Albania	2	3	3
	Macedonia	3	2	3
	Montenegro	1	1	1
	Serbia	5	4	6
	Turchia	13	8	13
Area mediterranea non UE	Algeria	2	2	2
	Egitto	1	1	1
	Giordania	2	2	2
	Israele *	9	11	12
	Libano	1	1	1
	Marocco	4	5	5
	Tunisia *	2	2	2
Europei extra UE	Bosnia-Erzegovina *	2	2	2
	Georgia *	2	2	2
	Islanda *	4	5	5
	Liechtenstein	1	1	1
	Moldavia *	2	2	2
	Norvegia *	27	22	32
	Russia	1	2	2
	Svizzera *	34	24	49
	Ucraina *	5	5	7
Resto del mondo	Australia	2	3	3
	Brasile	1	1	1
	Canada	2	1	2
	Cina	3	3	3
	Colombia	1	1	1
	Corea Del Sud	2	1	2
	Giappone	3	3	3
	Kenya	1	1	1
	Perù	1	1	1
	Stati Uniti d'America	2	2	2
	Sudafrica	2	2	2
	Taiwan	2	2	2
Organ. Internazionali		17	3	18

** Paese associato al programma Horizon 2020*

TIPOLOGIA DELL'ATTIVITÀ PREVALENTE
DEI PARTNER INTERNAZIONALI DELL'ENEA
contratti in corso nel 2019

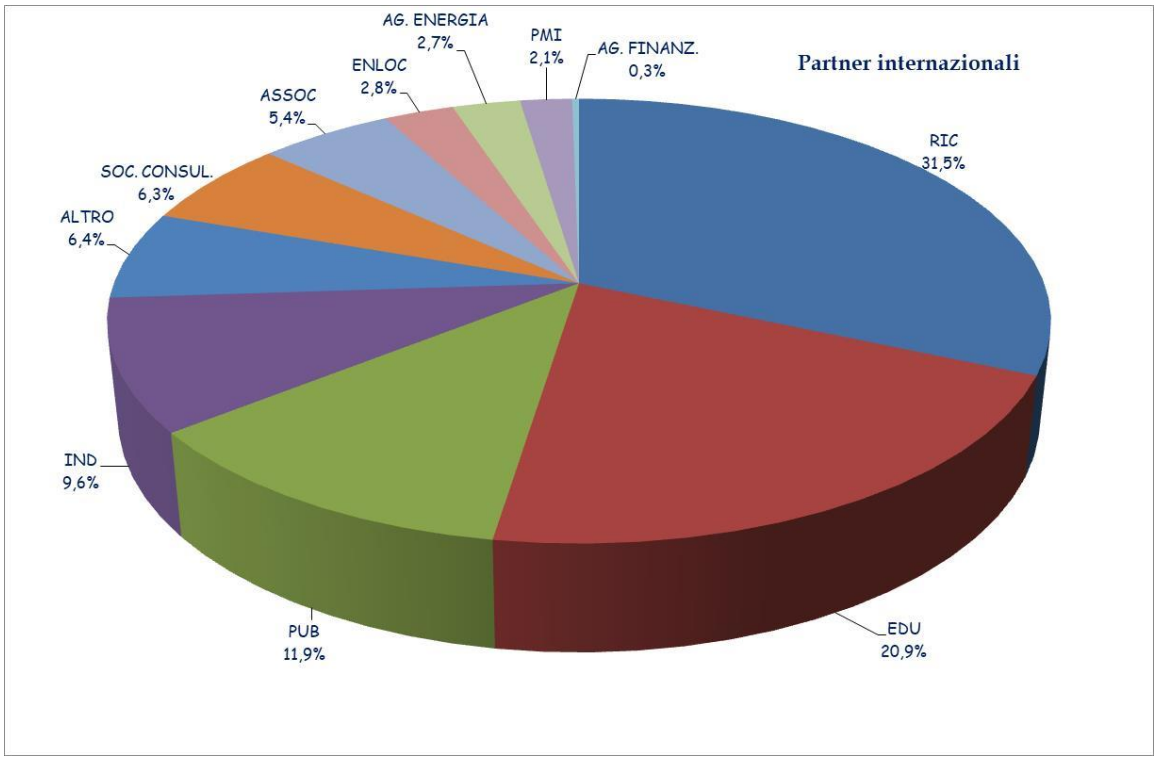


Fig. 9

TIPOLOGIA DELL'ATTIVITÀ PREVALENTE
DEI PARTNER ITALIANI DELL'ENEA
contratti in corso nel 2019

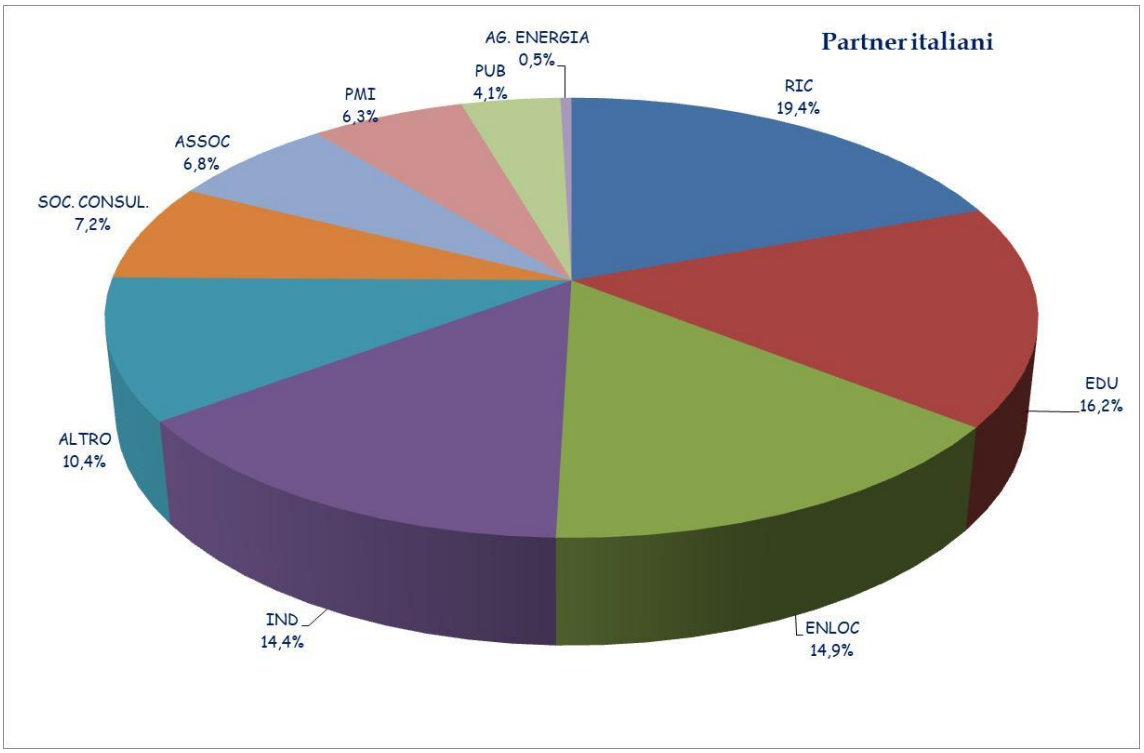


Fig. 10

AG. ENERGIA	*Agenzie per l'energia naz., reg. o locali*	***IND***	*Industrie*
AG. FINANZ.	*Agenzie di finanziamento*	***ORG. INT.LI***	*Organizzazioni internazionali*
ALTRO	*Altra tipologia o tipologia non ident.*	***PMI***	*Piccole e medie imprese*
ASSOC	*Associazioni*	***PUB***	*Organismi pubblici NO ricerca*
EDU	*Università e istituti di alta formazione*	***RIC***	*Organizzazioni di ricerca*
ENLOC	*Enti locali*	***SOC. CONSUL.***	*Società di consulenza*

Coordinamento

L'ENEA nel 2019 ha coordinato il 19% (33 progetti) dei 173 in corso (per tre progetti non è previsto il coordinatore).
Per quanto riguarda in particolare il programma Horizon 2020, non considerando progetti dell'EIT *Raw Materials* e *Climate KIC* e i progetti afferenti al programma Euratom fusione poiché soggetti a meccanismi diversi di finanziamento, i progetti coordinati da ENEA sono **16** e rappresentano il 15% dei progetti H2020 considerati.
I progetti a cui l'ENEA partecipa come partner sono coordinati nel 47% dei casi da organizzazioni di ricerca e nel 22% circa da università e istituti di alta formazione, seguiti dalle società di consulenza (6%) dagli Enti locali e dagli Enti pubblici non di ricerca, entrambi al 5% (fig. 15).
Per quanto riguarda invece il paese del coordinatore, per il 24% si tratta di soggetti italiani, seguiti da francesi e spagnoli (entrambi al 14%) e da quelli tedeschi (13%). I progetti coordinati da partner belgi o finlandesi sono il 5% mentre i Paesi Bassi e il Regno Unito si fermano entrambi al 4% (fig. 16).
Relativamente all'ammontare del budget totale dei progetti, i coordinatori italiani gestiscono il budget maggiore (16% circa), seguiti dai coordinatori spagnoli e francesi (15%), da quelli tedeschi (14%), del Belgio (8%), Finlandia (6%) e Regno Unito (5%).
Da segnalare la costante discesa dal 2016 a oggi dei progetti a coordinamento britannico, probabilmente come conseguenza dell'annuncio e del recente compimento della 'Brexit': i partner del Regno Unito nel 2016 coordinavano l'11% dei progetti, nel 2019 sono al 4%. Sembra che siano stati soprattutto i coordinatori italiani a trarne vantaggio: sono infatti passati dal 17,5% nei progetti coordinati del 2016 al 24% nel 2019, sempre con riferimento ai progetti a partecipazione ENEA in corso.
La tabella 4 evidenzia i progetti coordinati da ENEA, indicando per ciascuno il programma, l'area tematica e i dati finanziari; ulteriori informazioni sono presenti sulla scheda sintetica di ciascun progetto (all. 2).

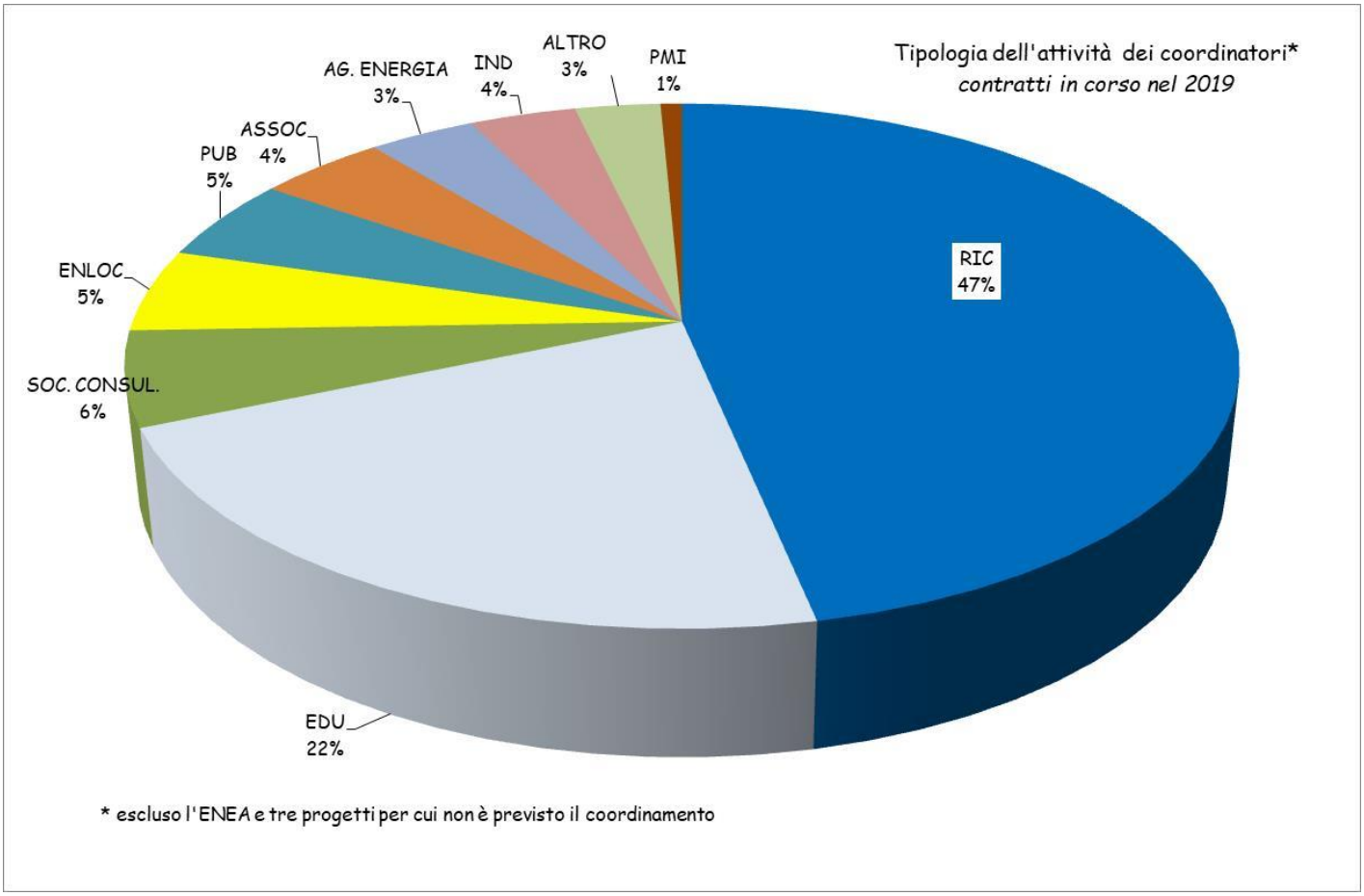


Fig. 11

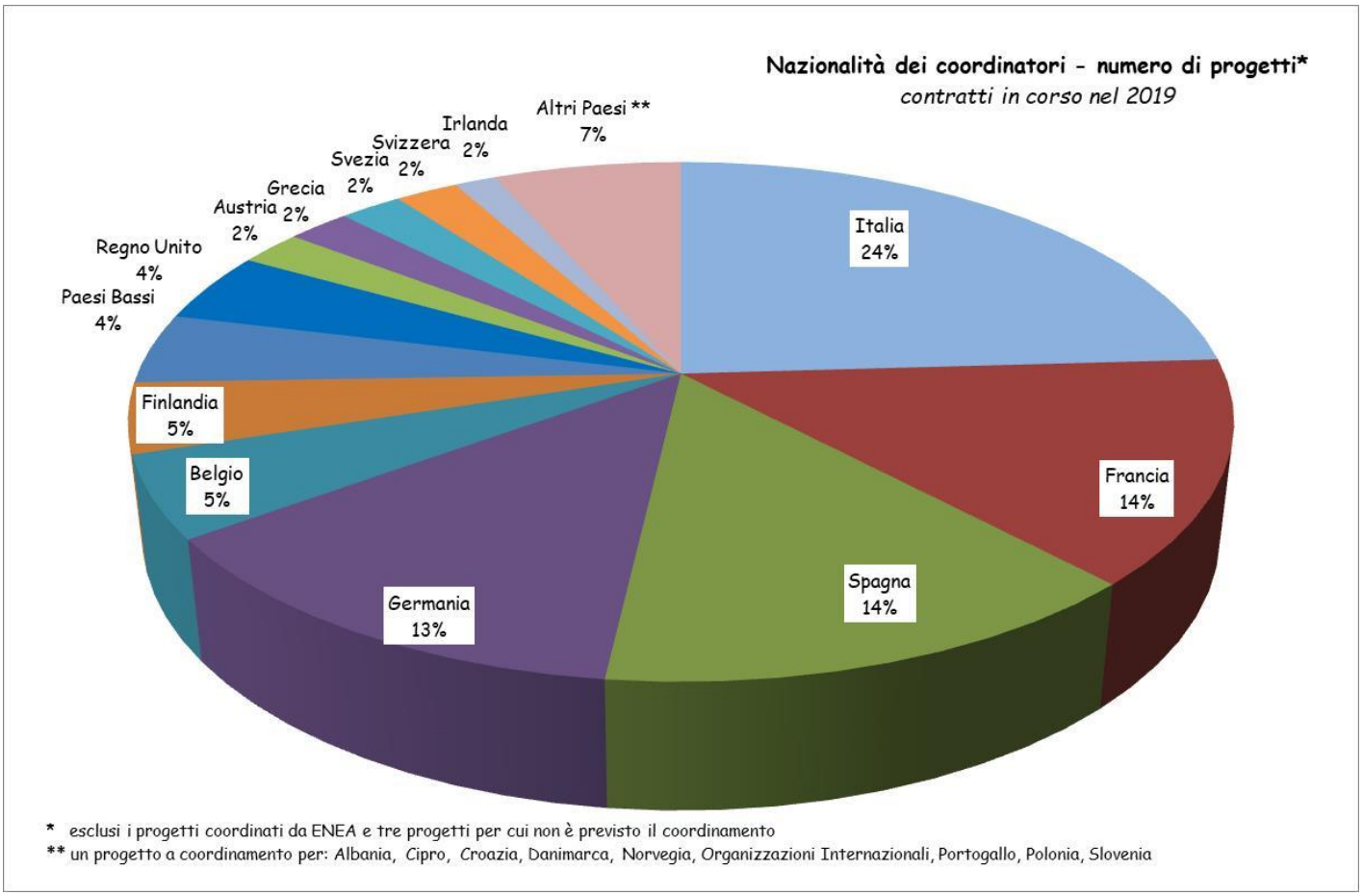

Nazionalità dei coordinatori - numero di progetti*
contratti in corso nel 2019
Italia 24%
Francia 14%
Spagna 14%
Germania 13%
Belgio 5%
Finlandia 5%
Paesi Bassi 4%
Regno Unito 4%
Austria 2%
Grecia 2%
Svezia 2%
Svizzera 2%
Irlanda 2%
Altri Paesi ** 7%
* esclusi i progetti coordinati da ENEA e tre progetti per cui non è previsto il coordinamento
** un progetto a coordinamento per: Albania, Cipro, Croazia, Danimarca, Norvegia, Organizzazioni Internazionali, Portogallo, Polonia, Slovenia

Fig. 12

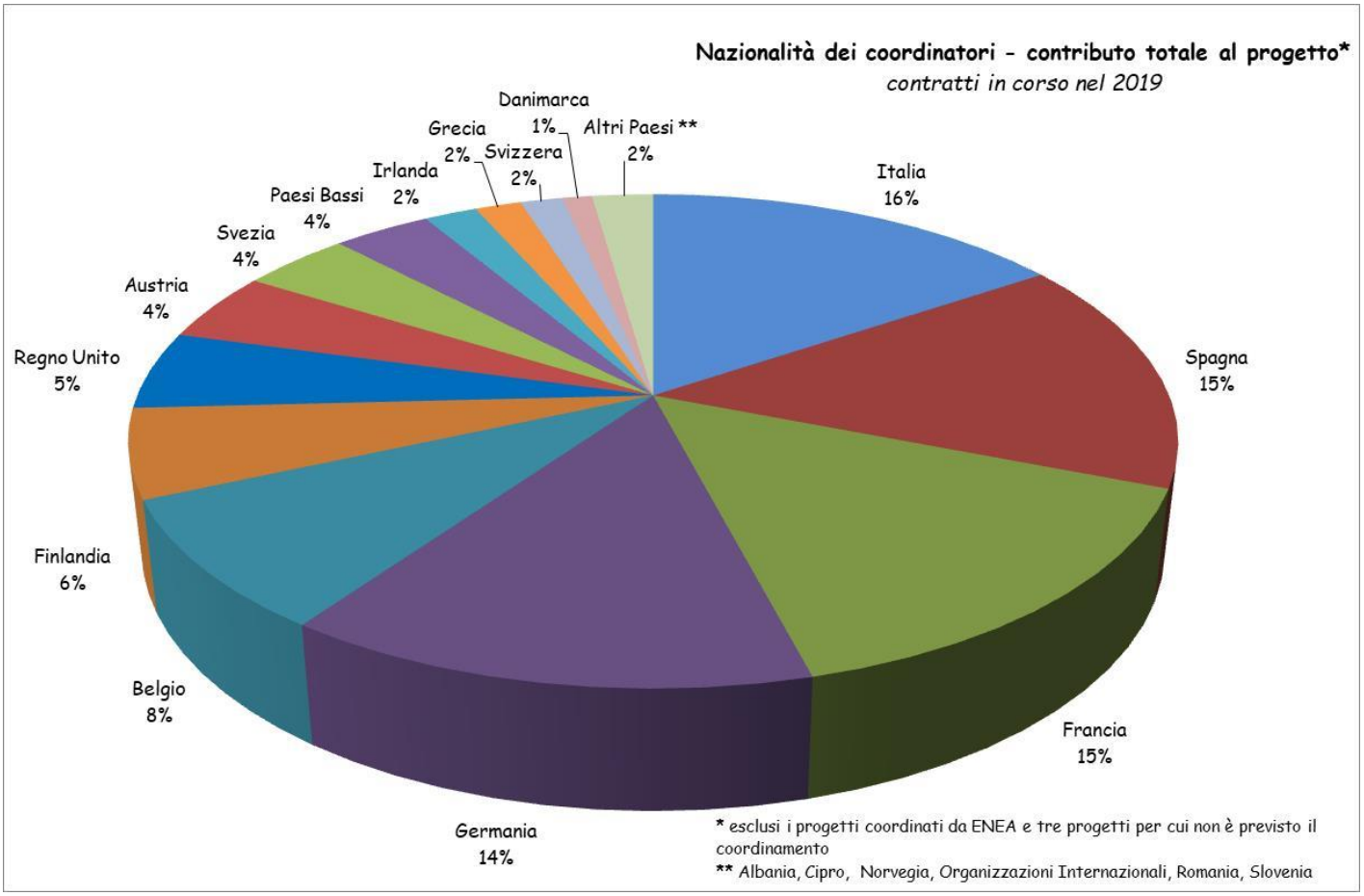

Nazionalità dei coordinatori - contributo totale al progetto*
contratti in corso nel 2019
Italia 16%
Spagna 15%
Francia 15%
Germania 14%
Belgio 8%
Finlandia 6%
Regno Unito 5%
Austria 4%
Svezia 4%
Paesi Bassi 4%
Irlanda 2%
Svizzera 2%
Grecia 2%
Danimarca 1%
Altri Paesi ** 2%
* esclusi i progetti coordinati da ENEA e tre progetti per cui non è previsto il coordinamento
** Albania, Cipro, Norvegia, Organizzazioni Internazionali, Romania, Slovenia

Fig.13

PROGETTI COORDINATI DA ENEA
in corso nel 2019 finanziati da programmi UE

	Acronimo	PROGRAMMA UE	Area tematica	Costo totale del progetto	Contributo totale al progetto	Costo ENEA	Contributo a ENEA
				euro			
HORIZON 2020	AD ASTRA	JTI - Hydrogen	Energy - hydrogen	3.008.426	3.008.426	399.250	399.250
	Bi-Stretch-4-Biomed	MSCA Marie Skl. Curie Actions	Nanotechnology - materials	400.500	342.000	139.500	132.800
	EIT Climate-KIC Circular Economy Training	EIT - Climate KIC	Environment - circular economy	34.802	23.035	18.340	12.055
	EIT Raw Materials C2CC	EIT - Raw Materials KIC	Raw materials	n.d.	n.d.	80.709	62.771
	EIT Raw Materials CIRCuIT	EIT - Raw Materials KIC	Circular economy	69.615	69.615	23.750	23.750
	EIT Raw Materials REVALUE	EIT - Raw Materials KIC	Raw materials	n.d.	n.d.	234.189	234.189
	G2P-SOL	Food Security, Sustainable Agriculture and the Bioe	Life sciences - food genetic	6.891.265	6.891.265	851.375	851.375
	GEMMA	Euratom fissione	Materials	6.370.380	3.999.182	1.095.440	650.612
	INCLUDING	Secure societies	Energy - fission safety	3.585.529	3.585.529	564.606	564.606
	INTERPLAN	Energy	Energy - smart grids	2.964.363	2.964.363	556.075	556.075
	MED-GOLD	Climate Action, Environment, Resource Efficiency an	Environment - climate change	4.990.968	4.990.968	473.588	473.588
	METROFOOD-RI	European Research Infrastructures	Metrology	3.999.890	3.999.890	506.187	506.187
	MILEDI	ICT	ICT	4.130.041	4.130.041	672.500	672.500
	NanoPyromat	MSCA Marie Skl. Curie Actions	Materials	180.277	180.277	180.277	180.277
	Net-UBIEP	Energy	Energy efficiency	995.023	995.023	146.700	146.700
	NEXTOWER	NMBP Nanotechn., Adv Materials, Adv Manufacturir	Materials	6.307.951	4.999.879	732.250	732.250
	ORC-PLUS	Energy	Energy - solar	7.297.149	6.339.316	1.258.125	1.258.125
Euratom	F4E-FPA-327-SG02	F4E - Fusion for energy	Energy - fusion	1.807.410	912.761	1.728.663	881.263
	F4E-FPA-327-SG06	F4E - Fusion for energy	Energy - fusion	1.622.649	718.467	1.153.431	529.597
	F4E-FPA-372-SG04	F4E - Fusion for energy	Energy - fusion	718.545	320.000	613.755	269.084
	PIACE	Euratom fissione	Energy - fission safety	3.210.440	2.247.230	593.775	415.643
	SEPARATE	Euratom radioprotezione	Radioprotection	1.019.135	703.203	598.000	551.098
	SESAME.	Euratom fissione	Energy - fission safety	6.643.280	5.200.000	1.042.250	843.500
Altri programmi	AVIAMED	ERA-NET	Life sciences	n.d.	n.d.	80.000	79.200
	IMEAS	Interreg Alpine Space (2014-2020)	Energy - renewable	1.859.855	1.580.277	320.361	272.306
	Life4MarPiccolo	LIFE (2014-2020)	Environment - marine	2.512.171	1.325.473	1.276.320	715.703
	MA.G.I.S.	LIFE (2014-2020)	Environment - ecoinnovation	2.624.168	1.385.942	450.049	256.249
	PEFMED	Interreg MED (2014-2020)	Life sciences - food industry	2.438.360	2.072.606	382.262	324.923
	REEF 2W	Interreg Central Europe	Energy - renewable	2.300.299	1.878.305	294.310	235.448
	RTNORM	EMPIR (2014-2020)	Metrology	794.732	794.732	68.009	68.009
	TEESCHOOLS	Interreg MED (2014-2020)	Energy efficiency	2.840.000	2.235.500	390.000	331.500
	VEG-GAP	LIFE (2014-2020)	Environment - air quality	1.673.668	1.000.000	326.182	195.709

Tab. 4

Allegato 1

Partecipanti per Paese e relativi progetti

AG. ENERGIA	*Agenzie per l'energia naz., reg. o locali*	**IND**	*Industrie*
AG. FINANZ.	*Agenzie di finanziamento*	**ORG. INT.LI**	*Organizzazioni internazionali*
ALTRO	*Altra tipologia o tipologia non ident.*	**PMI**	*Piccole e medie imprese*
ASSOC	*Associazioni*	**PUB**	*Organismi pubblici NO ricerca*
EDU	*Università e istituti di alta formazione*	**RIC**	*Organizzazioni di ricerca*
ENLOC	*Enti locali*	**SOC. CONSUL.**	*Società di consulenza*

Agenzia nazionale per le nuove tecnologie,
l'energia e lo sviluppo economico sostenibile

I progetti a partecipazione ENEA finanziati dalla UE

Contratti in vigore nel 2019, lista dei partner:

Paese	Nome	Tipologia	Acronimo progetto	Area tematica
Albania	AKBN - NATIONAL AGENCY OF NATURAL RESOURCES	PUB	BLUE DEAL	Energy - renewable
	BARLETI INSTITUTE FOR RESEARCH AND DEVELOPMENT	RIC	REEHUB	Energy efficiency
	MINISTRY OF INFRASTRUCTURES AND ENERGY	PUB	REEHUB	Energy efficiency
Algeria	APRUE - National Agency for the Promotion and Rationalisation of Energy Use	AG. ENERGIA	meetMED	Energy
	UNIV. BEJAIA	EDU	SUPREME	Life sciences - food industry
Australia	AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION	RIC	XLS	FEL - Free Electron Lasers
	UNIV. MELBOURNE	EDU	XLS	FEL - Free Electron Lasers
	UNIV. QUEENSLAND OF TECHNOLOGY	EDU	NEWCOTIANA	Life sciences
Austria	AEA AUSTRIAN ENERGY AGENCY	AG. ENERGIA	ANTICSS	Energy efficiency
			CA-EED 2	Energy efficiency
			EEPLIANT 3	Energy efficiency
			HYLAW	Energy - hydrogen
			INTAS	Energy efficiency
			ODYSSEE-MURE	Energy efficiency
	AEE INTEC - INSTITUTE FOR SUSTAINABLE TECHNOLOGIES	RIC	INSHIP	Energy - solar
	AIT AUSTRIAN INSTITUTE OF TECHNOLOGY	RIC	EXPAND	Urbanisation
			EXPAND II	null
			INTERPLAN	Energy - smart grids
	ALLPLAN GMBH	IND	Algeria	Energy efficiency
	BEV - BUNDESAMT FUER EICH-UND VERMESSUNGSWESEN	RIC	MRTDosimetry	Metrology

BIOENERGY 2020+ GMBH	RIC	BRISK II	Energy - renewable
BIOFACTION KG	Altro	NEWCOTIANA	Life sciences
BRIMATECH SERVICES GMBH	PMI	ICARUS	Nanotechnology - materials
ECODUNA	RIC	VALUEMAG	Industrial processes
ENERGIEINSTITUT VORARLBERG	PUB	IMEAS	Energy - renewable
ENERGY AGENCY-STEIERMARK	AG. ENERGIA	X-tendo	Energy
ESV O.Ö. ENERGIESPARVERBAND	AG. ENERGIA	PUBLENEF	Energy efficiency
e-think ZENTRUM FÜR ENERGIEWIRTSCHAFT UND UMWELT	RIC	X-tendo	Energy
FFG - AUSTRIAN RESEARCH PROMOTION AGENCY	PUB	EXPAND EXPAND II	Urbanisation null
GRAZ ENERGY AGENCY	AG. ENERGIA	FEEDSCHOOLS guarantEE	Energy efficiency Energy efficiency
IIASA - INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS	RIC	CRESCENDO	Environment - modelling
ISCC - INTERNATIONAL SECURITY COMPETENCE CENTRE	SOC. CONSUL.	INCLUDING	Energy - fission safety
ISEKI-Food Association	ASSOC	FNS-CLOUD	Life sciences
MINPOL GMBH	SOC. CONSUL.	SCRREEN	Raw materials
NATIONAL PARK THAYATAL	PUB	MaGICLandscapes	Environment
NUCCON NUCLEAR SAFETY AND TECHNOLOGY	SOC. CONSUL.	NARSIS	Energy - fission safety
OFFICE OF THE STYRIAN PROVINCIAL GOVERNMENT	ENLOC	CONDEREFF	Environment - utilisation of waste
OiB - Austrian Institute of Construction Engineering	PUB	CAV_EPBD	Energy efficiency
PROKO - PROJEKTkompetenz.eu	Altro	EIT Raw Materials RESIELP	Raw materials
RTDS ASSOCIATION	SOC. CONSUL.	FNS-CLOUD	Life sciences
SALZBURG RESEARCH	RIC	NIMBLE	Industry support
UNIV. BODENKULTUR WIEN	EDU	FASTNET NEWCOTIANA R2CA REEF 2W	Energy - fission safety Life sciences Energy - fission safety Energy - renewable
UNIV. GRAZ	EDU	BRISK II EUROCAROTEN	Energy - renewable Life sciences - food genetic
UNIV. MEDICAL WIEN	EDU	CONCERT	Radioprotection
UNIV. MONTAN	EDU	CRM-EXTREME	Raw materials

	UNIV. SALISBURGO	EDU	EC4SafeNano	Nanotechnology - materials
	UNIV. TECHNICAL WIEN	EDU	SANDA X-tendo	Energy - fission Energy
	UNIV. WIEN	EDU	MaGICLandscapes	Environment
Belgio	ABIS - THE ACADEMY OF BUSINESS IN SOCIETY	RIC	RETRACE	Environment - circular economy
	AESA - AGRICONSULTING EUROPE SA	SOC. CONSUL.	CBRN_2	Security
	ASSOCIATION EUROPEENNE DE L'ENERGIE DE L'OCEAN	ASSOC	OCEANSET	Energy - renewable
	BASF ANTWERPEN NV	IND	EIT Raw Materials Train Call	Raw materials
	BEL V	PUB	MUSA R2CA	Energy - fission safety Energy - fission safety
	BIO BASE EUROPE PILOT PLANT VZW	Altro	SIMBA	Life sciences - food industry
	BRUEGEL AISBL	RIC	COP21 RIPPLES	Environment - climate change
	CENTRE FOR EUROPEAN POLICY STUDIES	RIC	CICERONE	Environment - circular economy
	CENTRE SCIENTIFIQUE ET TECHNIQUE DE LA CONSTRUCTION	RIC	CAV_EPBD	Energy efficiency
	EASE - EUROPEAN ASSOCIATION FOR STORAGE OF ENERGY	ASSOC	IntEnSys4EU	Energy
	EASN TECHNOLOGY INNOVATION SERVICES BVBA	PMI	ICARUS	Nanotechnology - materials
	ECOS	ALTRO	ANTICSS HARP	Energy efficiency Energy efficiency
	ECOS - EUROPEAN ENVIRONMENTAL CITIZENS ORGANISATION FOR STANDARDIS	ASSOC	INTAS	Energy efficiency
	EERA AISBL	ASSOC	INSHIP	Energy - solar
	ENEN - European Nuclear Education Network	ASSOC	ARIEL	Energy - fission
	ENTSOE - EUROPEAN NETWORK OF TRANSMISSION SYSTEM OPERATORS FOR EI	Altro	IntEnSys4EU	Energy
	ESTELA EUROPEAN SOLAR THERMAL ELECTRICITY ASSOCIATION	ASSOC	HORIZON-STE SFERA III	Energy - solar Energy - solar
	ESTIF - EUROPEAN SOLAR THERMAL INDUSTRY FEDERATION	ASSOC	HARP	Energy efficiency
	EURIDICE - European Underground Research Infrastructure for Disposal of Nuclear Waste	RIC	MODERN2020	Energy - fission waste
	EuroFIR - EUROPEAN FOOD INFORMATION RESSOURCE AISBL	ASSOC	FNS-CLOUD	Life sciences
	EuroGOOS	ASSOC	SeaDataCloud	Environment - marine
	EUROPEAN BIOMASS INDUSTRY ASSOCIATION	ASSOC	BLAZE	Energy - renewable
	EUROPEAN CROWFUNDING NETWORK AISBL	Altro	DARE	ICT
	EUROPEAN GEOTHERMAL ENERGY COUNCIL	ASSOC	GEMex	Energy - renewable

FACTOR 4 BVBA	AG. ENERGIA	guarantEE	Energy efficiency
FDO Federale Overheidsdienst Economie, KMO	PUB	EEPLIANT 3	Energy efficiency
		ODYSSEE-MURE	Energy efficiency
FEDARENE - FEDERATION EUROPEENNE DES AGENCES REGIONALES DE L'ENER	AG. ENERGIA	PUBLENEF	Energy efficiency
HYDROGEN EUROPE	ASSOC	HYLAW	Energy - hydrogen
IBF - INTERNATIONAL CONSULTING SA	SOC. CONSUL.	Algeria	Energy efficiency
Institut Royal des Sciences Naturelles de Belgique	RIC	SeaDataCloud	Environment - marine
INSTITUT ROYALE D'AERONOMIE SPATIALE DE BELGIQUE	RIC	RINGO	Environment - modelling
INTERNATIONAL LIFE SCIENCES INSTITUTE EUROPEAN BRANCH AISBL	RIC	FNS-CLOUD	Life sciences
ION BEAM APPLICATIONS SA	IND	MYRTE	Energy - fission
IVKDF - INSTITUT VON KARMAN DE DYNAMIQUE DES FLUIDES	RIC	SESAME.	Energy - fission safety
LA SOCIETE WALLONNE DES EAUX	IND	ATENA	Cybersecurity
MAGICS INSTRUMENTS	IND	METRODECOM II	Metrology - decommissiong
MULTITEL	RIC	ATENA	Cybersecurity
NFWO - NATIONAL FUND FOR SCIENTIFIC RESEARCH	PUB	WaterWorks2014	Environment - water resources
NIRAS NATIONALE INSTELLING VOOR RADIOACTIEF AFVAL EN VERRIJKTE SPLIJTS	PUB	MODERN2020	Energy - fission waste
OCAS - ONDERZOEKSCENTRUM VOOR AANWENDING VAN STAAL N.V.	RIC	EIT Raw Materials Train Call	Raw materials
PNO INNOVATIONS	SOC. CONSUL.	SCRREEN	Raw materials
		VALUEMAG	Industrial processes
PRACE - PARTNERSHIP FOR ADVANCED COMPUTING IN EUROPE AISBL	ASSOC	FocusCoE	ICT
SCIENSANO	PUB	METROFOOD-RI	Metrology
SCK CEN - CENTRE D'ETUDE DE L'ENERGIE NUCLEAIRE	RIC	ARIEL	Energy - fission
		CHANCE	Energy - fission waste
		CONCERT	Radioprotection
		GEMMA	Materials
		INSPYRE	Energy - fission
		M4F	Energy - fission modelling
		MICADO	Energy - fission waste
		MRTDosimetry	Metrology
		PIACE	Energy - fission safety
		PREPAREDNESS	Metrology

		SANDA	Energy - fission
		TRANSAT	Energy - fission waste
SERVICE PUBLIC FEDERAL SANTE PUBLIQUE, SECURITE DE LA CHAINE ALIMENTA	PUB	ANTICSS	Energy efficiency
THE FLEMISH REGION	PUB	CA-EED 2	Energy efficiency
TRACTEBEL ENGINEERING	SOC. CONSUL.	IVMR	Energy - fission safety
		MUSA	Energy - fission safety
		PIACE	Energy - fission safety
		R2CA	Energy - fission safety
TRENKNER	SOC. CONSUL.	HARP	Energy efficiency
UNIV. ANTWERPEN	EDU	MODERN2020	Energy - fission waste
		RINGO	Environment - modelling
UNIV. GHENT	EDU	CRM-EXTREME	Raw materials
		EIT RAW MATERIALS 3DMPWIRE	Raw materials
		EUROCAROTEN	Life sciences - food genetic
		FNS-CLOUD	Life sciences
		MYRTE	Energy - fission
		SESAME.	Energy - fission safety
UNIV. KATHOLIEKE LEUVEN	EDU	Si-DRIVE	Nanotechnology - materials
UNIV. LIBRE DE BRUXELLES	EDU	BE-OI	Environment - climate change
		Beyond EPICA	Environment - climate change
		EC4SafeNano	Nanotechnology - materials
		EoCOE-II	ICT
UNIV. LIEGI	EDU	SeaDataCloud	Environment - marine
UNIV. VRIJE BRUSSEL	EDU	COP21 RIPPLES	Environment - climate change
		SQUARE4ECVs	Environment - modelling
VAN HOOL N.V.	IND	3EMOTION	Transport
VIB	RIC	NEWCOTIANA	Life sciences
VITO VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK	RIC	AMBIENCE	Energy efficiency
		CRM-EXTREME	Raw materials
		EC4SafeNano	Nanotechnology - materials
		EIT Raw Materials CIRCuIT	Circular economy

			X-tendo	Energy
	VON KARMAN INSTITUTE FOR FLUID DYNAMICS	RIC	MYRTE	Energy - fission
	WATERSTOFNET	Altro	3EMOTION	Transport
			HYLAW	Energy - hydrogen
Bosnia-Erzegovina	CITY OF ZENICA	ENLOC	GREENCAP	Energy - renewable
	DEPARTMENT FOR DEVELOPMENT AND INTERNATIONAL PROJECTS OF GOVERNM	PUB	TEESCHOOLS	Energy efficiency
Brasile	FUNDACAO COPPETEC - COORDENACAO DE PROJETOS PESQUISAS E ESTUDOS	RIC	COP21 RIPPLES	Environment - climate change
Bulgaria	ABEA - ASSOCIATION OF BULGARIAN ENERGY AGENCIES	ASSOC	PUBLENEF	Energy efficiency
	BULGARIAN ACADEMY OF SCIENCES	RIC	CRM-EXTREME	Raw materials
			HYLAW	Energy - hydrogen
			SeaDataCloud	Environment - marine
	BULGARIAN ACADEMY OF SCIENCES - INSTITUTE OF NUCLEAR RESEARCH AND N	RIC	IVMR	Energy - fission safety
			MUSA	Energy - fission safety
	BULGARIAN NATIONAL SCIENCE FUND	PUB	EXPAND II	null
	CLEANTECH BULGARIA LTD	SOC. CONSUL.	EIT CLIMATE-KIC Circular Learning Hub Circular	Circular economy
	IEES - INSTITUTE OF ELECTROCHEMISTRY AND ENERGY SYSTEMS	RIC	AD ASTRA	Energy - hydrogen
	MARITSA VEGETABLE CROPS RESEARCH INSTITUTE	RIC	G2P-SOL	Life sciences - food genetic
	NATIONAL CENTRE OF RADIOBIOLOGY AND RADIATION PROTECTION	RIC	CONCERT	Radioprotection
	SCALE FOCUS AD	IND	FNS-CLOUD	Life sciences
	SEDA SUSTAINABLE ENERGY DEVELOPMENT AGENCY ex EEA	AG. ENERGIA	CA-EED 2	Energy efficiency
			CAV_EPBD	Energy efficiency
			ODYSSEE-MURE	Energy efficiency
	SOFIA DEVELOPMENT ASSOCIATION	ASSOC	CICERONE	Environment - circular economy
	STATE AGENCY FOR METROLOGICAL AND TECHNICAL SURVEILLANCE	PUB	EEPLIANT 3	Energy efficiency
	UNIV. SOFIA "SVETI KLIMENT OHRIDSKI"	EDU	COP21 RIPPLES	Environment - climate change
			SANDA	Energy - fission
	UNIV. TECHNICAL SOFIA	EDU	CRM-EXTREME	Raw materials
			MUSA	Energy - fission safety
Canada	CANADIAN NUCLEAR SAFETY COMMISSION	PUB	FASTNET	Energy - fission safety
			MUSA	Energy - fission safety
Cina	CHINA NUCLEAR POWER TECHNOLOGY RESEARCH INSTITUTE Co. Ltd.	RIC	MUSA	Energy - fission safety

	CHINESE ACADEMY OF SCIENCES	RIC	XLS	FEL - Free Electron Lasers
	UNIV. TSINGHUA	EDU	COP21 RIPPLES	Environment - climate change
Cipro	ARI - AGRICULTURAL RESEARCH INSTITUTE	RIC	SUPREME	Life sciences - food industry
	CEA CYPRUS ENERGY AGENCY	AG. ENERGIA	BLUE DEAL	Energy - renewable
			TEESCHOOLS	Energy efficiency
	CYPRUS PEDAGOGICAL INSTITUT	PUB	TEESCHOOLS	Energy efficiency
	DEPARTMENT OF FISHERIES AND MARINE RESEARCH	RIC	IDEM	Environment - marine
	GEOIMAGING LTD	PMI	BLUE DEAL	Energy - renewable
	IDRYMA EREVNAS KAI KAINOTOMIAS	Altro	EXPAND II	null
	IDRYMA PROOTHISIS EREVNAS	Altro	EXPAND	Urbanisation
	INTERFUSION SERVICES LIMITED	PMI	SOCLIMPACT	Environment - climate change
	MARINEM - MARITIME INSTITUTE OF EASTERN MEDITERRANEAN	RIC	PELAGOS	Energy - renewable
	MINISTRY OF ENERGY, COMMERCE, INDUSTRY AND TOURISM	PUB	CA-EED 2	Energy efficiency
			CAV_EPBD	Energy efficiency
			EEPLIANT 3	Energy efficiency
	NOMASICO LTD	IND	VALUEMAG	Industrial processes
	ORION - INSTITOUTO AEIFORIAS KAI ANAPTIKSEON	RIC	SeaDataCloud	Environment - marine
	RESEARCH PROMOTION FOUNDATION	PUB	WaterWorks2014	Environment - water resources
	THE CYPRUS INSTITUTE LIMITED	RIC	INSHIP	Energy - solar
			NESTER	Energy - solar
			SFERA III	Energy - solar
			SOCLIMPACT	Environment - climate change
	UNIV. CIPRO	EDU	INTERPLAN	Energy - smart grids
	UNIV. TECHNOLOGY CYPRUS	EDU	EUROCAROTEN	Life sciences - food genetic
			ODYSSEE-MURE	Energy efficiency
Colombia	UNIV. MILITAR NUEVA GRANADA	EDU	MED-GOLD	Environment - climate change
Corea del Sud	KOREA ATOMIC ENERGY RESEARCH INSTITUTE	RIC	GEMMA	Materials
			MUSA	Energy - fission safety
Croazia	APOSS-ANALIZE POUZDANOSTI I SIGURNOSTI SUSTAVA d.o.o.	IND	NARSIS	Energy - fission safety
	CEI - CENTER FOR MONITORING BUSINESS ACTIVITIES IN THE ENERGY SECTOR A	PUB	PUBLENEF	Energy efficiency
	CISTOCA D.O.O. ZADAR	IND	NETWAP	Environment

	CITY OF SPLIT	ENLOC	TEESCHOOLS	Energy efficiency
	COMUNE DI GRAD SPLIT	ENLOC	FEEDSCHOOLS	Energy efficiency
	COMUNE DI ZARA	ENLOC	NETWAP	Environment
	EIHP - ENERGY INSTITUTE HRVOJE POZAR	RIC	ODYSSEE-MURE	Energy efficiency
	HEP ESCO LTD	SOC. CONSUL.	FEEDSCHOOLS TEESCHOOLS	Energy efficiency Energy efficiency
	IFS - INSTITUTE OF PHYSICS	RIC	M4F	Energy - fission modelling
	INSTITUTE FOR MEDICAL RESEARCH AND OCCUPATIONAL HEALTH	RIC	CONCERT	Radioprotection
	INSTITUTE OF OCEANOGRAPHY AND FISHERIES	RIC	SeaDataCloud	Environment - marine
	IRB - RUDER BOSKOVIC INSTITUTE	RIC	NETWAP	Environment
	MINISTRY OF CONSTRUCTION AND PHYSICAL PLANNING	PUB	CAV_EPBD	Energy efficiency
	MINISTRY OF INTERIOR	PUB	EXERTER	Security
	MINISTRY OF THE ECONOMY, LABOUR AND CRAFTS	PUB	CA-EED 2 EEPLIANT 3	Energy efficiency Energy efficiency
	REGEA - North-west Croatia Regional Energy Agency	AG. ENERGIA	REEF 2W	Energy - renewable
	UNIV. ZAGABRIA	EDU	BLUE DEAL EUROCAROTEN EXERTER Net-UBIEP PELAGOS	Energy - renewable Life sciences - food genetic Security Energy efficiency Energy - renewable
	ZAGREB HOLDING	Altro	REEF 2W	Energy - renewable
Danimarca	AALBORG KOMMUNE	ENLOC	3EMOTION	Transport
	BALLARD POWER SYSTEMS EUROPE AS	IND	3EMOTION	Transport
	BRINTBRANCHEN	ASSOC	HYLAW	Energy - hydrogen
	CENERGIA ENERGY CONSULTANTS	RIC	CONZEBS	Energy saving
	DANISH SAFETY TECHNOLOGY AUTHORITY - SIKKERHEDSSTYRELSEN	PUB	EEPLIANT 3	Energy efficiency
	DANISH TECHNOLOGICAL INSTITUTE	EDU	INTAS	Energy efficiency
	DANMARKS ALMENE BOLIGER	Altro	CONZEBS	Energy saving
	DEA DANISH ENERGY AUTHORITY	PUB	CA-EED 2 CAV_EPBD ODYSSEE-MURE	Energy efficiency Energy efficiency Energy efficiency

			X-tendo	Energy
	DEMA - DANISH EMERGENCY MANAGEMENT AGENCY	PUB	FASTNET	Energy - fission safety
	DGC - DANISH GAS TECHNOLOGY CENTRE	SOC. CONSUL.	HYLAW	Energy - hydrogen
	FERMBIOTICS APS	IND	SIMBA	Life sciences - food industry
	GEOLOGICAL SURVEY OF DENMARK AND GREENLAND	RIC	SCRREEN	Raw materials
	ICES - INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA	RIC	SeaDataCloud	Environment - marine
	IFD - INNOVATION FUND DENMARK	AG. FINANZ.	WaterWorks2014	Environment - water resources
	LANDBRUG & FODEVARER LANDBRUGSRAADET DANSK LANDBRUG FORENING	RIC	SCOoPE	Energy efficiency
	NRCWE National Research Centre for the Working Environment	RIC	EC4SafeNano	Nanotechnology - materials
	TECHNOLOGICAL INSTITUTE	RIC	IMPRESS II	Metrology
	UNIV. AALBORG	EDU	CONZEBS	Energy saving
	UNIV. AARHUS	EDU	PRISM-eBT	Radioprotection
			SeaDataCloud	Environment - marine
	UNIV. COPENHAGEN	EDU	Beyond EPICA	Environment - climate change
			SIMBA	Life sciences - food industry
	UNIV. KØBENHAVNS	EDU	BE-OI	Environment - climate change
	UNIV. TECHNICAL DENMARK	EDU	AD ASTRA	Energy - hydrogen
			AMBITION	Energy - renewable
			BALANCE	Energy - renewable
			CRM-EXTREME	Raw materials
			EUROCAROTEN	Life sciences - food genetic
			FNS-CLOUD	Life sciences
			IMPRESS II	Metrology
			RINGO	Environment - modelling
			RTNORM	Metrology
			WASTE2GRIDS	Energy - hydrogen
	VORES BUREAU APS	IND	EEPLIANT 3	Energy efficiency
Egitto	AGERI - AGRICULTURAL GENETIC ENGINEERING RESEARCH INSTITUTE	RIC	AVIAMED	Life sciences
Estonia	E-Krediidiinfo Creditinfo Eesti AS	Altro	Net-UBIEP	Energy efficiency
	ELCOGEN AS	PMI	qSOFC	Energy - hydrogen
	ESTONIAN RESEARCH COUNCIL	RIC	CICERONE	Environment - circular economy

			WaterWorks2014	Environment - water resources
	INSTITUTE OF BALTIC STUDIES	RIC	ATENA	Cybersecurity
	MINISTRY OF ECONOMIC AFFAIRS AND COMMUNICATION	PUB	CA-EED 2	Energy efficiency
			CAV_EPBD	Energy efficiency
	MINISTRY OF THE ENVIRONMENT	PUB	WaterWorks2014	Environment - water resources
	TREA - TARTU REGIONAL ENERGY AGENCY	AG. ENERGIA	X-tendo	Energy
	UNIV. LIFE SCIENCE ESTONIAN	EDU	RINGO	Environment - modelling
	UNIV. OF TECHNOLOGY TALLINN	EDU	Net-UBIEP	Energy efficiency
			ODYSSEE-MURE	Energy efficiency
			SeaDataCloud	Environment - marine
	UNIV. TARTU	EDU	CONCERT	Radioprotection
			CRM-EXTREME	Raw materials
Finlandia	AKA - SUOMEN AKATEMIA	ALTRO	WaterWorks2014	Environment - water resources
	ARCTIC FLAVOURS ASSOCIATION	ASSOC	EUROCAROTEN	Life sciences - food genetic
	CITY OF MIKKELIN	ENLOC	INCLUDING	Energy - fission safety
	CSC-IT CENTER FOR SCIENCE	PUB	SeaDataCloud	Environment - marine
	EcoFellows Ltd (City of Tampere)	ENLOC	Urb-En Pact	Energy efficiency
	ELCOGEN OY	PMI	INNO-SOFC	Energy - hydrogen
			qSOFC	Energy - hydrogen
	EVIRA - FINNISH FOOD SAFETY AUTHORITY	PUB	METROFOOD-RI	Metrology
	FINNISH INSTITUTE OF OCCUPATIONAL HEALTH	RIC	EC4SafeNano	Nanotechnology - materials
	FINNISH METEREOLOGICAL INSTITUTE	RIC	CAMS_63	Environment - air quality
			CRESCENDO	Environment - modelling
			SeaDataCloud	Environment - marine
	FORTUM POWER AND HEAT OY	IND	ELSMOR	Energy - fission
			IVMR	Energy - fission safety
	GTK - GEOLOGICAL SURVEY OF FINLAND	RIC	SCRREEN	Raw materials
	INTEGRATED CARBON OBSERVATION SYSTEM EUROPEAN RESEARCH INFRASTR	Altro	RINGO	Environment - modelling
	LUKE - NATURAL RESOURCES INSTITUTE FINLAND	RIC	SIMBA	Life sciences - food industry
	MIKES CENTRE FOR METROLOGY AND ACCREDITATION	RIC	IMPRESS II	Metrology
	MOTIVA OY	IND	CA-EED 2	Energy efficiency

		CAV_EPBD	Energy efficiency
		ODYSSEE-MURE	Energy efficiency
OUTOTEC OY	IND	EIT Raw Materials Train Call	Raw materials
POSIVA OY	RIC	MODERN2020	Energy - fission waste
RENOTECH OY	IND	RESLAG	Industrial processes
STUK RADIATION AND NUCLEAR SAFETY AUTHORITY	RIC	CONCERT	Radioprotection
		FASTNET	Energy - fission safety
		RTNORM	Metrology
TTY FOUNDATION	EDU	METRODECOM II	Metrology - decommissiong
TUKES SAFETY AND CHEMICALS AGENCY	PUB	INTAS	Energy efficiency
UNIV. Jyväskylä	EDU	ARIEL	Energy - fission
		SANDA	Energy - fission
UNIV. AALTO	EDU	GEMMA	Materials
		INSPYRE	Energy - fission
		M4F	Energy - fission modelling
UNIV. HELSINKI	EDU	RINGO	Environment - modelling
		SIMBA	Life sciences - food industry
		XLS	FEL - Free Electron Lasers
UNIV. OF TECHNOLOGY LAPPEENRANTA	EDU	EIT Raw Materials Train Call	Raw materials
UNIV. OULU	EDU	CRM-EXTREME	Raw materials
VTT TECHNICAL RESEARCH CENTRE OF FINLAND	RIC	BALANCE	Energy - renewable
		BRISK II	Energy - renewable
		CHANCE	Energy - fission waste
		CICERONE	Environment - circular economy
		CRM-EXTREME	Raw materials
		ELSMOR	Energy - fission
		EUROCAROTEN	Life sciences - food genetic
		HYLAW	Energy - hydrogen
		INNO-SOFC	Energy - hydrogen
		IVMR	Energy - fission safety
		METRODECOM II	Metrology - decommissiong

			MUSA	Energy - fission safety
			NARSIS	Energy - fission safety
			qSOFC	Energy - hydrogen
			R2CA	Energy - fission safety
			RESLAG	Industrial processes
Francia	ACCELERATORS AND CRYOGENIC SYSTEMS	IND	MYRTE	Energy - fission
	ACRI-HE	RIC	MOTTLES	Environment - climate change
	ADEME	RIC	CA-EED 2	Energy efficiency
			meetMED	Energy
			ODYSSEE-MURE	Energy efficiency
	AFNOR - ASSOCIATION FRANCAISE DE NORMALISATION	Altro	SCRREEN	Raw materials
	AGENCE NATIONALE DE LA RECHERCHE	ALTRO	CONCERT	Radioprotection
	AIR LIQUIDE	IND	3EMOTION	Transport
	ANDRA - AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS	PUB	CHANCE	Energy - fission waste
			METRODECOM II	Metrology - decommissiong
			MODERN2020	Energy - fission waste
	ANIA - ASSOCIATION NATIONALE DES INDUSTRIES ALIMENTAIRES	ASSOC	PEFMED	Life sciences - food industry
	ARENE Ile-de-France REGIONAL AGENCY FOR THE ENVIRONMENT AND NEW ENER	AG. ENERGIA	PUBLENEF	Energy efficiency
	AREVA NP SAS	IND	MODERN2020	Energy - fission waste
	ARKEMA FRANCE SA	RIC	EIT Raw Materials Circular TP	Raw materials
	AROL ENERGY	IND	WASTE2WATTS	Energy - hydrogen
	ASSOCIATION DE PREFIGURATION DE L'INSTITUT D'EXCELLENCE DES ENERGIES	RIC	OCEANSET	Energy - renewable
	ASSOCIATION FRANCAISE POUR L'HYDROGENE ET LES PILES A COMBUSTIBLE	ASSOC	HYLAW	Energy - hydrogen
	ASSOCIATION MELODI	ASSOC	CONCERT	Radioprotection
	AXELERA	Altro	GREENCAP	Energy - renewable
	AYMING	SOC. CONSUL.	PULSE-COM	Materials
	BLUENOVE	SOC. CONSUL.	CICERONE	Environment - circular economy
	BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES	RIC	GEMex	Energy - renewable
	CAPGEMINI TECHNOLOGY SERVICE	SOC. CONSUL.	S2S4E	Environment - modelling
	CEA	RIC	3EMOTION	Transport
			AD ASTRA	Energy - hydrogen

			AMPERE	Energy - photovoltaic
			BALANCE	Energy - renewable
			CHANCE	Energy - fission waste
			CICERONE	Environment - circular economy
			CONCERT	Radioprotection
			CRM-EXTREME	Raw materials
			EIT Raw Materials RESIELP	Raw materials
			EIT Raw Materials SPARK	Raw materials
			EIT Raw Materials REVALUE	Raw materials
			ELSMOR	Energy - fission
			ENTRAP	Security
			ESFR-SMART	Energy - fission safety
			FocusCoE	ICT
			GEMMA	Materials
			HYLAW	Energy - hydrogen
			INCLUDING	Energy - fission safety
			IN-POWER	Materials
			INSHIP	Energy - solar
			INSPYRE	Energy - fission
			M4F	Energy - fission modelling
			METRODECOM II	Metrology - decommissiong
			MICADO	Energy - fission waste
			MILEDI	ICT
			MRTDosimetry	Metrology
			MUSA	Energy - fission safety
			NARSIS	Energy - fission safety
			PRISM-eBT	Radioprotection
			RESLAG	Industrial processes
			RTNORM	Metrology
			SANDA	Energy - fission
			SCRREEN	Raw materials

			SESAME.	Energy - fission safety
			TRANSAT	Energy - fission waste
			WASTE2WATTS	Energy - hydrogen
	CEDRAT TECHNOLOGIES S.A.	IND	PULSE-COM	Materials
	CITY OF NICE	ENLOC	EFFICIENT BUILDINGS	Energy efficiency
	CLERMONT AUVERGNE METROPOLE	ENLOC	Urb-En Pact	Energy efficiency
	CNRS	RIC	ARIEL	Energy - fission
			CRESCENDO	Environment - modelling
			EoCOE-II	ICT
			EUPRAXIA	Energy - fission
			MYRTE	Energy - fission
			NESTER	Energy - solar
			SFERA III	Energy - solar
			XLS	FEL - Free Electron Lasers
	COMMUNE DE CHERBOURG-EN-COTENTIN	ENLOC	3EMOTION	Transport
	DDN - DATADIRECT NETWORKS FRANCE	IND	EoCOE-II	ICT
	EA ECOENTERPRISES	Altro	STRATUS	Environment - marine
	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE/CRPP	EDU	BALANCE	Energy - renewable
	ECOSCIENCE PROVENCE	ASSOC	STRATUS	Environment - marine
	EDF - ELECTRICITE DE FRANCE SA	IND	ELSMOR	Energy - fission
			ESFR-SMART	Energy - fission safety
			FASTNET	Energy - fission safety
			GEMMA	Materials
			INSPYRE	Energy - fission
			IVMR	Energy - fission safety
			METRODECOM II	Metrology - decommissiong
			NARSIS	Energy - fission safety
			R2CA	Energy - fission safety
			S2S4E	Environment - modelling
	ENERDATA SA	SOC. CONSUL.	ODYSSEE-MURE	Energy efficiency
	ENERGY CITIES ASSOCIATION	ASSOC	EFFICIENT BUILDINGS	Energy efficiency

		PUBLENEF	Energy efficiency
EURONOVIA	PMI	ORC-PLUS	Energy - solar
		SFERA III	Energy - solar
FEDERAL PUBLIC SERVICE - HEALTH, FOOD CHAIN SAFETY AND ENVIRONMENT	PUB	INTAS	Energy efficiency
GDF SUEZ	IND	EIT Raw Materials REVALUE	Raw materials
GeographR	SOC. CONSUL.	MITIMPACT	Environment - climate change
GIEFS GROUPEMENT INTERNATIONAL D'ETUDES DES FORETS SUD-EUROPEENNE	RIC	MITIMPACT	Environment - climate change
GROUPEMENT D'INTERET PUBLIC FORMATION ET INSERTION PROF.	PUB	STRATUS	Environment - marine
HLG MANAGEMENT	IND	RESLAG	Industrial processes
IDDRI - FONDATION INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT DURAB	RIC	COP21 RIPPLES	Environment - climate change
IFREMER INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER	RIC	IDEM	Environment - marine
		SeaDataCloud	Environment - marine
IFSTTAR INSTITUT FRANCAIS DES SCIENCES ET TECHNOLOGIES DES TRANSPOR	RIC	EXPAND	Urbanisation
		EXPAND II	null
INERIS Institut National de l'Environnement Industriel e des Risques	RIC	CAMS_63	Environment - air quality
		EC4SafeNano	Nanotechnology - materials
		IMPRESS II	Metrology
INRA - INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE	RIC	EUROCAROTEN	Life sciences - food genetic
		G2P-SOL	Life sciences - food genetic
INSTITUT POLAIRE FRANCAIS PAUL EMILE VICTOR	RIC	BE-OI	Environment - climate change
		Beyond EPICA	Environment - climate change
IRSN INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE	RIC	FASTNET	Energy - fission safety
		IVMR	Energy - fission safety
		MODERN2020	Energy - fission waste
		R2CA	Energy - fission safety
KEP NUCLEAR	IND	CHANCE	Energy - fission waste
LGI CONSULTING	SOC. CONSUL.	ESFR-SMART	Energy - fission safety
		INSPYRE	Energy - fission
		MUSA	Energy - fission safety
		SCRREEN	Raw materials
		SESAME.	Energy - fission safety

		TRANSAT	Energy - fission waste
MICROOLED SARL	PMI	MILEDI	ICT
MINISTERE DE L'ECONOMIE ET DES FINANCES	PUB	EEPLIANT 3	Energy efficiency
MINISTERE DE L'ENVIRONNEMENT, DE L'ENERGIE ET DE LA MER	PUB	CAV_EPBD	Energy efficiency
ORANO GROUP	IND	MICADO	Energy - fission waste
RESEAU ECO HABITAT	Altro	GreenAbility	Energy efficiency
RHONALPENERGIE ENVIRONNEMENT	AG. ENERGIA	CONDEREFF	Environment - utilisation of waste
RHÔNALPÉNERGIE-ENVIRONNEMENT	PUB	IMEAS	Energy - renewable
SEM ENERGIES POSIT'IF	ASSOC	guarantEE	Energy efficiency
SERVICES COOP DE FRANCE, UNION DES COOPERATIVES AGRICOLES	ASSOC	SCOoPE	Energy efficiency
SOLVIONIC SA	PMI	Si-DRIVE	Nanotechnology - materials
TECHNOFI SA	SOC. CONSUL.	IntEnSys4EU	Energy
TERATEC	ASSOC	FocusCoE	ICT
THE CLIMATE DATA FACTORY	Altro	S2S4E	Environment - modelling
THE INTERNATIONAL CRIMINAL POLICE ORGANIZATION	PUB	ENTRAP EXERTER	Security Security
TOULON VAR TECHNOLOGIES -POLE MER MEDITERRANEE	ASSOC	PELAGOS	Energy - renewable
TOURISME TERRITOIRES TRANSPORTS ENVIRONNEMENT CONSEIL	ALTRO	SOCLIMPACT	Environment - climate change
TRIXELL	IND	EIT Raw Materials SPARK	Raw materials
UNICLIMA	ASSOC	HARP	Energy efficiency
UNIV. BORDEAUX I	EDU	EIT Raw Materials SPARK EIT Raw Materials C2CC	Raw materials Raw materials
UNIV. CATHOLIQUE DE LOUVAIN	EDU	MYRTE RTNORM SESAME. SQUARE4ECVs	Energy - fission Metrology Energy - fission safety Environment - modelling
UNIV. D'AIX MARSEILLE	EDU	EUROCAROTEN TRANSAT	Life sciences - food genetic Energy - fission waste
UNIV. DE PAU ET DES PAYS DE L'ADOUR	EDU	METROFOOD-RI	Metrology
UNIV. DE VERSAILLES SAINT-QUENTIN-EN-YVELINES	EDU	RINGO	Environment - modelling
UNIV. DES ANTILLES	EDU	SOCLIMPACT	Environment - climate change

	UNIV. GRENOBLE ALPES	EDU	PULSE-COM	Materials
	UNIV. LIMOGES	EDU	MODERN2020	Energy - fission waste
			SUMCASTEC	Health
	UNIV. LORRAINE	EDU	CRM-EXTREME	Raw materials
			EIT RAW MATERIALS INCO-PILES FA	Raw materials
			ESFR-SMART	Energy - fission safety
	UNIV. TECHNOLOGIE BELFORT-MONTBELIARD	EDU	GEMMA	Materials
	VERTECH GROUP SRL	PMI	BLAZE	Energy - renewable
			VALUEMAG	Industrial processes
Georgia	PMGC - POLICY AND MANAGEMENT CONSULTING GROUP	SOC. CONSUL.	CBRN_2	Security
	UNIV. STATE TBILISI	EDU	SeaDataCloud	Environment - marine
Germania	52° North Initiative for Geospatial Open Source Software Gmbh	ASSOC	SeaDataCloud	Environment - marine
	ABG FRANKFURT HOLDING WOHNUNGSBAU	Altro	CONZEBS	Energy saving
	ADELPHI RESEARCH GMBH	RIC	REEF 2W	Energy - renewable
	ALFRED-WEGENER-INSTITUTE OF POLAR AND MARINE RESEARCH	RIC	BE-OI	Environment - climate change
			Beyond EPICA	Environment - climate change
			SeaDataCloud	Environment - marine
	AREVA NP GMBH	IND	ESFR-SMART	Energy - fission safety
			IVMR	Energy - fission safety
			NARSIS	Energy - fission safety
	B.A.U.M. CONSULT GMBH MÜNCHEN	SOC. CONSUL.	IMEAS	Energy - renewable
	BALANCE TECHNOLOGY CONSULTING GMBH	IND	NIMBLE	Industry support
	BAM FEDERAL INSTITUTE FOR MATERIALS RESEARCH AND TESTING	RIC	EC4SafeNano	Nanotechnology - materials
	BERLIN ENERGY AGENCY	AG. ENERGIA	guarantEE	Energy efficiency
	BFR - Federal Institute for Risk Assessment	RIC	FNS-CLOUD	Life sciences
	BFS - FEDERAL OFFICE FOR RADIATION PROTECTION	RIC	CONCERT	Radioprotection
			LDLensRad	Radioprotection
	BGR - FEDERAL INSTITUTE FOR GEOSCIENCES AND NATURAL RESOURCES	RIC	SCRREEN	Raw materials
	BKA FEDERAL CRIMINAL POLICE OFFICE	ALTRO	EXERTER	Security
	BSH - FEDERAL MARITIME AND HYDROGRAPHIC AGENCY	PUB	SeaDataCloud	Environment - marine
	CITY OF HAMBURG	ENLOC	ARCH	Environment - cultural heritage

CLIMATE ANALYTICS GMBH	RIC	COP21 RIPPLES	Environment - climate change
CLIMATE MEDIA FACTORY	Altro	EIT CLIMATE-KIC Circular Learning Hul	Circular economy
DBE TECHNOLOGY GmbH	SOC. CONSUL.	MODERN2020	Energy - fission waste
DENA GERMAN ENERGY AGENCY	RIC	HARP	Energy efficiency
DEUTSCHES ELEKTRONEN SYNCHROTRON DESY	RIC	EUPRAXIA	Energy - fission
DIN GERMAN INSTITUTE FOR STANDARD E.V.	PUB	ARCH	Environment - cultural heritage
DLR GERMAN CENTER FOR AIR AND SPACE E.V.	RIC	HORIZON-STE	Energy - solar
		RESLAG	Industrial processes
		SFERA III	Energy - solar
		Si-DRIVE	Nanotechnology - materials
		SQUARE4ECVs	Environment - modelling
DWD - DEUTSCHER WETTERDIENST	PUB	RINGO	Environment - modelling
DWV - GERMAN HYDROGEN & FUEL CELL ASSOCIATION	ASSOC	HYLAW	Energy - hydrogen
EIFER EUROPEAN INSTITUT FOR ENERGY RESERACH/UNIV. KARLSRUHE	RIC	AD ASTRA	Energy - hydrogen
EIT RAW MATERIALS GMBH	Altro	CICERONE	Environment - circular economy
ELRINGKLINGER AG	IND	INNO-SOFC	Energy - hydrogen
		qSOFC	Energy - hydrogen
ENBW ENERGIE BADEN-WUERTTEMBERG AG	IND	S2S4E	Environment - modelling
EURADOS EUROPEAN RADIATION DOSIMETRY GROUPEV	ASSOC	CONCERT	Radioprotection
EUROPEAN DISTRIBUTED ENERGY RESOURCES LABORATORIES E.V.	RIC	INTERPLAN	Energy - smart grids
EUROPEAN VIRTUAL INSTITUTE FOR INTEGRATED RISK MANAGEMENT - GEIE	SOC. CONSUL.	EC4SafeNano	Nanotechnology - materials
eza!ENERGIE AND ENVIRONMENTAL CENTRE ALLGAEU	PUB	IMEAS	Energy - renewable
FEDERAL MINISTRY FOR DIGITAL AND ECONOMIC AFFAIRS	PUB	EEPLIANT 3	Energy efficiency
FEDERAL MINISTRY FOR ECONOMIC AFFAIRS AND ENERGY	PUB	CA-EED 2	Energy efficiency
FEDERAL OFFICE FOR ECONOMIC AFFAIRS AND EXPORT CONTROL	PUB	CAV_EPBD	Energy efficiency
FHG FRAUNHOFER GESELLSCHAFT	RIC	CONZEBS	Energy saving
		ENTRAP	Security
		EXERTER	Security
FORSCHUNGSZENTRUM JUELICH GMBH	RIC	CHANCE	Energy - fission waste
		CICERONE	Environment - circular economy
		EoCOE-II	ICT

			EXPAND	Urbanisation
			EXPAND II	null
			FocusCoE	ICT
			INNO-SOFC	Energy - hydrogen
	FRAMATOME ANP GMBH	IND	ELSMOR	Energy - fission
			MUSA	Energy - fission safety
	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCH	RIC	ARCH	Environment - cultural heritage
			EIT Raw Materials Circular TP	Raw materials
			INCLUDING	Energy - fission safety
			MILEDI	ICT
			ODYSSEE-MURE	Energy efficiency
	FZK FRAUNHOFER-GESELLSCHAFT	RIC	AMPERE	Energy - photovoltaic
			INSHIP	Energy - solar
			ORC-PLUS	Energy - solar
	GEFERTECH GMBH	IND	EIT RAW MATERIALS 3DMPWIRE	Raw materials
	GEOMAR HELMHOLTZ CENTRE FOR OCEAN RESEARCH KIEL	RIC	RINGO	Environment - modelling
	GKZ - GEOKOMPETENZZENTRUM FREIBERG EV	SOC. CONSUL.	CICERONE	Environment - circular economy
	GLOBAL NATURE FUND	Altro	LIFE BLUE LAKES	Environment
	GRS - GLOBAL RESEARCH FOR SAFETY AND NUCLEAR SAFETY	RIC	ELSMOR	Energy - fission
			ESFR-SMART	Energy - fission safety
			IVMR	Energy - fission safety
			MUSA	Energy - fission safety
			SESAME.	Energy - fission safety
	GWS - THE INSTITUTE OF ECONOMIC STRUCTURES RESEARCH	Altro	SOCLIMPACT	Environment - climate change
	HELMHOLTZ ZENTRUM POTSDAM DEUTSCHESGEOFORSCHUNGSZENTRUM GFZ	RIC	GEMex	Energy - renewable
	HELMHOLTZ-ZENTRUM DRESDEN-ROSSENDORF EV	RIC	ARIEL	Energy - fission
			M4F	Energy - fission modelling
			MYRTE	Energy - fission
			R2CA	Energy - fission safety
			SANDA	Energy - fission
	HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFOF	RIC	CRM-EXTREME	Raw materials

HELMHOLTZ-ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER G	RIC	SEPARATE	Radioprotection
ICLEI - EUROPEAN SECRETARIAT GMBH	Altro	ARCH	Environment - cultural heritage
		WINWIND	Energy - renewable
IGA TECHNOLOGY SERVICES GMBH	Altro	GEMex	Energy - renewable
IHP MICROELECTRONICS/LEIBNIZ-INSTITUT FUER INNOVATIVE MIKROELEKTRONIK	RIC	SUMCASTEC	Health
IPK - Leibniz Institute of Plant Genetics and Crop Plant Research	RIC	G2P-SOL	Life sciences - food genetic
ISW INSTITUTE FOR STRUCTURAL POLICY AND ECONOMIC DEVELOPMENT	RIC	CONDEREFF	Environment - utilisation of waste
JONAS & REDMANN THE AUTOMATION COMPANY	IND	AMPERE	Energy - photovoltaic
KIT KARLSRUHER INSTITUT FUER TECHNOLOGIE	EDU	AMBITION	Energy - renewable
		BRISK II	Energy - renewable
		ESFR-SMART	Energy - fission safety
		GEMMA	Materials
		IVMR	Energy - fission safety
		M4F	Energy - fission modelling
		MUSA	Energy - fission safety
		NARSIS	Energy - fission safety
		NEWCOTIANA	Life sciences
		SANDA	Energy - fission
		SESAME.	Energy - fission safety
		Si-DRIVE	Nanotechnology - materials
		TRANSAT	Energy - fission waste
		XLS	FEL - Free Electron Lasers
KWB - Berlin Centre of Competence for Water	ENLOC	REEF 2W	Energy - renewable
LANU - SAXONY STATE FOUNDATION FOR NATURE AND THE ENVIRONMENT	PUB	MaGICLandscapes	Environment
LEIBNIZ INSTITUTE OF ECOLOGICAL URBAN AND REGIONAL DEVELOPMENT	RIC	MaGICLandscapes	Environment
LEIBNIZ INSTITUTE OF PLANT BIOCHEMISTRY	RIC	NEWCOTIANA	Life sciences
MAX PLANCK	RIC	CAMS_63	Environment - air quality
MAX PLANCK/BIOGEOCHEMIE	RIC	CRESCENDO	Environment - modelling
MUKO MASCHINENBAU GMBH	SOC. CONSUL.	qSOFC	Energy - hydrogen
NTG Neue Technologien GmbH	IND	MYRTE	Energy - fission
OEKO-INSTITUT E.V.	RIC	ANTICSS	Energy efficiency

	PTB PHYSIKALISCH TECHNISCHE BUNDESANSTALT	RIC	F4E-FPA-327-SG06 IMPRESS II METRODECOM II PREPAREDNESS PRISM-eBT	Energy - fusion Metrology Metrology - decommissiong Metrology Radioprotection
	REGIERUNG VON SCHWABEN - GEWERBEAUFSICHTSAMT	PUB	ANTICSS	Energy efficiency
	RHV - Biogasanlage Trattnachtal GmbH	IND	REEF 2W	Energy - renewable
	SCAPOS AG	IND	FocusCoE	ICT
	SEECON INGENIEURE GMBH	SOC. CONSUL.	WINWIND	Energy - renewable
	SUDAU AGRO GMBH	IND	SIMBA	Life sciences - food industry
	SUNFIRE GMBH	IND	AD ASTRA WASTE2WATTS	Energy - hydrogen Energy - hydrogen
	THM - TECHNISCHE HOCHSCHULE MITTELHESSEN	EDU	RTNORM	Metrology
	UNIV. AACHEN	EDU	GEMex MA.G.I.S. NESTER	Energy - renewable Environment - ecoinnovation Energy - solar
	UNIV. BONN RHEINISCHE FRIEDRICH-WILHELMS	EDU	ANTICSS SIMBA	Energy efficiency Life sciences - food industry
	UNIV. BREMA	EDU	NIMBLE	Industry support
	UNIV. ERLANGEN-NURNBERG	EDU	EoCOE-II RESLAG	ICT Industrial processes
	UNIV. FREIE BERLINO	EDU	WINWIND	Energy - renewable
	UNIV. HAMBURG	EDU	CRESCENDO EUPRAXIA	Environment - modelling Energy - fission
	UNIV. JOHANN WOLFGANG GOETHE FRANKFURT AM MAIN	EDU	EUROCAROTEN MYRTE SOCLIMPACT	Life sciences - food genetic Energy - fission Environment - climate change
	UNIV. JOHANNES GUTENBERG MAINZ	EDU	ARIEL	Energy - fission
	UNIV. KASSEL	EDU	RETRACE	Environment - circular economy
	UNIV. MONACO LUDWIG-MAXIMILIANS	EDU	SQUARE4ECVs	Environment - modelling
	UNIV. RUPRECHT-KARLS HEIDELBERG	EDU	RINGO	Environment - modelling

	UNIV. STOCCARDA	EDU	FASTNET	Energy - fission safety
			FocusCoE	ICT
	UNIV. TECHN. BERGAKADEMIE FREIBERG	EDU	EIT Raw Materials Train Call	Raw materials
	UNIV. TECHNICAL MUNICH (TUM)	EDU	FNS-CLOUD	Life sciences
			METROFOOD-RI	Metrology
	UNIV. TECHNISCHE DRESDEN	EDU	MaGICLandscapes	Environment
			MILEDI	ICT
	UNIV. WUERZBURG JULIUS-MAXIMILIANS	EDU	MRTDosimetry	Metrology
	VDE TESTING AND CERTIFICATION INSTITUTE	Altro	ANTICSS	Energy efficiency
	VOTTELER LACKE COATINGS	IND	IN-POWER	Materials
	WIP - WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	RIC	INTAS	Energy efficiency
	WUPPERTAL INSTITUTE FOR CLIMATE, ENVIRONMENT AND ENERGY GMBH	EDU	CICERONE	Environment - circular economy
			COP21 RIPPLES	Environment - climate change
	X-RAY IMAGING EUROPE GMBH	IND	MICADO	Energy - fission waste
Giappone	JAEA - JAPAN ATOMIC ENERGY AGENCY	RIC	MUSA	Energy - fission safety
	RADIOACTIVE WASTE MANAGEMENT FUNDING AND RESEARCH CENTER	RIC	MODERN2020	Energy - fission waste
	UNIV. UNITED NATIONS	EDU	SCRREEN	Raw materials
Giordania	NERC - NATIONAL ENERGY RESEARCH CENTER JORDAN	AG. ENERGIA	meetMED	Energy
	UNIV. MUTAH	EDU	SUPREME	Life sciences - food industry
Grecia	ARCHITECTS ASSOCIATION OF THESSALONIKI	ASSOC	TEESCHOOLS	Energy efficiency
	ATHENA RESEARCH AND INNOVATION CENTER IN INFORMATION, COMMUNICATIO	RIC	EIT CLIMATE-KIC Circular Learning Hub Climate	Circular economy
	CERTH - CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS	RIC	BRISK II	Energy - renewable
	CRES - CENTER FOR RENEWABLE ENERGY SOURCES AND SAVING	RIC	Algeria	Energy efficiency
			BLUE DEAL	Energy - renewable
			CA-EED 2	Energy efficiency
			CAV_EPBD	Energy efficiency
			EC4SafeNano	Nanotechnology - materials
			EFFICIENT BUILDINGS	Energy efficiency
			GEMex	Energy - renewable
			INSHIP	Energy - solar
			meetMED	Energy

		ODYSSEE-MURE	Energy efficiency
		PELAGOS	Energy - renewable
		PUBLENEF	Energy efficiency
		X-tendo	Energy
DYNAMIC VISION	SOC. CONSUL.	BLUE DEAL	Energy - renewable
E3-MODELLING IKE	SOC. CONSUL.	SOCLIMPACT	Environment - climate change
EFXINI POLI	ENLOC	TEESCHOOLS	Energy efficiency
ELEUSIS MUNICIPALITY	ENLOC	Urb-En Pact	Energy efficiency
GAIA EPICHEIREIN S.A.	ALTRO	SCOoPE	Energy efficiency
GAROUFALIS ORCHID GREENHOUSE	PMI	SUPREME	Life sciences - food industry
GREEK ATOMIC ENERGY COMMISSION	RIC	CONCERT	Radioprotection
HELLENIC CENTRE FOR MARINE RESEARCH	RIC	EMODnet Data Ingestion II	Environment - marine
		SeaDataCloud	Environment - marine
INSTITUTE OF ACCELERATING SYSTEMS AND APPLICATIONS	RIC	XLS	FEL - Free Electron Lasers
KEMEA - KENTRO MELETON ASFALEIAS	RIC	ENTRAP	Security
		EXERTER	Security
KRITI	Altro	SOCLIMPACT	Environment - climate change
LIVING PROSPECTS DEVELOPMENT AND ENVIRONMENTAL SERVICES LTD	SOC. CONSUL.	TEESCHOOLS	Energy efficiency
MINISTRY OF NATIONAL DEFENCE	PUB	INCLUDING	Energy - fission safety
MONOLITHOS CATALYSTS LTD.	IND	CRM-EXTREME	Raw materials
NATIONAL OBSERVATORY OF ATHENS	RIC	MED-GOLD	Environment - climate change
		RINGO	Environment - modelling
		SOCLIMPACT	Environment - climate change
OPEKEPE - PAYMENT AND CONTROL AGENCY FOR GUIDANCE AND GUARANTEE C	PUB	OpenIACS	ICT
PATRAS SCIENCE PARK S.A.	RIC	GREENCAP	Energy - renewable
REGION OF NORTH AEGEAN	ENLOC	PELAGOS	Energy - renewable
REGION OF THESSALY	ENLOC	CONDEREFF	Environment - utilisation of waste
SEVT - FEDERATION OF HELLENIC FOOD INDUSTRY	ASSOC	PEFMED	Life sciences - food industry
SOUTH EAST EUROPEAN RESEARCH CENTRE	RIC	RETRACE	Environment - circular economy
TECHNICAL CHAMBER OF GREECE - REGIONAL DEPARTMENT OF WESTERN GREE	Altro	TEESCHOOLS	Energy efficiency
Theagenio Cancer Hospital of Thessaloniki	RIC	MRTDosimetry	Metrology

	UNIV. AGRICULTURAL ATENE	EDU	EUROCAROTEN	Life sciences - food genetic
	UNIV. ARISTOTLE OF THESSALONIKI	EDU	METROFOOD-RI PREPAREDNESS	Metrology Metrology
	UNIV. HAROKOPIO	EDU	FNS-CLOUD	Life sciences
	UNIV. NATIONAL AND KAPODISTRIAN ATHENS	EDU	INCLUDING	Energy - fission safety
	UNIV. NATIONAL TECHNICAL ATENE NTUA	EDU	CRM-EXTREME SANDA SCRREEN VALUEMAG	Raw materials Energy - fission Raw materials Industrial processes
	UNIV. PATRAS	EDU	EFFICIENT BUILDINGS ICARUS	Energy efficiency Nanotechnology - materials
	UNIV. THESSALY	EDU	MED-GOLD	Environment - climate change
Irlanda	AquaTT UETP Ltd	PMI	SIMBA	Life sciences - food industry
	CODEMA - CITY OF DUBLIN ENERGY MANAGEMENT AGENCY LIMITED	AG. ENERGIA	guarantEE	Energy efficiency
	DCCAE - DEPARTMENT OF COMMUNICATIONS, ENERGY AND ENVIRONMENT	PUB	CA-EED 2	Energy efficiency
	DUBLIN INSTITUTE OF TECHNOLOGY	EDU	SEPARATE	Radioprotection
	EPA - ENVIRONMENTAL PROTECTION AGENCY OF IRELAND	PUB	WaterWorks2014	Environment - water resources
	MI - MARINE INSTITUTE	RIC	SeaDataCloud	Environment - marine
	NUTRITICS LIMITED	IND	FNS-CLOUD	Life sciences
	RFSAT - RESEARCH FOR SCIENCE, ART AND TECHNOLOGY LTD	Altro	ARCH	Environment - cultural heritage
	SEAI - SUSTAINABLE ENERGY AUTHORITY IRELAND	AG. ENERGIA	CAV_EPBD EEPLIANT 3 OCEANSET ODYSSEE-MURE	Energy efficiency Energy efficiency Energy - renewable Energy efficiency
	TEA - TIPPERARY ENERGY AGENCY	AG. ENERGIA	PUBLENEF	Energy efficiency
	UNIV. COLLEGE CORK	EDU	PELAGOS	Energy - renewable
	UNIV. COLLEGE DUBLIN	EDU	FNS-CLOUD RINGO	Life sciences Environment - modelling
	UNIV. LIMERICK	EDU	EIT Raw Materials Train Call Si-DRIVE	Raw materials Nanotechnology - materials
	UNIV. NATIONAL OF IRELAND - GALWAY	EDU	FocusCoE	ICT

	UNIV. NATIONAL OF IRELAND - MAYNOOTH	EDU	SQUARE4ECVs	Environment - modelling
	UNIV. QUEEN'S BELFAST	EDU	Bi-Stretch-4-Biomed	Nanotechnology - materials
	WIT - WATERFORD INSTITUTE OF TECHNOLOGY	EDU	EUROCAROTEN	Life sciences - food genetic
Islanda	ISOR ICELAND GEOSURVEY	RIC	GEMex	Energy - renewable
	MATIS OHF	RIC	SIMBA	Life sciences - food industry
	MRI - MARINE RESEARCH INSTITUTE	RIC	SeaDataCloud	Environment - marine
	UNIV. ICELAND	EDU	EUROCAROTEN	Life sciences - food genetic
Israele	AMSYS LTD	PMI	MILEDI	ICT
	ARO - THE AGRICULTURAL RESEARCH ORGANISATION OF ISRAEL - THE VOLCANI	RIC	G2P-SOL	Life sciences - food genetic
	IBM ISRAEL - SCIENCE AND TECHNOLOGY LTD	IND	NIMBLE	Industry support
	IBR - ISRAELI BIOTECHNOLOGY RESEARCH LTD	RIC	EUROCAROTEN	Life sciences - food genetic
	IORL - ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED	RIC	SeaDataCloud	Environment - marine
	MINISTRY OF ENERGY AND WATER RESOURCES	PUB	WaterWorks2014	Environment - water resources
	PHEN - PHENOM NETWORKS LTD	ALTRO	G2P-SOL	Life sciences - food genetic
	TECHNION ISRAEL INSTITUTE OF TECHNOLOGY	EDU	CRM-EXTREME	Raw materials
	THE ISRAEL ELECTRIC CORPORATION	IND	ATENA	Cybersecurity
	UNIV. HEBREW OF JERUSALEM	EDU	EUROCAROTEN G2P-SOL	Life sciences - food genetic Life sciences - food genetic
	UNIV. TEL AVIV	EDU	IDEM	Environment - marine
Italia	3SUN SRL	IND	AMPERE	Energy - photovoltaic
	AESS - AGENZIA PER L'ENERGIA E LO SVILUPPO SOSTENIBILE	AG. ENERGIA	EIT CLIMATE-KIC Circular Learning Hub Circular economy EIT CLIMATE-KIC GECO EIT Climate-KIC Young Innovators	Environment Environment - climate change
	AGEA - AGENZIA PER LE EROGAZIONI IN AGRICOLTURA	PUB	OpenIACS	ICT
	AGENZIA DELLE DOGANE E DEI MONOPOLI	PUB	CBRN_2	Security
	AGRIGES SRL	IND	SIMBA	Life sciences - food industry
	AM COMPOSITES	IND	EIT Raw Materials C2CC	Raw materials
	ANCI SARDEGNA	Altro	SOCLIMPACT	Environment - climate change
	ANIMA - FEDERAZIONE DELLE ASSOCIAZIONI NAZIONALI DELL'INDUSTRUSTRIA ME	ASSOC	HARP	Energy efficiency
	APO CONERPO	IND	MA.G.I.S.	Environment - ecoinnovation
	APRE	ALTRO	FNS-CLOUD	Life sciences

AREA MARINA PROTETTA CAPO CARBONARA	Altro	STRATUS	Environment - marine
ARIANET Srl	SOC. CONSUL.	VEG-GAP	Environment - air quality
ARPA PIEMONTE	ENLOC	MITIMPACT	Environment - climate change
ARPA UMBRIA	ENLOC	LIFE BLUE LAKES	Environment
ART-ER (ex ASTER)	Altro	EIT Climate-KIC Young Innovators	Environment - climate change
ASSOCIAZIONE ETHIC SAFE	ASSOC	RESIST	Security
ASSOCIAZIONE REGIONALE DEI COMUNI DEL LAZIO	ASSOC	DYDAS	ICT
ASSOFOND - FEDERAZIONE NAZIONALE FONDERIE	ASSOC	EFFIGE	Environment
ASTER	PUB	EIT CLIMATE KIC - BMB EIT Climate-KIC BEST	Energy efficiency Energy saving
ATAC - AZIENDA PER LA MOBILITA DEL COMUNE DI ROMA SPA	IND	3EMOTION	Transport
AUSL LATINA	ENLOC	MRTDosimetry	Metrology
AUTORITA' DI BACINO DISTRETTUALE DELL'APPENNINO CENTRALE	PUB	LIFE BLUE LAKES	Environment
AZIENDA CASA EMILIA ROMAGNA	PUB	CONZEBS	Energy saving
BARILLA G. E R. FRATELLI SPA	IND	MED-GOLD	Environment - climate change
BEETOBIT SRL	Altro	MED-GOLD	Environment - climate change
BLUMEN GROUP SPA	IND	G2P-SOL	Life sciences - food genetic
C.A.E.N. SPA COSTRUZIONI APPARECCHIATURE ELETTRONICHE NUCLEARI	IND	MICADO	Energy - fission waste
CAMERA DI COMMERCIO MILANO-MONZA-BRIANZA-LODI	ENLOC	ANTICSS EEPLIANT 3	Energy efficiency Energy efficiency
CENTRO SERVIZI AZIENDALE SCARL	Altro	Net-UBIEP	Energy efficiency
CHIA LAB SRL	PMI	DARE	ICT
CITTA' METROPOLITANA DI TORINO	ENLOC	MaGICLandscapes	Environment
CLU SRL	SOC. CONSUL.	SQUARE4ECVs	Environment - modelling
CNA RAVENNA	ASSOC	DARE	ICT
COMUNE DI AGNONE	ENLOC	REEHUB	Energy efficiency
COMUNE DI BOLOGNA	ENLOC	EIT Climate-KIC Circular Economy Trair	Environment - circular economy
COMUNE DI CAMERINO	ENLOC	ARCH	Environment - cultural heritage
COMUNE DI CASTEL SAN PIETRO TERME	ENLOC	TEESCHOOLS	Energy efficiency
COMUNE DI MILANO	ENLOC	VEG-GAP	Environment - air quality
COMUNE DI PALMA DI MONTECHIARO	ENLOC	Urb-En Pact	Energy efficiency

COMUNE DI PORTICI	ENLOC	AIR-HERITAGE	Environment - air quality
COMUNE DI RAVENNA	ENLOC	DARE	ICT
COMUNE DI TARANTO	ENLOC	Life4MarPiccolo	Environment - marine
COMUNE DI UDINE	ENLOC	FEEDSCHOOLS	Energy efficiency
CONFINDUSTRIA EMILIA ROMAGNA	ASSOC	EIT Climate-KIC Circular Economy Trair	Environment - circular economy
CONFINDUSTRIA SICILIA	ASSOC	BRIDGeconomies_2_2019 INCAME_2_2019	Innovation - SME Innovation - SME
CONSORZIO AGRITURISTICO MANTOVANO VERDI TERRE D'ACQUA	Altro	EFFIGE	Environment
COSMETICA ITALIA	ASSOC	MA.G.I.S.	Environment - ecoinnovation
DAI CARULINA SOCIETA' A RESPONSABILITA' LIMITATA AGRICOLA	IND	EFFIGE	Environment
DEDAGROUP PUBLIC SERVICES SRL	SOC. CONSUL.	EIT Climate-KIC Inno-WEEE	Environment - climate change
DITNE DISTRETTO TECNOLOGICO NAZIONALE SULL'ENERGIA SCARL	ALTRO	REEHUB	Energy efficiency
ECD SRL	SOC. CONSUL.	INTAS	Energy efficiency
ECODOM-CONSORZIO ITALIANO PER IL RECUPERO E RICICLAGGIO ELETTRODOM	Altro	EIT Climate-KIC Inno-WEEE SCRREEN	Environment - climate change Raw materials
ENCO SRL	SOC. CONSUL.	SCRREEN	Raw materials
ENEL TRADE	IND	SECLI-FIRM	Environment - climate change
ENERRAY SPA	IND	ORC-PLUS	Energy - solar
ENVIPARK -Environment Park S.P.A	ALTRO	GREENCAP	Energy - renewable
ETT spa	IND	SeaDataCloud	Environment - marine
EUROSPORTELLO - SERVIZI INFORMATIVI PER LE IMPRESE CCIAA NAPOLI	ENLOC	BRIDGeconomies_2_2019	Innovation - SME
FATTORIA SOLDANO	PMI	POREM	Environment - utilisation of waste
FEDERALIMENTARE - FEDERAZIONE ITALIANA DELL'INDUSTRIA ALIMENTARE	ASSOC	PEFMED	Life sciences - food industry
FIT CONSULTING SRL	SOC. CONSUL.	3EMOTION	Transport
FONDAZIONE PER L'AMBIENTE T.FENOGLIO ONLUS	Altro	IMEAS	Energy - renewable
FRATELLO SOLE SCARL	Altro	GreenAbility	Energy efficiency
GEMMATE TECHNOLOGIES SRL	IND	Si-DRIVE	Nanotechnology - materials
GENELAB SRL	ALTRO	Life4MarPiccolo	Environment - marine
GMATICS S.R.L.	PMI	DYDAS	ICT
HORTA SA	SOC. CONSUL.	MED-GOLD	Environment - climate change
HYLOBATES CONSULTING	SOC. CONSUL.	FNS-CLOUD	Life sciences

I.T.O. srl	IND	EIT Raw Materials RESIELP	Raw materials
IAI -ISTITUTO AFFARI INTERNAZIONALI	ALTRO	INCLUDING RESIST	Energy - fission safety Security
IIT - ISTITUTO ITALIANO DI TECNOLOGIA	SOC. CONSUL.	GEMMA TRANSAT	Materials Energy - fission waste
IMQ - ISTITUTO ITALIANO DEL MARCHIO DI QUALITA'	Altro	ANTICSS	Energy efficiency
INDACO2	SOC. CONSUL.	BLUE DEAL	Energy - renewable
INNOVA BIC - BUSINESS INNOVATION CENTRE SRL	PMI	NIMBLE	Industry support
KEY2 - KEY TO BUSINESS SRL	SOC. CONSUL.	DYDAS	ICT
KOLZER SRL	IND	IN-POWER	Materials
KYMA SRL	IND	XLS	FEL - Free Electron Lasers
LATERIZI GAMBETTOLA SRL	PMI	ORC-PLUS	Energy - solar
LEGACOOP ROMAGNA	Altro	DARE	ICT
LEGAMBIENTE CAMPANIA	ASSOC	AIR-HERITAGE	Environment - air quality
LEGAMBIENTE ONLUS	Altro	LIFE BLUE LAKES	Environment
LEONARDO FINMECCANICA	IND	ATENA	Cybersecurity
LIFE CYCLE ENGINEERING SRL	SOC. CONSUL.	RESLAG	Industrial processes
LIFELY SRL	IND	FNS-CLOUD	Life sciences
LITHOPS	PMI	Si-DRIVE	Nanotechnology - materials
MBN NANOMATERIALIA SPA	PMI	ICARUS	Nanotechnology - materials
MEEO Srl - METEOROLOGICAL AND ENVIRONMENTAL EARTH OBSERVATION	IND	VEG-GAP	Environment - air quality
MINISTERO DELL'AMBIENTE	PUB	PEFMED	Life sciences - food industry
MINISTERO DELL'INTERNO	PUB	RESIST	Security
MINISTERO DELL'ISTRUZIONE DELL'UNIVERSITA' E DELLA RICERCA	PUB	EXPAND EXPAND II WaterWorks2014	Urbanisation null Environment - water resources
MOLISE VERSO IL 2000 Srl	Altro	NETWAP	Environment
NIDIA SRL	PMI	MODERN2020	Energy - fission waste
NINE NUCLEAR AND INDUSTRIAL ENGINEERING SRL	SOC. CONSUL.	MUSA R2CA	Energy - fission safety Energy - fission safety
NOVA CONSULTING SRL	SOC. CONSUL.	Life4MarPiccolo	Environment - marine

OSDIFE - Osservatorio sulla Sicurezza e Difesa CBRNe	Altro	CBRN_2	Security
POLISTE SRL	SOC. CONSUL.	STRATUS	Environment - marine
POLITECNICO DI MILANO	EDU	GEMMA	Materials
		INSPYRE	Energy - fission
		R2CA	Energy - fission safety
POLITECNICO DI TORINO	EDU	BRISK II	Energy - renewable
		Si-DRIVE	Nanotechnology - materials
		WASTE2WATTS	Energy - hydrogen
PROVINCIA AUTONOMA DI TRENTO	ENLOC	IMEAS	Energy - renewable
REGIONE LAZIO	ENLOC	3EMOTION	Transport
		CONDEREFF	Environment - utilisation of waste
RELIGHT SRL	PMI	EIT Raw Materials RESIELP	Raw materials
		EIT Raw Materials SPARK	Raw materials
S.I. IMPRESA - SERVIZI INTEGRATI IMPRESA	ENLOC	INCAME_2_2019	Innovation - SME
SCUOLA SUPERIORE SANT'ANNA	EDU	EFFIGE	Environment
		MA.G.I.S.	Environment - ecoinnovation
SINTEC SRL	ALTRO	GEMMA	Materials
		M4F	Energy - fission modelling
		PIACE	Energy - fission safety
SOCIETA COOPERATIVA AGRICOLO FORESTALE - D.R.E.AM. ITALIA	ASSOC	SCOoPE	Energy efficiency
SOGESCA SRL	SOC. CONSUL.	ARCH	Environment - cultural heritage
SOLIDPOWER SPA	IND	AD ASTRA	Energy - hydrogen
		BLAZE	Energy - renewable
		WASTE2WATTS	Energy - hydrogen
UNIONCAMERE VENETO	ENLOC	NETWAP	Environment
		PELAGOS	Energy - renewable
		REEF 2W	Energy - renewable
UNIV. BARI	EDU	GEMex	Energy - renewable
UNIV. BOLOGNA ALMA MATER STUDIORUM	EDU	BE-OI	Environment - climate change
		DARE	ICT
		EIT CLIMATE-KIC GECO	Environment

		EIT RAW MATERIALS INCO-PILES FA	Raw materials
		SeaDataCloud	Environment - marine
		SOCLIMPACT	Environment - climate change
UNIV. CAGLIARI	EDU	STRATUS	Environment - marine
		SUPREME	Life sciences - food industry
UNIV. CALABRIA	EDU	EUROCAROTEN	Life sciences - food genetic
UNIV. CAMERINO	EDU	ARCH	Environment - cultural heritage
UNIV. CAMPANIA LUIGI VANVITELLI	EDU	VALUEMAG	Industrial processes
UNIV. CATTOLICA SACRO CUORE	EDU	INCLUDING	Energy - fission safety
UNIV. FIRENZE	EDU	FNS-CLOUD	Life sciences
UNIV. GENOVA	EDU	AD ASTRA	Energy - hydrogen
UNIV. GUGLIELMO MARCONI	EDU	BLAZE	Energy - renewable
UNIV. MILANO BICOCCA	EDU	EIT Raw Materials SPARK	Raw materials
UNIV. MODENA E REGGIO EMILIA	EDU	MILEDI	ICT
		SESAME.	Energy - fission safety
UNIV. NAPOLI FEDERICO II	EDU	AIR-HERITAGE	Environment - air quality
UNIV. NAPOLI PARTHENOPE	EDU	RETRACE	Environment - circular economy
UNIV. PADOVA	EDU	EIT Raw Materials RESIELP	Raw materials
		SUMCASTEC	Health
UNIV. PALERMO	EDU	INSHIP	Energy - solar
UNIV. PARMA	EDU	SIMBA	Life sciences - food industry
UNIV. PAVIA	EDU	CONCERT	Radioprotection
		TRANSAT	Energy - fission waste
UNIV. PISA	EDU	MUSA	Energy - fission safety
		MYRTE	Energy - fission
		NARSIS	Energy - fission safety
UNIV. POLITECNICA MARCHE	EDU	CRM-EXTREME	Raw materials
		EIT CLIMATE-KIC Circular Learning Hu	Circular economy
		IDEM	Environment - marine
		LIFE BLUE LAKES	Environment
UNIV. ROMA LA SAPIENZA	EDU	EUPRAXIA	Energy - fission

			XLS	FEL - Free Electron Lasers
	UNIV. ROMA TOR VERGATA	EDU	RESIST	Security
	UNIV. ROMA TRE	EDU	ATENA	Cybersecurity
	UNIV. SALENTO	EDU	EIT Raw Materials REVALUE	Raw materials
			ERN-APULIA	Open Science
	UNIV. SIENA	EDU	BLUE DEAL	Energy - renewable
	UNIV. TORINO	EDU	G2P-SOL	Life sciences - food genetic
	UNIV. TRENTO	EDU	EoCOE-II	ICT
	UNIV. TUSCIA	EDU	RINGO	Environment - modelling
	WALTER TOSTO SPA	IND	GEMMA	Materials
	WHIRPOOL EUROPE SRL	IND	NIMBLE	Industry support
Kenya	AESA EAST AFRICA	SOC. CONSUL.	CBRN_2	Security
Lettonia	CONSUMER RIGHTS PROTECTION CENTRE	PUB	EEPLIANT 3	Energy efficiency
	FEI - INSTITUTE OF PHYSICAL ENERGETICS	RIC	ODYSSEE-MURE	Energy efficiency
	INSTITUTE OF PHYSICAL ENERGETICS	RIC	WINWIND	Energy - renewable
	LATVIAN COUNCIL OF SCIENCE	RIC	EXPAND II	null
	LATVIAN ENVIRONMENTAL INVESTMENT FUND	PUB	WINWIND	Energy - renewable
	LATVIAN HYDROGEN ASSOCIATION	ASSOC	HYLAW	Energy - hydrogen
	LHEI - LATVIAN INSTITUTE OF AQUATIC ECOLOGY	RIC	SeaDataCloud	Environment - marine
	MINISTRY OF ECONOMICS	PUB	CA-EED 2	Energy efficiency
			CAV_EPBD	Energy efficiency
	UNIV. LATVIA	EDU	CONCERT	Radioprotection
			ESFR-SMART	Energy - fission safety
	UNIV. LATVIA OF AGRICULTURE	EDU	EUROCAROTEN	Life sciences - food genetic
	VIAA - STATE EDUCATION DEVELOPMENT AGENCY	PUB	EXPAND	Urbanisation
Libano	ALMEE - Lebanese Energy Management and Environment Association	AG. ENERGIA	meetMED	Energy
Liechtenstein	EURISD - LIECHTENSTEIN INSTITUTE FOR STRATEGIC DEVELOPMENT	PMI	IMEAS	Energy - renewable
Lituania	EKSPLA UAB	IND	MILEDI	ICT
	LEI LITHUANIAN ENERGY INSTITUTE	RIC	ELSMOR	Energy - fission
			FASTNET	Energy - fission safety
			IVMR	Energy - fission safety

			MUSA	Energy - fission safety
			ODYSSEE-MURE	Energy efficiency
			R2CA	Energy - fission safety
	MINISTRY OF ENERGY	PUB	CA-EED 2	Energy efficiency
	NATIONAL PAYING AGENCY UNDER THE MINISTRY OF AGRICULTURE	PUB	OpenIACS	ICT
	RSC RADIATION PROTECTION CENTRE	RIC	CONCERT	Radioprotection
	SKAITMENINE STATYBA	PUB	Net-UBIEP	Energy efficiency
	SPSC - Statybos produkcijos sertifikavimo centras	PUB	CAV_EPBD	Energy efficiency
	STATE BORDER GUARD SERVICE	PUB	INCLUDING	Energy - fission safety
	STATE CONSUMER RIGHTS PROTECTION AUTHORITY	PUB	EEPLIANT 3	Energy efficiency
	UNIV. TECHNICAL VILNIUS GEDIMINAS	EDU	EUROCAROTEN	Life sciences - food genetic
			Net-UBIEP	Energy efficiency
	UNIV. VYTAUTAS MAGNUS	EDU	MUSA	Energy - fission safety
	VIPA - Public Investment Development Agency	AG. FINANZ.	guarantEE	Energy efficiency
Lussemburgo	CREOS LUXEMBOURG SA	IND	ATENA	Cybersecurity
	INSTITUT LUXEMBOURGEOIS de la normalisation, de l'accreditation, de la securite et qu	PUB	EEPLIANT 3	Energy efficiency
	ITRUST CONSULTING	SOC. CONSUL.	ATENA	Cybersecurity
	LIH - LUXEMBOURG INSTITUTE OF HEALTH	RIC	EUROCAROTEN	Life sciences - food genetic
	LIST - LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY	RIC	CRM-EXTREME	Raw materials
	MINISTRY OF THE ECONOMY AND FOREIGN TRADE	PUB	CA-EED 2	Energy efficiency
			CAV_EPBD	Energy efficiency
	MYENERGY GIE	ALTRO	ODYSSEE-MURE	Energy efficiency
	UNIV. LUXEMBOURG	EDU	ATENA	Cybersecurity
Macedonia	JZU - INSTITUTE OF PUBLIC HEALTH	RIC	METROFOOD-RI	Metrology
	UNIV. SS CYRIL AND METHODIUS	EDU	CRM-EXTREME	Raw materials
			EUROCAROTEN	Life sciences - food genetic
Malta	AQUABIOTECH LIMITED	SOC. CONSUL.	SOCLIMPACT	Environment - climate change
	ENERGY AND WATER AGENCY	EDU	ODYSSEE-MURE	Energy efficiency
	MALTA COMPETITION AND CONSUMER AFFAIRS AUTHORITHY	PUB	EEPLIANT 3	Energy efficiency
	MALTA MARITTIMA AGENCY	PUB	BLUE DEAL	Energy - renewable
	MINISTRY FOR TRANSPORT AND INFRASTRUCTURE	PUB	CAV_EPBD	Energy efficiency

	SEWCU - SUSTAINABLE ENERGY AND WATER CONSERVATION UNIT	PUB	CA-EED 2	Energy efficiency
	UNIV. MALTA	EDU	IDEM	Environment - marine
			SeaDataCloud	Environment - marine
Marocco	AGRIMAROC	SOC. CONSUL.	CBRN_2	Security
	IAV - INSTITUTE OF AGRONOMY AND VETERINARY HASSAN II	RIC	AVIAMED	Life sciences
	INSTITUT DE RECHERCHES EN ENERGIE SOLAIRE ET ENERGIES NOUVELLES	RIC	ORC-PLUS	Energy - solar
	MASEN - MOROCCAN AGENCY FOR SOLAR ENERGY SA	PUB	RESLAG	Industrial processes
Moldavia	ACADEMY OF SCIENCES OF MOLDOVA - CENTER FOR INTERNATIONAL PROJECT	RIC	WaterWorks2014	Environment - water resources
	DAS FOUNDATION	Altro	METROFOOD-RI	Metrology
Montenegro	UNIV. OF MONTENEGRO	EDU	REEHUB	Energy efficiency
Norvegia	CICERO - CENTER FOR INTERNATIONAL CLIMATE AND ENVIRONMENTAL RESEAR	RIC	S2S4E	Environment - modelling
			WINWIND	Energy - renewable
	FFI Norwegian Defence Research Establishment	RIC	EXERTER	Security
	IFE INSTITUTE FOR ENERGY TECHNOLOGY	RIC	GEMex	Energy - renewable
			ODYSSEE-MURE	Energy efficiency
	IMR INSTITUTE OF MARINE RESEARCH	RIC	SeaDataCloud	Environment - marine
	METNO - NORWEGIAN METEOROLOGICAL INSTITUTE	RIC	CRESCENDO	Environment - modelling
	MINISTRY OF PETROLEUM AND ENERGY	PUB	CA-EED 2	Energy efficiency
	NEE - NORWEGIAN ENERGY EFFICIENCY INC.	SOC. CONSUL.	guarantEE	Energy efficiency
	NIVA NORWEGIAN INSTITUTE FOR WATER RESEARCH	RIC	SIMBA	Life sciences - food industry
	NOFIMA - NORWEGIAN INSTITUTE OF FOOD, FISHERIES AND AQUACULTURE	RIC	EUROCAROTEN	Life sciences - food genetic
	NORSUN	IND	AMPERE	Energy - photovoltaic
	NORWEGIAN DEFENCE RESEARCH ESTABLISHMENT	RIC	ENTRAP	Security
	NORWEGIAN POLAR INSTITUTE	RIC	BE-OI	Environment - climate change
			Beyond EPICA	Environment - climate change
	NRPA - NORWEGIAN RADIATION PROTECTION AUTHORITY	PUB	CONCERT	Radioprotection
			FASTNET	Energy - fission safety
	NVE - Norwegian Water Resources and Energy Directorate	PUB	CAV_EPBD	Energy efficiency
			WINWIND	Energy - renewable
	SINTEF	RIC	CRM-EXTREME	Raw materials
	STIFTELSEN SINTEF	RIC	AMBITION	Energy - renewable

			BRISK II	Energy - renewable
			HYLAW	Energy - hydrogen
	THE RESEARCH COUNCIL OF NORWAY	RIC	WaterWorks2014	Environment - water resources
	UNIV. I BERGEN	EDU	CRESCENDO	Environment - modelling
			RINGO	Environment - modelling
			SeaDataCloud	Environment - marine
	UNIV. NORWEGIAN OF LIFE SCIENCES	EDU	SIMBA	Life sciences - food industry
	UNIV. NORWEGIAN OF SCIENCE AND TECHNOLOGY -NTNU	EDU	EXPAND II	null
			METROFOOD-RI	Metrology
	UNIV. OSLO	EDU	ARIEL	Energy - fission
Organ. Internazionali	JRC COMMISSION OF THE EUROPEAN COMMUNITIES	RIC	ARIEL	Energy - fission
			ELSMOR	Energy - fission
			ESFR-SMART	Energy - fission safety
			GEMMA	Materials
			INSPYRE	Energy - fission
			IVMR	Energy - fission safety
			M4F	Energy - fission modelling
			MED-GOLD	Environment - climate change
			METRODECOM II	Metrology - decommissiong
			MUSA	Energy - fission safety
			MYRTE	Energy - fission
			PREPAREDNESS	Metrology
			R2CA	Energy - fission safety
			SANDA	Energy - fission
			SCRREEN	Raw materials
			SeaDataCloud	Environment - marine
	MEDENER - MEDITERRANEAN ASSOCIATION OF NATIONAL AGENCIES FOR ENER	ASSOC	meetMED	Energy
Paesi Bassi	ANL - MINISTRY OF ECONOMIC AFFAIRS, AGRICULTURE AND INNOVATION	PUB	guarantEE	Energy efficiency
	BALANCE & RESULT ORGANISATIE ADVISEURS BV	SOC. CONSUL.	Net-UBIEP	Energy efficiency
	CCS - CORNELISSEN CONSULTING SERVICE	SOC. CONSUL.	EIT Climate-KIC BEST	Energy saving
	ECN ENERGY RESEARCH CENTRE OF THE NETHERLANDS	RIC	AMBITION	Energy - renewable

EFFoST - European Federation of Food Science and Technology	Altro	FNS-CLOUD	Life sciences
ENERGY MATTERS	SOC. CONSUL.	INNO-SOFC	Energy - hydrogen
HAIKU TECH EUROPE BV	IND	qSOFC	Energy - hydrogen
HYGEAR B.V	IND	BLAZE	Energy - renewable
ISSO - STICHTING ISSO	RIC	Net-UBIEP	Energy efficiency
JIN - STICHTING JOINT IMPLEMENTATION NETWORK	SOC. CONSUL.	PUBLENEF	Energy efficiency
KNMI ROYAL DUTCH METEOROLOGICAL INSTITUTE	RIC	CRESCENDO	Environment - modelling
		SECLI-FIRM	Environment - climate change
MARIS MARINE INFORMATION SERVICE B.V.	IND	EMODnet Data Ingestion II	Environment - marine
		SeaDataCloud	Environment - marine
MINISTERIE VAN INFRASTRUCTUUR EN WATERSTAAT Netherlands	PUB	EEPLIANT 3	Energy efficiency
MINISTRY OF AGRICULTURE, NATURE AND FOOD QUALITY	PUB	ANTICSS	Energy efficiency
MINISTRY OF DEFENSE	PUB	EXERTER	Security
MINISTRY OF ECONOMIC AFFAIRS AND CLIMATE POLICY	PUB	CICERONE	Environment - circular economy
		ODYSSEE-MURE	Energy efficiency
MINISTRY OF ECONOMIC AFFAIRS, FARM AND INNOVATION	PUB	CA-EED 2	Energy efficiency
		CAV_EPBD	Energy efficiency
MINISTRY OF INFRASTRUCTURE AND THE ENVIRONMENT	PUB	CRESCENDO	Environment - modelling
		WaterWorks2014	Environment - water resources
NEN - DUTCH STANDARDIZATION INSTITUTE	ALTRO	EXERTER	Security
		HYLAW	Energy - hydrogen
Netherlands Forensic Institute	PUB	ENTRAP	Security
NIOZ ROYAL NETHERLANDS INSTITUTE FOR SEA RESEARCH	RIC	SeaDataCloud	Environment - marine
NMI VAN SWINDEN LABORATORIUM	RIC	PRISM-eBT	Radioprotection
NUCLEAR RESEARCH AND CONSULTANCY GROUP	RIC	INSPYRE	Energy - fission
		IVMR	Energy - fission safety
		MODERN2020	Energy - fission waste
		MYRTE	Energy - fission
		NARSIS	Energy - fission safety
		SANDA	Energy - fission
		SESAME.	Energy - fission safety

NWO - NETHERLANDS ORGANISATION FOR SCIENTIFIC RESEARCH	RIC	EXPAND	Urbanisation
		EXPAND II	null
		SIMBA	Life sciences - food industry
PNO CONSULTANTS BV	SOC. CONSUL.	CICERONE	Environment - circular economy
PROSAFE - THE PRODUCT SAFETY ENFORCEMENT FORUM OF EUROPE	ASSOC	EEPLIANT 3	Energy efficiency
PROVINCE ZUID-HOLLAND	ENLOC	3EMOTION	Transport
RIVM - NATIONAL INSTITUTE FOR PUBLIC HEALTH AND THE ENVIRONMENT	RIC	CONCERT	Radioprotection
		FNS-CLOUD	Life sciences
		METROFOOD-RI	Metrology
ROTTERDAMSE ELEKTRISCHE TRAM NV	IND	3EMOTION	Transport
STICHTING PLATFORM31	Altro	EXPAND	Urbanisation
STICHTING WAGENINGEN RESEARCH	RIC	BRISK II	Energy - renewable
THEHYVE BV	SOC. CONSUL.	FNS-CLOUD	Life sciences
TNO - NETHERLANDS ORGANISATION FOR APPLIED SCIENTIFIC RESEARCH	RIC	CICERONE	Environment - circular economy
		EC4SafeNano	Nanotechnology - materials
		EIT Climate-KIC BEST	Energy saving
		ENTRAP	Security
		EXERTER	Security
		GEMex	Energy - renewable
		ODYSSEE-MURE	Energy efficiency
UNIV. ERASMUS ROTTERDAM	EDU	RETRACE	Environment - circular economy
UNIV. GRONINGEN	EDU	RINGO	Environment - modelling
UNIV. LEIDEN	EDU	SCRREEN	Raw materials
UNIV. MAASTRICHT	EDU	FNS-CLOUD	Life sciences
UNIV. TECHN. EINDHOVEN	EDU	XLS	FEL - Free Electron Lasers
UNIV. TECHNISCHE DELFT	EDU	BALANCE	Energy - renewable
		BRISK II	Energy - renewable
		EIT Raw Materials Circular TP	Raw materials
		EIT RAW MATERIALS INCO-PILES FA	Raw materials
		IMPRESS II	Metrology
		INSPYRE	Energy - fission

			NARSIS	Energy - fission safety
			SESAME.	Energy - fission safety
	UNIV. UTRECHT	EDU	BE-OI	Environment - climate change
			Beyond EPICA	Environment - climate change
			GEMex	Energy - renewable
	UNIV. WAGENINGEN	EDU	EUROCAROTEN	Life sciences - food genetic
			SIMBA	Life sciences - food industry
	UNIV. WAGENINGEN/DLO	RIC	G2P-SOL	Life sciences - food genetic
	VDL ENABLING TECHNOLOGIES GROUP EINDHOVEN BV	IND	XLS	FEL - Free Electron Lasers
	VSL B.V. DUTCH METROLOGY INSTITUTE	RIC	IMPRESS II	Metrology
			RTNORM	Metrology
	ZILT PROEFBEDRIJF BV	IND	SIMBA	Life sciences - food industry
Peru'	CIP - INTERNATIONAL POTATO CENTRE	RIC	G2P-SOL	Life sciences - food genetic
Polonia	ASSOCIATION OF BIALYSTOK FUNCTIONAL AREA	ASSOC	Urb-En Pact	Energy efficiency
	ASTRI POLSKA	RIC	INCLUDING	Energy - fission safety
	CBRTP - Research and Development Center of Technology for Industry	RIC	PULSE-COM	Materials
	CITTA' DI VARSAVIA	ENLOC	FEEDSCHOOLS	Energy efficiency
	FEWE - POLISH FOUNDATION FOR ENERGY EFFICIENCY	SOC. CONSUL.	INTAS	Energy efficiency
	FLOR - CENTRAL LABORATORY FOR RADIOLOGICAL PROTECTION	RIC	PREPAREDNESS	Metrology
	IChTJ - INSTITUTE OF NUCLEAR CHEMISTRY AND TECHNOLOGY	RIC	CHANCE	Energy - fission waste
	IEN INSTITUTE OF POWER ENGINEERING	RIC	BALANCE	Energy - renewable
			HYLAW	Energy - hydrogen
			INTERPLAN	Energy - smart grids
	IETU - INSTITUTE FOR ECOLOGY OF INDUSTRIAL AREAS	RIC	CICERONE	Environment - circular economy
	IHAR INSTITUTE OF PLANT BREEDING AND ACCLIMATIZATION	RIC	G2P-SOL	Life sciences - food genetic
	IMGW - INSTITUTE OF METEOROLOGY AND WATER MANAGEMENT	RIC	SeaDataCloud	Environment - marine
	IMN - INSTITUTE OF NON FERROUS METALS	RIC	EIT RAW MATERIALS 3DMPWIRE	Raw materials
			EIT Raw Materials Train Call	Raw materials
			SCRREEN	Raw materials
	IOS -INSTITUTE OF ADVANCED MANUFACTURIN TECHNOLOGY	RIC	CRM-EXTREME	Raw materials
	ITB - BUILDING RESEARCH INSTITUTE	RIC	CAV_EPBD	Energy efficiency

	KAPE THE POLISH NATIONAL ENERGY CONSERVATION AGENCY	AG. ENERGIA	CA-EED 2	Energy efficiency
			ODYSSEE-MURE	Energy efficiency
			PUBLENEF	Energy efficiency
			WINWIND	Energy - renewable
	KARKONOSKI PARK NARODOWY	PUB	MaGICLandscapes	Environment
	KOMENDA STOLECZNA POLICJI	PUB	EXERTER	Security
	NAPE NATIONAL ENERGY CONSERVATION AGENCY	SOC. CONSUL.	X-tendo	Energy
	NCBJ NATIONAL CENTER FOR NUCLEAR RESEARCH	RIC	GEMMA	Materials
			IVMR	Energy - fission safety
			M4F	Energy - fission modelling
			NARSIS	Energy - fission safety
	NCN - NATIONAL SCIENCE CENTRE	RIC	EXPAND	Urbanisation
	POLISH ACADEMY OF SCIENCE- THE HENRYK NIEWODNICSANSKI INST. OF NUCLE	RIC	F4E-FPA-327-SG06	Energy - fusion
	POLISH ACADEMY OF SCIENCES - Institute of Bioorganic Chemistry	RIC	EoCOE-II	ICT
			OpenIACS	ICT
	POLISH ACADEMY OF SCIENCES/INSTITUTE OF OCEANOLOGY	EDU	SeaDataCloud	Environment - marine
			SQUARE4ECVs	Environment - modelling
	POLISH GEOLOGICAL INSTITUTE	RIC	GEMex	Energy - renewable
	RESEARCH AND INNOVATION CENTER PROAKADEMIA	RIC	FEEDSCHOOLS	Energy efficiency
	STATISTICS POLAND	RIC	ODYSSEE-MURE	Energy efficiency
	UNIV. JAGELLONIAN	EDU	EUROCAROTEN	Life sciences - food genetic
	UNIV. LIFE SCIENCES AUGUST CIESZKOWSKI POZNAN	EDU	RINGO	Environment - modelling
	UNIV. LODZ	EDU	SANDA	Energy - fission
	UNIV. OF TECHNOLOGY WARSAW	EDU	CHANCE	Energy - fission waste
			NARSIS	Energy - fission safety
	WISEEUROPA INSTITUTE	RIC	COP21 RIPPLES	Environment - climate change
	WOJSKOWA AKADEMIA TECHNICZNA IM JAROSLAWA DABROWSKIEGO	EDU	EXERTER	Security
Portogallo	ADENE AGENCIA PARA A ENERGIA	AG. ENERGIA	ANTICSS	Energy efficiency
			CAV_EPBD	Energy efficiency
			EFFICIENT BUILDINGS	Energy efficiency
			HARP	Energy efficiency

	meetMED	Energy
	ODYSSEE-MURE	Energy efficiency
	X-tendo	Energy
AGENCIA REGIONAL DA ENERGIA E AMBIENTE DA REGIAO AUTONOMA DA MADEI	RIC	SOCLIMPACT	Environment - climate change
ASAE - AUTORIDADE SEGURANCA ALIMENTAR E ECONOMICA	PUB	ANTICSS	Energy efficiency
		EEPLIANT 3	Energy efficiency
ASSOCIACAO DO INSTITUTO SUPERIOR TECNICO PARA A INVESTIGACAO E DESE	RIC	MYRTE	Energy - fission
COMUNIDADE INTERMUNICIPAL DO MINHO-LIMA	ENLOC	Urb-En Pact	Energy efficiency
CONFEDERACAO NACIONAL DAS COOPERATIVAS AGRICOLAS E DO CREDITO AGR	ASSOC	SCOoPE	Energy efficiency
DECO - ASSOCIACAO PORTUGUESA PARA ADEFESA DO CONSUMIDOR	ASSOC	HARP	Energy efficiency
DIRECAO-GERAL DE ENERGIA E GEOLOGIA	PUB	OCEANSET	Energy - renewable
DIRECTORATE GENERAL FOR ENERGY AND GEOLOGY	PUB	INTAS	Energy efficiency
EDPCNET - CENTRE FOR NEW ENERGY TECHNOLOGIES SA	IND	AMBIENCE	Energy efficiency
FCT FUNDACAO PARA A CIENCIA E A TECNOLOGIA	RIC	CONCERT	Radioprotection
		EXPAND	Urbanisation
		WaterWorks2014	Environment - water resources
FIPA - FEDERACAO DAS INDUSTRIAS PORTUGUESAS AGRO-ALIMENTARES	ASSOC	PEFMED	Life sciences - food industry
FUNDO REGIONAL PARA A CIENCIA E TECNOLOGIA	PUB	EXPAND II	null
INESC TEC PORTO - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORE	RIC	AMBIENCE	Energy efficiency
		INCLUDING	Energy - fission safety
INSTITUTO HIDROGRAFICO	RIC	SeaDataCloud	Environment - marine
INSTITUTO NACIONAL DE SAUDE	PUB	EUROCAROTEN	Life sciences - food genetic
		METROFOOD-RI	Metrology
INSTITUTO SUPERIOR DE AGRONOMIA	EDU	RINGO	Environment - modelling
IST - INSTITUTO SUPERIOR TECNICO	EDU	CRM-EXTREME	Raw materials
		EUPRAXIA	Energy - fission
		F4E-FPA-327-SG06	Energy - fusion
		RTNORM	Metrology
IST-ID Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento	RIC	SANDA	Energy - fission
LNEG - LABORATORIO NACIONAL DE ENERGIA E GEOLOGIA I.P.	RIC	AMBITION	Energy - renewable
		BRISK II	Energy - renewable

			INSHIP	Energy - solar
			SFERA III	Energy - solar
	MINISTRY OF INTERNAL ADMINISTRATION	PUB	EXERTER	Security
	NECTON - COMPANHIA PORTUGUESA DE CULTURAS MARINHAS SA	IND	SIMBA	Life sciences - food industry
	SOGRAPE VINHOS SA	IND	MED-GOLD	Environment - climate change
	STI - SISTEMAS E TECNICAS INDUSTRIAIS LDA	IND	HYLAW	Energy - hydrogen
	TEKEVER - TECNOLOGIAS DE INFORMACAO, S.A.	IND	INCLUDING	Energy - fission safety
	UNIV. ALGARVE	EDU	PELAGOS	Energy - renewable
	UNIV. CATOLICA PORTUGUESA, ESCOLA SUPERIOR DE BIOTECNOLOGIA	EDU	EUROCAROTEN	Life sciences - food genetic
	UNIV. COIMBRA	EDU	ATENA	Cybersecurity
	UNIV. EVORA	EDU	INSHIP	Energy - solar
			SFERA III	Energy - solar
	UNIV. MINHO	EDU	HARP	Energy efficiency
Regno Unito	BETTERPOINTS LIMITED	SOC. CONSUL.	EIT Climate-KIC Inno-WEEE	Environment - climate change
	BUILDING RESEARCH ESTABLISHMENT LIMITED	RIC	CAV_EPBD	Energy efficiency
	CBRNE LTD	SOC. CONSUL.	ENTRAP	Security
	CLIMATE STRATEGIES	RIC	COP21 RIPPLES	Environment - climate change
	CREO MEDICAL LIMITED	IND	SUMCASTEC	Health
	DEPARTMENT OF HEALTH	PUB	CONCERT	Radioprotection
			TRANSAT	Energy - fission waste
	ECI - EUROPEAN COPPER INSTITUTE	ASSOC	INTAS	Energy efficiency
	EDF ENERGY R&D UK CENTRE LIMITED	IND	NARSIS	Energy - fission safety
	ENERGY, SAFETY AND RISK CONSULTANTS	SOC. CONSUL.	ESFR-SMART	Energy - fission safety
	ENVIRONMENTAL RESOURCES MANAGEMENT LTD	SOC. CONSUL.	AMPERE	Energy - photovoltaic
	EXERGY LTD	PMI	VALUEMAG	Industrial processes
	FCC - FUTURE CITIES CATAPULT LIMITED	RIC	EXPAND II	null
	Galson Sciences Limited	SOC. CONSUL.	MODERN2020	Energy - fission waste
	GREATER LONDON AUTHORITY	ENLOC	HYLAW	Energy - hydrogen
	HEALTH AND SAFETY EXECUTIVE	RIC	EC4SafeNano	Nanotechnology - materials
	HOME OFFICE	PUB	ENTRAP	Security
	IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE	RIC	IVMR	Energy - fission safety

		RESLAG	Industrial processes
INNOVATEUK - THE TECHNOLOGY STRATEGY BOARD	RIC	EXPAND	Urbanisation
JOHN INNES CENTRE	RIC	NEWCOTIANA	Life sciences
KNOWLEDGE TRANSFER NETWORK LIMITED	Altro	SCRREEN	Raw materials
KROMEC LTD	IND	PREPAREDNESS	Metrology
LABLOGIC SYSTEMS LIMITED	IND	METRODECOM II	Metrology - decommissiong
LONDON BUS SERVICES LIMITED	IND	3EMOTION	Transport
MARINE SOUTH EAST LIMITED	SOC. CONSUL.	PELAGOS	Energy - renewable
MET OFFICE	RIC	CRESCENDO	Environment - modelling
		MED-GOLD	Environment - climate change
		SECLI-FIRM	Environment - climate change
NATIONAL NUCLEAR LABORATORY LIMITED	PUB	ESFR-SMART	Energy - fission safety
		INSPYRE	Energy - fission
		METRODECOM II	Metrology - decommissiong
NERC NATURAL ENVIRONMENT RESEARCH COUNCIL	RIC	BE-OI	Environment - climate change
		GEMex	Energy - renewable
		RINGO	Environment - modelling
		SCRREEN	Raw materials
		SeaDataCloud	Environment - marine
		WaterWorks2014	Environment - water resources
NEUTRAL SUPPLY CHAIN LIMITED	SOC. CONSUL.	NEWCOTIANA	Life sciences
NPL MANAGEMENT LIMITED	RIC	ARIEL	Energy - fission
		IMPRESS II	Metrology
		METRODECOM II	Metrology - decommissiong
		MRTDosimetry	Metrology
		PRISM-eBT	Radioprotection
		RTNORM	Metrology
		SANDA	Energy - fission
NPL NATIONAL PHYSICAL LABORATORY	RIC	PREPAREDNESS	Metrology
POLICE SERVICE OF NORTHERN IRELAND	PUB	EXERTER	Security
PUBLIC HEALTH ENGLAND	PUB	LDLensRad	Radioprotection

QUADRAM INSTITUTE BIOSCIENCE	RIC	FNS-CLOUD	Life sciences
RICARDO-AEA LTD	SOC. CONSUL.	ODYSSEE-MURE	Energy efficiency
ROYAL ALLOWAY AND BEDFORD NEW COLLEGE	EDU	NEWCOTIANA	Life sciences
RWM - RADIOACTIVE WASTE MANAGEMENT LIMITED	PUB	MODERN2020	Energy - fission waste
SCIENCE AND TECHNOLOGY FACILITIES COUNCIL	RIC	EUPRAXIA XLS	Energy - fission FEL - Free Electron Lasers
SEC NRS - SCIENTIFIC AND ENGINEERING CENTRE FOR NUCLEAR AND RADIATION	PUB	FASTNET	Energy - fission safety
SHFCA - THE SCOTTISH HYDROGEN AND FUEL CELL ASSOCIATION LTD	ASSOC	HYLAW	Energy - hydrogen
TATA STEEL UK LIMITED	IND	RETRACE	Environment - circular economy
THE ENERGY SAVING TRUST	ALTRO	CA-EED 2 X-tendo	Energy efficiency Energy
THE JAMES HUTTON INSTITUTE	RIC	G2P-SOL	Life sciences - food genetic
THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS	EDU	MILEDI	ICT
THERACELL ADVANCED BIOTECHNOLOGY LTD	IND	VALUEMAG	Industrial processes
UKAEA	RIC	GEMMA M4F TRANSAT	Materials Energy - fission modelling Energy - fission waste
UNITED KINGDOM RESEARCH AND INNOVATION	RIC	Beyond EPICA	Environment - climate change
UNIV. ASTON	EDU	AMBITION BRISK II	Energy - renewable Energy - renewable
UNIV. BANGOR	EDU	SUMCASTEC	Health
UNIV. BATH	EDU	EoCOE-II	ICT
UNIV. BIRMINGHAM	EDU	BALANCE EC4SafeNano	Energy - renewable Nanotechnology - materials
UNIV. BRISTOL	EDU	CHANCE	Energy - fission waste
UNIV. BUCKINGHAMSHIRE NEW	EDU	SOCLIMPACT	Environment - climate change
UNIV. CAMBRIDGE	EDU	BE-OI ESFR-SMART	Environment - climate change Energy - fission safety
UNIV. CARDIFF	EDU	MRTDosimetry	Metrology
UNIV. COLLEGE LONDON	EDU	COP21 RIPPLES FocusCoE	Environment - climate change ICT

	UNIV. COVENTRY	EDU	M4F	Energy - fission modelling
	UNIV. CRANFIELD	EDU	INSHIP	Energy - solar
	UNIV. EAST ANGLIA	EDU	SECLI-FIRM	Environment - climate change
	UNIV. EDINBURGH	EDU	OCEANSET	Energy - renewable
	UNIV. LANCASTER	EDU	XLS	FEL - Free Electron Lasers
	UNIV. LEEDS	EDU	CRESCENDO	Environment - modelling
			MED-GOLD	Environment - climate change
	UNIV. MANCHESTER	EDU	SANDA	Energy - fission
	UNIV. NOTTINGHAM	EDU	GEMMA	Materials
	UNIV. OF KENT	EDU	RETRACE	Environment - circular economy
	UNIV. OF WALES TRINITY SAINT DAVID ROYAL CHARTER UWTSD	EDU	FNS-CLOUD	Life sciences
	UNIV. OXFORD BROOKES	EDU	SEPARATE	Radioprotection
	UNIV. PLYMOUTH	EDU	TRANSAT	Energy - fission waste
	UNIV. READING	EDU	S2S4E	Environment - modelling
	UNIV. ROYAL ALLOWAY OF LONDON	EDU	EUROCAROTEN	Life sciences - food genetic
	UNIV. STRATHCLYDE	EDU	EUPRAXIA	Energy - fission
			MODERN2020	Energy - fission waste
	UNIV. WARWICK	EDU	Bi-Stretch-4-Biomed	Nanotechnology - materials
	UNIV. YORK	EDU	CRM-EXTREME	Raw materials
	WAIDE STRATEGIC EFFICIENCY LIMITED	SOC. CONSUL.	INTAS	Energy efficiency
	WAVE ENERGY SCOTLAND LIMITED	RIC	OCEANSET	Energy - renewable
	WEMC - WORLD ENERGY AND METEOROLOGY CENTER	Altro	SECLI-FIRM	Environment - climate change
	WOOD NUCLEAR LIMITED	IND	MUSA	Energy - fission safety
Repubblica Ceca	ACADEMY OF SCIENCES	RIC	EUROCAROTEN	Life sciences - food genetic
	ADVAMAT SRO	PMI	ICARUS	Nanotechnology - materials
	CENTRUM VYZKUMU REZ S.R.O.	RIC	F4E-FPA-372-SG04	Energy - fusion
			GEMMA	Materials
			M4F	Energy - fission modelling
			SANDA	Energy - fission
			SESAME.	Energy - fission safety
	CMI CZECH METROLOGY INSTITUTE	RIC	IMPRESS II	Metrology

		METRODECOM II	Metrology - decommissiong
		MRTDosimetry	Metrology
		PREPAREDNESS	Metrology
		PRISM-eBT	Radioprotection
CZECHGLOBE - GLOBAL CHANGE RESEARCH INSTITUTE OF THE CZECH ACADEMY	RIC	RINGO	Environment - modelling
ENVIROS S.R.O.	SOC. CONSUL.	FEEDSCHOOLS	Energy efficiency
		guarantEE	Energy efficiency
		ODYSSEE-MURE	Energy efficiency
IPPCAS - Institute of Plasma Physics of the Czech Academy of Sciences	RIC	F4E-FPA-327-SG06	Energy - fusion
KRNAP - KRKONOŠE MOUNTAINS NATIONAL PARK	PUB	MaGICLandscapes	Environment
MILITARY TECHNICAL INSTITUTE	PUB	PREPAREDNESS	Metrology
MINISTRY OF INDUSTRY AND TRADE	PUB	CA-EED 2	Energy efficiency
		CAV_EPBD	Energy efficiency
NRPI National Radiation Protection Institute	RIC	CONCERT	Radioprotection
NUCLEAR PHYSICS INSTITUTE ASCR	RIC	ARIEL	Energy - fission
NUVIA A.S.	IND	METRODECOM II	Metrology - decommissiong
		PREPAREDNESS	Metrology
RADIOACTIVE WASTE REPOSITORY	PUB	MODERN2020	Energy - fission waste
Regional Development Agency of the Pardubice Region	AG. ENERGIA	CONDEREFF	Environment - utilisation of waste
RILOG - Silva Tarouca Research Institute for Landscape and Ornamental Gardening	RIC	MaGICLandscapes	Environment
SEI - STATNI ENERGETICKA INSPECKCE	PUB	ANTICSS	Energy efficiency
		EEPLIANT 3	Energy efficiency
SEVEn THE ENERGY EFFICIENCY CENTER	AG. ENERGIA	ANTICSS	Energy efficiency
		INTAS	Energy efficiency
UJV REZ a.s.	RIC	FASTNET	Energy - fission safety
		IVMR	Energy - fission safety
		R2CA	Energy - fission safety
UNIV. CZECH OF LIFE SCIENCES PRAGUE	EDU	METROFOOD-RI	Metrology
UNIV. CZECH TECHNICAL IN PRAGUE	EDU	MICADO	Energy - fission waste
		MODERN2020	Energy - fission waste
UNIV. OF CHEMISTRY AND TECHNOLOGY PRAGUE	EDU	CRM-EXTREME	Raw materials

			REEF 2W	Energy - renewable
	VEOLIA	RIC	REEF 2W	Energy - renewable
Romania	AAECR - ROMANIAN ASSOCIATION OF ENERGY AUDITORS FOR BUILDINGS	ASSOC	X-tendo	Energy
	ACADEMIA TEHNICA MILITARA	EDU	EXERTER	Security
	AEEPM - AGENCY FOR ENERGY EFFICIENCY AND ENVIRONMENTAL PROTECTION	AG. ENERGIA	PUBLENEF	Energy efficiency
	ANRE - ROMANIAN ENERGY REGULATORY AUTHORITY	ALTRO	INTAS	Energy efficiency
			ODYSSEE-MURE	Energy efficiency
	EXECUTIVE UNIT FOR FINANCING EDUCATION HIGHER, RESEARCH DEVELOPMEN	AG. FINANZ.	WaterWorks2014	Environment - water resources
	IBA - NATIONAL INSTITUTE OF RESEARCH AND DEVELOPMENT FOR FOOD BIORES	RIC	METROFOOD-RI	Metrology
	IFA - INSTITUTUL DE FIZICA ATOMICA	RIC	CONCERT	Radioprotection
	IFIN HH HORIA HULUBEI NATIONAL INST. OF PHYSICS AND NUCLEAR ENGINEERIN	RIC	ARIEL	Energy - fission
			SANDA	Energy - fission
			TRANSAT	Energy - fission waste
	IGPR - INSPECTORATUL GENERAL AL POLITIEI ROMANE	PUB	EXERTER	Security
	IMNR - NATIONAL R&D INSTITUTE FOR NON FERROUS AND RARE METALS	RIC	CRM-EXTREME	Raw materials
	INFLPR - NATIONAL INSTITUTE FOR LASER, PLASMA & RADIATION PHYSICS	RIC	PULSE-COM	Materials
	INSTITUTUL NAIONAL DE CERCETARE DEZVOLTARE ÎN SILVICULTURA "MARIN DRA	RIC	MOTTLES	Environment - climate change
	MINISTRY OF REGIONAL DEVELOPMENT AND PUBLIC ADMINISTRATION	PUB	CAV_EPBD	Energy efficiency
	MUNICIPALITY OF GALATI	ENLOC	Urb-En Pact	Energy efficiency
	NATIONAL INST. OF R&D FOR OPTOELECTRONICS	RIC	RINGO	Environment - modelling
	NATIONAL INSTITUTE FOR MARINE RESEARCH AND DEVELOPMENT "GRIGORE AN	RIC	SeaDataCloud	Environment - marine
	NATIONAL RESEARCH AND DEVELOPMENT INSTITUTE FOR CRYOGENICS AND ISO	RIC	HYLAW	Energy - hydrogen
	PROECO – CBRNE	ASSOC	RESIST	Security
	RATEN - REGIA AUTONOMA PENTRU ACTIVITATI NUCLEARE	RIC	CHANCE	Energy - fission waste
			FASTNET	Energy - fission safety
			GEMMA	Materials
			PIACE	Energy - fission safety
	SITEX 45 SRL	PMI	PULSE-COM	Materials
	TUD BUSINESS CONSULTING SRL	SOC. CONSUL.	guarantEE	Energy efficiency
	UEFISCDI - UNIT EXECUTIVE FOR FUNDING HIGHER EDUCATION, RESEARCH DEVE	RIC	CICERONE	Environment - circular economy
			EXPAND	Urbanisation

			EXPAND II	null
	UNIV. BUCAREST	EDU	SANDA	Energy - fission
	UNIV. OF AGRICULTURAL SCIENCES AND VETERINARY MEDICINE	EDU	EUROCAROTEN	Life sciences - food genetic
	UNIV. OVIDIUS CONSTANTZA	EDU	EIT Raw Materials SPARK	Raw materials
	UNIV. POLITECNICA BUCAREST	EDU	CRM-EXTREME	Raw materials
Russia	RIHMI-WDC ALL-RUSSIAN RESEARCH INSTITUTE OF HYDROMETEOROLOGICAL IN	RIC	SeaDataCloud	Environment - marine
	RUSSIAN ACADEMY OF SCIENCE	EDU	SeaDataCloud	Environment - marine
Serbia	CAPACITY DEVELOPMENT IN NUTRITION RESEARCH-CAPNUTRA	Altro	FNS-CLOUD	Life sciences
	ELECTRICAL ENGINEERING INSTITUTE NIKOLA TESLA	RIC	ODYSSEE-MURE	Energy efficiency
	UNIV. NOVISAD	EDU	CRM-EXTREME EUROCAROTEN	Raw materials Life sciences - food genetic
	VINCA INSTITUTE OF NUCLEAR SCIENCES	RIC	CRM-EXTREME PREPAREDNESS	Raw materials Metrology
Slovacchia	AB MERIT - Nucler Science and Software	SOC. CONSUL.	FASTNET	Energy - fission safety
	CITY OF BRATISLAVA	ENLOC	ARCH	Environment - cultural heritage
	ENERGY CENTRE BRATISLAVA	ALTRO	guarantEE	Energy efficiency
	IVS - Company for Engineering Calculations Trnava, Ltd	RIC	IVMR	Energy - fission safety
	SIEA -SLOVAK INNOVATION AND ENERGY AGENCY	AG. ENERGIA	ODYSSEE-MURE	Energy efficiency
	SLOVAK ACADEMY OF SCIENCES INST. OF MATERIALS RESEARCH	RIC	CRM-EXTREME	Raw materials
	SLOVAK ACADEMY OF SCIENCES INST. OF PHYSICS	RIC	VALUEMAG	Industrial processes
	TSUS - BUILDING TESTING AND RESEARCH INSTITUTE	RIC	CAV_EPBD	Energy efficiency
	UNIV. COMENIO BRATISLAVA	EDU	ARCH	Environment - cultural heritage
	UNIV. SLOVAK TECHNOLOGY BRATISLAVA	EDU	EUROCAROTEN	Life sciences - food genetic
	UVS - Institute for Adult Education and Services	Altro	Net-UBIEP	Energy efficiency
	VIAEUROPA COMPETENCE CENTRE SRO	RIC	Net-UBIEP	Energy efficiency
	VUJE TRNAVA INC ENGINEERING, DESIGN AND RESEARCH ORGANISATION	RIC	CONCERT	Radioprotection
Slovenia	ARRS - SLOVENIAN RESEARCH AGENCY	RIC	EXPAND	Urbanisation
	BISTRA	RIC	GREENCAP	Energy - renewable
	CHAMBER OF COMMERCE AND INDUSTRY OF SLOVENIA	ASSOC	PEFMED	Life sciences - food industry
	COMUNE DI SLOVENSKA BISTRICA	ENLOC	FEEDSCHOOLS	Energy efficiency
	COSYLAB LABORATORY FOR CONTROL SYSTEMS DD	RIC	MYRTE	Energy - fission

	GEN Energija	IND	NARSIS	Energy - fission safety
			PIACE	Energy - fission safety
	GEOZS -GEOLOGICAL SURVEY OF SLOVENIA	RIC	SCRREEN	Raw materials
	GRADBENI INSTITUT ZRMK DOO	ALTRO	CONZEBS	Energy saving
	GS1 SLOVENIJA	Altro	FNS-CLOUD	Life sciences
	JSI JOZEF STEFAN INSTITUT	RIC	ARIEL	Energy - fission
			FNS-CLOUD	Life sciences
			guarantEE	Energy efficiency
			METROFOOD-RI	Metrology
			NARSIS	Energy - fission safety
			ODYSSEE-MURE	Energy efficiency
			PIACE	Energy - fission safety
			PREPAREDNESS	Metrology
			SANDA	Energy - fission
			SESAME.	Energy - fission safety
			TRANSAT	Energy - fission waste
	KSSENA	AG. ENERGIA	IMEAS	Energy - renewable
	LEA SPODNJE PODRAVJE	Altro	FEEDSCHOOLS	Energy efficiency
	MINISTRY OF ECONOMIC DEVELOPMENT AND TECHNOLOGY - Market inspectorate	PUB	EEPLIANT 3	Energy efficiency
	MINISTRY OF THE ENVIRONMENT AND SPATIAL PLANNING, Slovenian Environment A	PUB	GREENCAP	Energy - renewable
	MOC - Mestna obcina Celje	ENLOC	IMEAS	Energy - renewable
	NIB NATIONAL INSTITUTE OF BIOLOGY	RIC	SeaDataCloud	Environment - marine
	THE HOUSING FUND OF REPUBLIC OF SLOVENIA	PUB	CONZEBS	Energy saving
	UNIV. LJUBLJANI	EDU	CRM-EXTREME	Raw materials
			EUROCAROTEN	Life sciences - food genetic
	UNIV. MARIBOR	EDU	CICERONE	Environment - circular economy
	ZAG - SLOVENIAN NATIONAL BUILDING AND CIVIL ENGINEERING INST.	RIC	CRM-EXTREME	Raw materials
	ZRMK - BUILDING AND CIVIL ENGINEERING INSTITUTE	RIC	CAV_EPBD	Energy efficiency
Spagna	ACER - ASOCIACION CANARIA DE ENERGIAS RENOVABLES	Altro	WINWIND	Energy - renewable
	ACONDICIONAMIENTO TARRASENSE ASSOCIACION	RIC	IN-POWER	Materials
	AIDIMME INSTITUTO TECNOLOGICO METALMECANICO, MUEBLE, MADERA, EMBAL	RIC	NIMBLE	Industry support

AITEMIN - Asociación para la Investigación y Desarrollo Industrial de los Recursos Natural	RIC	MODERN2020	Energy - fission waste
ALBA - CELLS CONSORCIO PARA LA CONSTRUCCION EQUIPAMIENTO Y EXPLOTACION DEL LABORATORIO DE LUZ SINCROTRON	RIC	XFEL	FEL - Free Electron Lasers
AMPHOS 21 GROUP SL	IND	SCRREEN	Raw materials
ARCELORMITTAL SESTAO SL	IND	RESLAG	Industrial processes
AWS TRUEPOWER SL	Altro	SECLI-FIRM	Environment - climate change
AYUNTAMENTO DE MADRID	ENLOC	VEG-GAP	Environment - air quality
AZTI FOUNDATION	ENLOC	PELAGOS	Energy - renewable
BARCELONA SUPERCOMPUTING CENTER - CENTRO NACIONAL DE SUPERCOMPUTACION	RIC	EoCOE-II FocusCoE MED-GOLD S2S4E	ICT ICT Environment - climate change Environment - modelling
BCNecologia	Altro	GREENCAP	Energy - renewable
BUSINESS AND INNOVATION CENTRE OF VALENCIA - CCEI VALENCIA	RIC	BLUE DEAL	Energy - renewable
CATALONIA INSTITUTE FOR ENERGY RESEARCH	RIC	EFFICIENT BUILDINGS	Energy efficiency
CDTI CENTRO PARA EL DESARROLLO TECNOLOGICO INDUSTRIAL	SOC. CONSUL.	WaterWorks2014	Environment - water resources
CEM CENTRO ESPANOL DE METROLOGIA	RIC	IMPRESS II	Metrology
CENER NATIONAL RENEWABLE ENERGY CENTRE	RIC	BRISK II	Energy - renewable
CENTRO DE INVESTIGACION COOPERATIVADE ENERGIAS ALTERNATIVAS FUNDACION	RIC	ORC-PLUS RESLAG	Energy - solar Industrial processes
CETECIMA - TECHNOLOGICAL CENTER OF MARINE SCIENCE	Altro	SOCLIMPACT	Environment - climate change
CIEMAT	RIC	ARIEL CONCERT ESFR-SMART FASTNET GEMMA GREENCAP HORIZON-STE INSHIP M4F METRODECOM II MUSA	Energy - fission Radioprotection Energy - fission safety Energy - fission safety Materials Energy - renewable Energy - solar Energy - solar Energy - fission modelling Metrology - decommissiong Energy - fission safety

	MYRTE	Energy - fission
	NESTER	Energy - solar
	PUBLENEF	Energy efficiency
	R2CA	Energy - fission safety
	SANDA	Energy - fission
	SFERA III	Energy - solar
	TRANSAT	Energy - fission waste
CIRCE - Centro de investigación de recursos y consumos energéticos	RIC	SCOoPE	Energy efficiency
CLANER - ANDALUSIAN CLUSTER OF RENEWABLE ENERGIES AND ENERGY EFFIC	Altro	BLUE DEAL	Energy - renewable
COMUNIDAD DE MADRID	ENLOC	ANTICSS	Energy efficiency
CONSORCIO PARA EL DISENO, CONSTRUCCION, EQUIPAMIENTO Y EXPLOTACION	PUB	OCEANSET	Energy - renewable
COOPERATIVAS AGRO-ALIMENTARIAS DE ESPANA	ASSOC	SCOoPE	Energy efficiency
CSIC SPANISH NATIONAL RESEARCH COUNCIL	RIC	EIT Raw Materials Train Call	Raw materials
		Net-UBIEP	Energy efficiency
		NEWCOTIANA	Life sciences
		SQUARE4ECVs	Environment - modelling
		XLS	FEL - Free Electron Lasers
CSIC-CEBAS	RIC	POREM	Environment - utilisation of waste
CTAQUA - AQUACULTURE TECHNOLOGICAL CENTER	RIC	SIMBA	Life sciences - food industry
CTN MARINE TECHNOLOGY CENTRE	SOC. CONSUL.	PELAGOS	Energy - renewable
DCOOP SOCIEDAD COOPERATIVA ANDALUZA	Altro	MED-GOLD	Environment - climate change
DE LA CUEVA GONZALEZ COTERA JAVIER	SOC. CONSUL.	FNS-CLOUD	Life sciences
DNV-GL BUSINESS ASSURANCE	Altro	PEFMED	Life sciences - food industry
EASYTOSEE AGTECH, SOCIEDAD LIMITADA	PMI	MED-GOLD	Environment - climate change
ECODES FUNDACION ECOLOGIA Y DESARROLLO	Altro	GreenAbility	Energy efficiency
ECORYS ESPANA	RIC	WINWIND	Energy - renewable
EDPR - EDP RENEWABLES	IND	S2S4E	Environment - modelling
EIT CLIMATE KIC SL	Altro	CICERONE	Environment - circular economy
EMPRESA DE TRANSFORMACION AGRARIA SA SME MP	SOC. CONSUL.	OpenIACS	ICT
EMPRESA NACIONAL DE RESIDUOS RADIACTIVOS S.A.	PUB	MODERN2020	Energy - fission waste
EMPRESARIOS AGRUPADOS INTERNACIONAL SA	IND	MYRTE	Energy - fission

		PIACE	Energy - fission safety
EVE ENTE VASCO DE LA ENERGIA	RIC	OCEANSET	Energy - renewable
FEVAMA - FEDERACION EMPRESARIAL DE LA MADERAY MUEBLE DE LA COMUNID	IND	NIMBLE	Industry support
FIAB - SPANISH FEDERATION OF FOOD AND DRINK INDUSTRIES	ASSOC	PEFMED	Life sciences - food industry
FOUNDATION FOR THE PROMOTION OF INDUSTRIAL INNOVATION	ALTRO	INTAS	Energy efficiency
FUNDACIO EURECAT	RIC	METROFOOD-RI	Metrology
FUNDACION CENER-CIEMAT	RIC	AMBITION	Energy - renewable
FUNDACION CIDETEC	RIC	Si-DRIVE	Nanotechnology - materials
FUNDACION DE LA COMUNITAT VALENCIANA PARA LA PROMOCION ESTRATEGICA	EDU	ARCH	Environment - cultural heritage
FUNDACION GAIKER	RIC	EIT Raw Materials C2CC	Raw materials
FUNDACION IMDEA ALIMENTACION	RIC	FNS-CLOUD	Life sciences
FUNDACION LABORAL DE LA CONSTRUCCION	Altro	Net-UBIEP	Energy efficiency
FUNDACION PARA EL DESARROLLO DE LAS NUEVAS TECNOLOGIAS DEL HIDROGE	RIC	HYLAW	Energy - hydrogen
FUNDACION PARA EL FOMENTO DE LA INNOVACION INDUSTRIAL	RIC	ANTICSS	Energy efficiency
		EEPLIANT 3	Energy efficiency
FUNDACION TECNALIA RESEARCH & INNOVATION	RIC	ARCH	Environment - cultural heritage
		COPERNICUS SIS	Environment - modelling
		CRM-EXTREME	Raw materials
		EC4SafeNano	Nanotechnology - materials
		EIT RAW MATERIALS 3DMPWIRE	Raw materials
		EIT Raw Materials CIRCuIT	Circular economy
		EIT Raw Materials Circular TP	Raw materials
		SCRREEN	Raw materials
GMV AEROSPACE AND DEFENCE SA	IND	MED-GOLD	Environment - climate change
HASTEN VENTURES AIE	Altro	RESLAG	Industrial processes
HIJOS DE A. FERRER DALMAU S.A.	SOC. CONSUL.	EIT Raw Materials C2CC	Raw materials
IDAE INSTITUTO PARA LA DIVERSIFICACION Y AHORRO DE LA ENERGIA	RIC	CAV_EPBD	Energy efficiency
		meetMED	Energy
		ODYSSEE-MURE	Energy efficiency
IDAEA - CSIC	RIC	IDEM	Environment - marine
IDERTIA SOLUCIONES INDUSTRIALES	IND	EIT Raw Materials Circular TP	Raw materials

	IEO - INSTITUTO ESPANOL DE OCEANOGRAFIA	RIC	SeaDataCloud	Environment - marine
	IK4 RESEARCH ALLIANCE	RIC	AMBIENCE	Energy efficiency
	INSTITUT CATALA D'ENERGIA	AG. ENERGIA	guarantEE	Energy efficiency
	INSTITUTO NACIONAL DE TECNICA AEROESPACIAL	RIC	ENTRAP	Security
	INSTITUTO TECNOLOGICO DE CANARIAS S.A.	RIC	SOCLIMPACT	Environment - climate change
	INTA - INSTITUTO NACIONAL DE TECNICA AEROESPACIAL ESTEBAN TERRADAS	RIC	EXERTER	Security
	IRIS - INNOVACIO I RECERCA INDUSTRIAL I SOSTENIBLE SL	IND	VALUEMAG	Industrial processes
	Maritime Cluster of Murcia	PUB	PELAGOS	Energy - renewable
	MICRONADIR SL	PMI	POREM	Environment - utilisation of waste
	MICUNA SL	PMI	NIMBLE	Industry support
	MINISTERIO DE ECONOMIA Y COMPETITIVIDAD	PUB	WaterWorks2014	Environment - water resources
	MINISTERIO DEL INTERIOR	PUB	ENTRAP EXERTER	Security Security
	NNERGIX ENERGY MANAGEMENT SL	SOC. CONSUL.	S2S4E	Environment - modelling
	OCU - ORGANIZACION DE CONSUMIDORES Y USUARIOS-ASOCIACION	ASSOC	HARP	Energy efficiency
	OHL INDUSTRIAL SL	IND	IN-POWER	Materials
	OPTIMIZACION ORIENTADA A LA SOSTENIBILIDAD SL	Altro	SCRREEN	Raw materials
	R2M SOLUTION SPAIN SL	SOC. CONSUL.	HARP	Energy efficiency
	RIBERA CONSORTIUM	AG. ENERGIA	TEESCHOOLS	Energy efficiency
	SAPIENZA SL	IND	ATENA	Cybersecurity
	SCAYLE - Fundación del Centro de Supercomputación de Castilla y León	PUB	OpenIACS	ICT
	SESDERMA SL	IND	NEWCOTIANA	Life sciences
	UNIV. ALICANTE	EDU	M4F	Energy - fission modelling
	UNIV. ALMEIRA	EDU	SFERA III	Energy - solar
	UNIV. BARCELONA	EDU	IDEM	Environment - marine
	UNIV. BURGOS	EDU	ICARUS SCRREEN	Nanotechnology - materials Raw materials
	UNIV. CARLOS III MADRID	EDU	ENTRAP IMPRESS II OpenIACS	Security Metrology ICT
	UNIV. DE LAS PALMAS DE GRAN CANARIA	EDU	RINGO	Environment - modelling

			SOCLIMPACT	Environment - climate change
	UNIV. DE SEVILLA	EDU	ARIEL	Energy - fission
			EUROCAROTEN	Life sciences - food genetic
			INSHIP	Energy - solar
	UNIV. JAUME	EDU	NANOUPTAKE	Energy
	UNIV. OF BASQUE COUNTRY	EDU	PREPAREDNESS	Metrology
	UNIV. POLITECNICA DE CATALUNYA	EDU	SANDA	Energy - fission
	UNIV. POLITECNICA MADRID	EDU	ESFR-SMART	Energy - fission safety
			PIACE	Energy - fission safety
			SCOoPE	Energy efficiency
			VEG-GAP	Environment - air quality
	UNIV. POLITECNICA VALENCIA	EDU	CONDEREFF	Environment - utilisation of waste
			G2P-SOL	Life sciences - food genetic
	U-SPACE	SOC. CONSUL.	BLUE DEAL	Energy - renewable
	VALENCIAN FEDERATION OF MUNICIPALITIES AND PROVINCES	PUB	TEESCHOOLS	Energy efficiency
	XUNTA DE GALICIA - CONSELLERIA DE MEDIO AMBIENTE E DESENVOLVEMENTO S	PUB	CICERONE	Environment - circular economy
	ZABALA INNOVATION CONSULTING	SOC. CONSUL.	IntEnSys4EU	Energy
Stati Uniti D'america	EPRI - ELECTRIC POWER RESEARCH INSTITUTE INC	RIC	MUSA	Energy - fission safety
Stati Uniti D'America	USNRC - U.S. NUCLEAR REGULATORY COMMISSION	PUB	FASTNET	Energy - fission safety
Sudafrica	UNIV. CAPE TOWN	EDU	COP21 RIPPLES	Environment - climate change
	WRC - WATER RESEARCH COMMISSION	RIC	WaterWorks2014	Environment - water resources
Svezia	ASTAREAL	IND	EUROCAROTEN	Life sciences - food genetic
	BOVERKET - National Board of Housing, Building and Planning	PUB	CAV_EPBD	Energy efficiency
	CHALMERS TEKNISKA HOEGSKOLA AKTIEBOLAG	EDU	CRM-EXTREME	Raw materials
			ESFR-SMART	Energy - fission safety
			SCRREEN	Raw materials
	FOI SWEDISH DEFENCE RESEARCH AGENCY	RIC	ENTRAP	Security
			EXERTER	Security
	IQ SAMHALLSBYGGNAD AB - Swedish Centre for Innovation and Quality in the Built Envi	ALTRO	EXPAND	Urbanisation
			EXPAND II	null
	IVL - SWEDISH ENVIRONMENTAL RESEARCH INSTITUTE	RIC	CICERONE	Environment - circular economy

	KUNGLIGA TEKNISKA HOEGSKOLAN	EDU	BRISK II	Energy - renewable
			FocusCoE	ICT
			GEMMA	Materials
			INSPYRE	Energy - fission
			IVMR	Energy - fission safety
			M4F	Energy - fission modelling
			SESAME.	Energy - fission safety
	LANTMANNEN EKONOMISK FORENING	ALTRO	SCOoPE	Energy efficiency
	LINDBACKS BYGG AB	IND	NIMBLE	Industry support
	LLOYD'S REGISTER CONSULTING - ENERGY AB	SOC. CONSUL.	FASTNET	Energy - fission safety
	RISE - THE SWEDISH RESEARCH INSTITUTE	RIC	IMPRESS II	Metrology
	SGU GEOLOGICAL SURVEY OF SWEDEN	RIC	SCRREEN	Raw materials
	SKB - Swedish Nuclear Fuel and Waste Management Company	RIC	MODERN2020	Energy - fission waste
	SMHI - SWEDISH METEOROLOGICAL AND HYDROLOGICAL INSTITUTE	PUB	CRESCENDO	Environment - modelling
			S2S4E	Environment - modelling
			SeaDataCloud	Environment - marine
	SMT AB SANDVIK MATERIALS TECHNOLOGY	IND	GEMMA	Materials
			qSOFC	Energy - hydrogen
	SP SWEDISH NATIONAL TESTING AND RESEARCH INSTITUTE	RIC	EC4SafeNano	Nanotechnology - materials
	STEM SWEDISH ENERGY AGENCY	AG. ENERGIA	EEPLIANT 3	Energy efficiency
			ODYSSEE-MURE	Energy efficiency
	SWEDISH POLICE AUTHORITY	PUB	ENTRAP	Security
			EXERTER	Security
	SWEDISH RADIATION SAFETY AUTHORITY	RIC	CONCERT	Radioprotection
			FASTNET	Energy - fission safety
	THE SWEDISH RESEARCH COUNCIL FORMAS	RIC	WaterWorks2014	Environment - water resources
	UNIV. DALARNA	EDU	RETRACE	Environment - circular economy
	UNIV. GOETEBORGS	EDU	MODERN2020	Energy - fission waste
	UNIV. LUND	EDU	CRESCENDO	Environment - modelling
			MRTDosimetry	Metrology
			RINGO	Environment - modelling

	UNIV. OF TECHNOLOGY LULEA	EDU	NIMBLE	Industry support
	UNIV. STOCCOLMA	EDU	BE-OI	Environment - climate change
			Beyond EPICA	Environment - climate change
			EUROCAROTEN	Life sciences - food genetic
	UNIV. UPPSALA	EDU	ARIEL	Energy - fission
			F4E-FPA-327-SG06	Energy - fusion
			SANDA	Energy - fission
			XLS	FEL - Free Electron Lasers
	VATGAS SVERIGE IDEELL FORENING	ASSOC	HYLAW	Energy - hydrogen
Svizzera	ALSTOM (SCHWEIZ) AG	IND	RESLAG	Industrial processes
	ASCOMP GMBH	SOC. CONSUL.	SESAME.	Energy - fission safety
	BACHER ENERGIE AG	SOC. CONSUL.	IntEnSys4EU	Energy
	CERN - EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH	RIC	ARIEL	Energy - fission
			MYRTE	Energy - fission
			SANDA	Energy - fission
			XLS	FEL - Free Electron Lasers
	CREM - CENTRE FOR ENERGY AND MUNICIPAL RESEARCH	EDU	IMEAS	Energy - renewable
	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE	EDU	AD ASTRA	Energy - hydrogen
			AMPERE	Energy - photovoltaic
			BLAZE	Energy - renewable
			WASTE2GRIDS	Energy - hydrogen
			WASTE2WATTS	Energy - hydrogen
	EMPA MATERIALS SCIENCE AND TECHNOLOGY	RIC	Si-DRIVE	Nanotechnology - materials
	EREP SA, ETUDES ET APPLICATIONS D'ENERGIES RENOUVELABLES ET D'EPURAT	SOC. CONSUL.	WASTE2WATTS	Energy - hydrogen
	ETH - FEDERAL INSTITUTE OF TECHNOLOGY ZURICH	EDU	CRESCENDO	Environment - modelling
			INSHIP	Energy - solar
			MODERN2020	Energy - fission waste
			RESLAG	Industrial processes
			RINGO	Environment - modelling
			SFERA III	Energy - solar
			SQUARE4ECVs	Environment - modelling

	HTCERAMIX SA	IND	WASTE2GRIDS	Energy - hydrogen
	MEYER BURGER AG	IND	AMPERE	Energy - photovoltaic
			Si-DRIVE	Nanotechnology - materials
	MEYER BURGER RESEARCH AG	RIC	AMPERE	Energy - photovoltaic
	NAGRA - National Cooperative for the Disposal of Radioactive Waste	PUB	MODERN2020	Energy - fission waste
	PAUL SCHERRER INSTITUT	RIC	ELSMOR	Energy - fission
			ESFR-SMART	Energy - fission safety
			INSPYRE	Energy - fission
			M4F	Energy - fission modelling
			MUSA	Energy - fission safety
			SESAME.	Energy - fission safety
			WASTE2WATTS	Energy - hydrogen
	PHILIP MORRIS PRODUCTS S.A.	IND	NEWCOTIANA	Life sciences
	PREMOTECH GMBH	IND	FNS-CLOUD	Life sciences
			METROFOOD-RI	Metrology
	UNIV. BERNA	EDU	BE-OI	Environment - climate change
			Beyond EPICA	Environment - climate change
	UNIV. OF APPLIED SCIENCES AND ARTS	EDU	EUROCAROTEN	Life sciences - food genetic
	UNIV. OF APPLIED SCIENCES OF SOUTHERN SWITZERLAND	EDU	CRM-EXTREME	Raw materials
	UNIV. OF APPLIED SCIENCES ZURICH ZHAW	EDU	ODYSSEE-MURE	Energy efficiency
	WORLD RESOURCES FORUM ASSOCIATION	ASSOC	CICERONE	Environment - circular economy
Taiwan	ASIAN VEGETABLE CROPS RESEARCH INSTITUTE	RIC	G2P-SOL	Life sciences - food genetic
	UNIV. NATIONAL CHENG KUNG	EDU	CICERONE	Environment - circular economy
Tunisia	ANME - TUNISIAN NATIONAL AGENCY FOR ENERGY CONSERVATION	AG. ENERGIA	meetMED	Energy
	UNIV. MANOUBA	EDU	SUPREME	Life sciences - food industry
Turchia	MINISTRY OF FOOD AGRICULTURE AND LIVESTOCK	PUB	G2P-SOL	Life sciences - food genetic
	MINISTRY OF INDUSTRY AND TECHNOLOGY	PUB	EEPLIANT 3	Energy efficiency
	SRDC SOFTWARE RESEARCH & DEVELOPMENT CONSULTANCY	IND	NIMBLE	Industry support
	SUEN - TURKISH WATER INSTITUTE	PUB	WaterWorks2014	Environment - water resources
	TUBITAK THE SCIENTIFIC AND TECHNOLOGICAL RESEARCH COUNCIL OF TURKEY	RIC	EXPAND II	null
			METROFOOD-RI	Metrology

	UNIV. AKDENIZ	EDU	EUROCAROTEN	Life sciences - food genetic
	UNIV. ANKARA	EDU	XLS	FEL - Free Electron Lasers
	UNIV. TECHNICAL MIDDLE EAST	EDU	HORIZON-STE	Energy - solar
			INSHIP	Energy - solar
			M4F	Energy - fission modelling
			SeaDataCloud	Environment - marine
			SFERA III	Energy - solar
Ucraina	ANALYTICAL RESEARCH BUREAU FOR NPP SAFETY	RIC	R2CA	Energy - fission safety
	ENERGORISK - LIMITED LIABILITY COMPANY ENERGORISK	SOC. CONSUL.	ELSMOR	Energy - fission
			MUSA	Energy - fission safety
	MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE	PUB	EXPAND II	null
	STATE ENTERPRISE STATE SCIENTIFIC AND TECHNICAL CENTER FOR NUCLEAR A	RIC	MUSA	Energy - fission safety
	UKRSCES - UKRAINIAN SCIENTIFIC CENTER OF ECOLOGY OF SEA	RIC	SeaDataCloud	Environment - marine
Ungheria	ADMATIS ADVANCED MATERIALS IN SPACE	PMI	ICARUS	Nanotechnology - materials
	ATOMKI - HUNGARIAN ACADEMY OF SCIENCES INST. FOR NUCLEAR RESEARCH	RIC	SANDA	Energy - fission
	BAY ZOLTAN NONPROFIT LTD. FOR APPLIED RESEARCH	RIC	EIT Raw Materials RESIELP	Raw materials
	FREDERIC JOLIOT CURIE NAT. RES. INST. FOR RADIOBIOLOGY AND RADIOHYGIEN	RIC	CONCERT	Radioprotection
	HUNGARIAN ACADEMY OF SCIENCES	EDU	CRM-EXTREME	Raw materials
			HYLAW	Energy - hydrogen
			INCLUDING	Energy - fission safety
	HUNGARIAN ACADEMY OF SCIENCES CENTRE FOR ENERGY RESEARCH	RIC	ARIEL	Energy - fission
			R2CA	Energy - fission safety
	INSTITUTE RUDER BOSKOVIC	RIC	PREPAREDNESS	Metrology
	MEKH - HUNGARIAN ENERGY AND UTILITIES REGULATORY AGENCY	PUB	CA-EED 2	Energy efficiency
			ODYSSEE-MURE	Energy efficiency
	MTA EK - HUNGARIAN ACADEMY OF SCIENCES/CENTRE FOR ENERGY RESEARCH	RIC	IVMR	Energy - fission safety
	OMSZ - HUNGARIAN METEOROLOGICAL SERVICE	PUB	RINGO	Environment - modelling
	SEMILAB	IND	AMPERE	Energy - photovoltaic
	UNIV. DEBRECEN	EDU	CAV_EPBD	Energy efficiency
	UNIV. MISKOLC	EDU	ICARUS	Nanotechnology - materials
	UNIV. PECS	EDU	EUROCAROTEN	Life sciences - food genetic

	UNIV. SZEGED	EDU	METROFOOD-RI	Metrology
	ZALA COUNTY FOUNDATION FOR ENTERPRISE PROMOTION	Altro	FEEDSCHOOLS	Energy efficiency

Allegato 2

Schede sintetiche dei progetti (in ordine alfabetico di acronimo)

N° Contratto: 633174

3EMOTION

Environmentally Friendly, Efficient Electric Motion

Coordinatore VAN HOOL N.V.
Belgio

n. partner: 18

Abstract

The 3EMOTION project will provide policymakers and financing institutions with the necessary arguments to invest in Fuel Cell Buses (FCB) as a cost effective strategy to accelerate the reduction of harmful local emissions while offering attractive co-modality options for commuters. By leveraging the experiences of earlier FCB demonstrations in overcoming the last technical and economic barriers, as well as significantly increasing the number of bus operators involved with FCBs, the project will support the achievements anticipated in the upcoming FCH-JU Bus Commercialisation Study, 2014. More specifically, the project will:
•Lower H2 consumption for FCB's to less than 9kg/100km (a 30% improvement over the FCH JU targets)
•Integrate latest drive train, fuel cells & battery technologies to lower the TCO and increase their actual lifetime
•Ensure Availability >90% without the need of permanent technical support, a major advance compared to that achieved under current FCH-JU projects
•Increase warranties (>15,000 hours) and improved delivery times of key components
•Reduce bus investment costs to 850K€ for a 13m bus (a reduction of 35% over the current generation of vehicles)
A pan-European consortium of public & private actors will achieve these challenging targets and objectives by:
•Operating 27 FCB in 5 leading EU cities: London, Rome, Flanders, Rotterdam, Cherbourg (6 already existing)
•Developing 3 new Hydrogen Refuelling Station (HRS)
•Conducting an evaluation assessment of the use of FCB & HRS (environment, economic, social) using the existing MAF
•Identifying the transferability model for accelerating the commercialisation of FCB's in the EU by comparing their latest performances with conventional/alternative technologies
•Consolidating and extending the network of H2 Bus Centres of Excellence to the project sites, in collaboration with the H2 Bus Alliance Global H2 Bus Platform and UITP.

Anno di stipula	2017
Tipo di progetto	CP - Progetto di collaborazione
Programma UE	Settimo Programma Quadro R&ST (2007-2013) JTI - Hydrogen
Data inizio	01-feb-17
Data scadenza	31-dic-19
Contributo totale	€ 14.999.983
Costo eleggibile totale	€ 39.232.163
Contributo a ENEA	€ 456.212
Costo eleggibile ENEA	€ 899.240
Doc. approvazione	293/2017/PRES
Codice atto	PT4AAN
Resp.scientifico ENEA	MC PHAIL STEPHEN JOHN
Unità	DTE-PCU-SPCT

Attività ENEA:

L'ENEA partecipa al progetto da febbraio 2017 e realizza attività tecnico/scientifiche relative all'integrazione di sistemi di produzione di idrogeno, in loco, per un rifornimento affidabile degli autobus, partecipando sostanzialmente alla progettazione e allo sviluppo di sistemi di controllo per il gassificatore a biomasse e monitorando, quindi, la qualità dell'idrogeno.

N° Contratto: 825027

AD ASTRA

HArnessing Degradation mechanisms to prescribe Accelerated Stress Tests for the Realization of SOC lifetime prediction Algorithms

Coordinatore ENEA
Italia

n. partner: 10

Abstract

AD ASTRA aims to define Accelerated Stress Testing (AST) protocols deduced from a systematic understanding of degradation mechanisms of aged components in solid oxide cell (SOC) stacks, operating in both fuel cell and electrolysis modes. In particular, fuel and oxygen electrode issues and interconnect contact loss will be tackled.
The project will build upon relevant information harvested in FCH JU projects, as well as make use of many samples taken from stacks operated in the field for thousands of hours, supplied by leading European SOC manufacturers across the two application areas CHP and P2X (combined heat&power generators and power-to-commodity energy storage).
The approach to harnessing the intricate phenomena causing critical performance degradation will be based upon a methodical analysis of inservice performance data correlated with post-operation states, augmented by a dual-focus campaign targeting macroscopic stack testing Procedures as well as specific component ageing tests. The probabilistic nature of degradation will be captured by slimming down deterministic simulation models through conception and integration of stochastic correlations between (nominal/accelerated) operating conditions and degradation effects, based on statistically significant data obtained from field-tests and purposely generated experiments. Stochastic interpretation will thus serve the physical description of dominant SOFC degradation mechanisms in CHP and P2X operation, but allowing rapid estimation of remaining useful stack life.
The combined results will be translated to validated test protocols that allow quantifying and predicting degradation in SOCs as a function of test aggravation, defining appropriate transfer functions between stress-accelerating and real-world conditions. The overall project approach will be formalized for adoption by the relevant standards-developing organisations.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 JTI - Hydrogen
Data inizio	01-gen-19
Data scadenza	31-dic-21
Contributo totale	€ 3.008.426
Costo eleggibile totale	€ 3.008.426
Contributo a ENEA	€ 399.250
Costo eleggibile ENEA	€ 399.250
Doc. approvazione	69/E72018/DTE
Codice atto	PT4AAU
Resp.scientifico ENEA	MC PHAIL STEPHEN JOHN
Unità	DTE-PCU-SPCT

Attività ENEA:

L'ENEA coordina il progetto (WP1) ed è l'interfaccia tra il consorzio e la Fuel Cells and Hydrogen Joint Undertaking (FCH JU).
Partecipa inoltre ai seguenti WP:
WP2: creazione di un databse con dati interni ed esterni al progetto, sviluppo campagne sperimentali. Elaborazione di protocolli per test accelerati;
WP3: attività sperimentali volte a monitorare sia le prestazioni di stack operati in condizioni critiche in situ sia le prestazioni di stack composti da componenti invecchiati artificialmente ex situ;
WP4: analisi post mortem con diversi tipi di spettroscopia;
WP5: in questo WP l'ENEA è il tramite tra il consorzio e la IEA e contribuisce allo sviluppo di un modello a parametri concentrati per simulare i meccanismi di degrado sui singoli componenti;
WP6: gestione del piano di disseminazione e valorizzazione del know-how e del prodotto generato nel progetto, diffusione nei mercati e promozione del prodotto facendo leva sulle piattaforme dedicate europee, mediante l'organizzazione di workshop e la pubblicazione di articoli.

N° Contratto: UIA03-322

AIR-HERITAGE

Improving the environmental quality of the City of Portici: Monitoring, Modelling, and Mitigating Air Pollution through participated and efficient Policies

Coordinatore COMUNE DI PORTICI
Italia

n. partner: 5

Abstract

AIR-HERITAGE foresees the development of an innovative, pervasive and versatile way of monitoring air quality that is integrated with the ordinary institutional monitoring. Through the modeling of the data collected with respect to the context and the preparation of a decision support tool that can be used by both public administrators and citizens, they will be able to adopt the most appropriate choices and behaviours. Citizens themselves will be able to compete directly in monitoring using portable detectors. Local communities, in a complementary and synergic way, will be sensitized to adopt virtuous behaviour.
AIR-HERITAGE aims to obtain a change in the way the components of the City of Portici assess and react to air quality issues, reducing the distances and barriers among them. In particular, AIR-HERITAGE success will impact on citizens mobility choices and policy engagement as well as UA policy decision making. Through the new pervasive monitoring stations network, the city AQ measuring, hi-res mapping, and remediation design capability will be established. Trough enhanced awareness of personal exposure, AIR-HERITAGE will define a new level of social cohesion for fighting environmental threats. Citizenship, Regulatory Monitoring Agencies, Research centers and Economical actors will enhance their support and engagement in AQ knowledge building, Policy making and implementation. As a final result, Air quality will improve in the areas most affected by car traffic. Most of the results will be transferable to cities that are subjected to the same forces at political, environmental, social, technical level.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi UIA - Urban Innovative Actions
Data inizio	01-nov-18
Data scadenza	31-ott-21
Contributo totale	€ 3.274.476
Costo eleggibile totale	€ 4.093.095
Contributo a ENEA	€ 557.510
Costo eleggibile ENEA	€ 693.500
Doc. approvazione	12/E/2019/DTE
Codice atto	PT2AAV
Resp.scientifico ENEA	DE VITO SAVERIO
Unità	DTE-FSN-DIN

Attività ENEA:

Le attività ENEA riguardano principalmente il monitoraggio diffuso e pervasivo della qualità dell'aria cittadina attuato con l'utilizzo del dispositivo MONICA.

N° Contratto: ENI/2018/404-536

Algeria

Assistance technique au programme d'appui de l'Union européenne aux secteurs des énergies renouvelables et de l'efficacité énergétique en Algérie

Coordinatore IBF - INTERNATIONAL CONSULTING SA

Belgio

n. partner: 4

Abstract

Ce marché concerne la composante Assistance Technique du Programme d'Appui au secteur des énergies renouvelables principalement électriques et de l'efficacité énergétique en Algérie, dont les principales parties prenantes sont le Ministère de l'Énergie, le Ministère de l'Environnement et des Énergies Renouvelables, le Ministère de l'Habitat, de l'Urbanisme et de la Ville, les Ministères de l'Industrie et du Commerce, la Commission de Régulation de l'Électricité et du Gaz (CREG), l'Agence Nationale pour la Promotion et la Rationalisation de l'Utilisation de l'Énergie (APRUE), les sociétés du groupe SONELGAZ (y compris GRTE, OS, SKTM et sociétés de distribution), ainsi que le Centre National d'Études et de Recherches Intégrées du Bâtiment (CNERIB) et le Centre de Développement des Énergies Renouvelables (CDER).
Il vise à fournir de l'expertise de haut niveau sur trois axes stratégiques :
Axe 1 - Institutionnel, politique et règlementaire
Axe 2 - Energies renouvelables
Axe 3 - Efficacite énergétique

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi ENI - European Neighbourhood Instru
Data inizio	08-apr-19
Data scadenza	07-feb-22
Contributo totale	€ 8.243.455
Costo eleggibile totale	€ 8.243.455
Contributo a ENEA	€ 2.060.864
Costo eleggibile ENEA	€ 2.171.935
Doc. approvazione	59/E/2019/DTE
Codice atto	PT0AAG
Resp.scientifico ENEA	DE IULIIS SIMONA
Unità	DTE

Attività ENEA:

L'ENEA svolge le attività necessarie al conseguimento degli obiettivi tramite l'Unità Studi Analisi e Valutazioni e i Dipartimenti "Tecnologie Energetiche", "Unità per l'Efficienza Energetica", "Sostenibilità dei sistemi produttivi e territoriali". L'ENEA ha un ruolo chiave nell'indirizzo delle politiche energetiche dell'Algeria sui temi dello sviluppo economico sostenibile in ambito energetico, ricoprendo un ruolo di primo piano anche con le aziende che in Algeria operano nel settore.

N° Contratto: 847054

AMBIENCE

Active managed Buildings with Energy performaNce Contracting

Coordinatore	VITO VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK	*n. partner:*	6
	Belgio		

Abstract

The AmBIENCe project aims at extending the concept of Energy Performance Contracting to Active Buildings and making it available and attractive to a wider range of buildings. AmBIENCe will provide new concepts and business models for performance guarantees of Active Buildings, combining savings from energy efficiency measures with additional savings and earnings resulting from the active control of assets leveraging for instance price based incentive contracts (Implicit Demand Response). The willingness to invest in additional sensorisation, ICT an IoT will be increased by offering adjacent other-than-energy services, e.g. related to comfort, security or maintenance. Within the course of AmBIENCe, we will leverage the experience of the project's business and research partners, and extend this through regional workshops where we will bring together various stakeholders to make an assessment of best practices and learnings. Based on this, an integrated modular concept will be proposed, and a proof-of-concept platform will be developed, to support the creation of Active Building Performance Contracts.

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-giu-19
Data scadenza	30-nov-21
Contributo totale	€ 1.999.875
Costo eleggibile totale	€ 1.999.875
Contributo a ENEA	€ 196.625
Costo eleggibile ENEA	€ 196.625
Doc. approvazione	45/E/2019/DTE
Codice atto	PT7AAL
Resp.scientifico ENEA	DI SOMMA MARIALAURA
Unità	DTE-STSN-SGRE

Attività ENEA:

L'ENEA è impegnato nei seguenti workpackage:
WP1 - Assessment of (enhanced) energy performance contracts and building demand response services in Europe, con il ruolo di leader;
WP2 - Development of an active building energy performance contract concept and business model in two pilots;
WP3 - Implementation and validation of the active building epc concept and business model in two pilots;
WP5 - Economic evaluation, exploitation and replication
WP6 - Market actors engagement through communication and dissemination
WP7 - Project management

N° Contratto: 731263

AMBITION

Advanced biofuel production with energy system integration

Coordinatore STIFTELSEN SINTEF

Norvegia

n. partner: 8

Abstract

The ECRIA project AMBITION aims to develop a long-term joint European Community Research and Innovation Agenda on the integration of biofuels production and surplus grid electricity valorisation. AMBITION brings together eight partners from eight different countries into a European wide lasting research partnership, which is closely linked to EERA Bioenergy. The current fragmentation in energy systems and an increasing share of intermittent energy ask for solutions providing integration and flexibility in the system. AMBITION targets the challenge of system flexibility by integrating (i.e. creating a bridge between) two forms of energy carriers, e.g. grid electricity and biofuels. Further, CO2 from current energy systems and industrial production can to be utilized as an alternative carbon source as an alternative to sequestration. The project targets a limited set of specific aspects (topics) of the integration challenge, which are in line with the priority areas identified in the SET plan Integrated Roadmap. Based on a short-term RIA, several key bottlenecks in biomass conversion technologies such as energy-efficient, low-temperature biomass pre-treatment, gasification and gas cleaning/conditioning to valorize lignin-rich biorefinery residue feedstock and syngas fermentation for the sustainable production of biofuels and chemicals are eliminated through transnational and integrated multidisciplinary research. AMBITION improves the overall material and energy efficiency of the conversion processes and simultaneously reduces capital and operation costs to facilitate implementation in an innovative and integrated European Energy system.

Anno di stipula	2016
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Energy
Data inizio	01-dic-16
Data scadenza	30-nov-19
Contributo totale	€ 2.494.986
Costo eleggibile totale	€ 2.494.986
Contributo a ENEA	€ 321.525
Costo eleggibile ENEA	€ 321.525
Doc. approvazione	32/E/2016/DTE
Codice atto	PT7AAC
Resp.scientifico ENEA	ZIMBARDI FRANCESCO
Unità	DTE-USTS

Attività ENEA:

L'ENEA svolgerà le seguenti attività:
. Pretrattamento tipo organo solvente delle biomasse, scala banco da effettuarsi con un apparato specifico da acquisire o realizzare in house;
. Gassificazione di residui;
. Aggiustamento del rapporto H2CO mediante reazione di water gas shift in reattori a membrana Pd/Ag permeativi all'H2;
. LCA e simulazione di processo mediante applicativi software disponibili degli stadi sperimentali.

N° Contratto: 745601

AMPERE

Automated photovoltaic cell and Module industrial Production to regain and secure European Renewable Energy market

Coordinatore 3SUN SRL
Italia

n. partner: 15

Abstract

Today's world PV market is dominated by standard crystalline solar cells (so-called Al-BSF cells) and part of the market is shifting to PERC solar cells. The shift is obtained by introducing three additional process steps to the standard process (rear side cleaning, passivation and laser opening), and allows a gain of typically 1% absolute in efficiency. Next generation c-Si technologies should feature higher voltage solar cells with higher efficiency and less processing steps in the manufacturing, allowing for further cost reduction, both at the PV panel level and for the final cost of solar electricity. AMPERE focuses on technologies with such a potential and capitalizes on the high tech investments made in Europe over the last decade for establishing advanced manufacturing processes for crystalline silicon heterojunction (SHJ) solar cells and modules, on the development of hardware capable of coating at high speed and low cost homogeneous materials of high electronic quality. It also bases on the unique expertise gained in production of thin film modules, and in all hardware issues related to large area coatings in production environment, which can applied for the production of SHJ cells and modules. The final goal of the project is t the setting-up of a 100 MW full-scale automated pilot line in production environment at the 3Sun fab, while preparing the next steps to 300 MW and GW scale. The project will operate with the support of full technology platforms for solar cells at CEA and the platform for advanced module technologies at MBS. It will demonstrate practically the ultra-low cost potential of such manufacturing approaches, as well as the even more impressively low solar electricity generation costs thanks to high efficiency and/or intrinsic bifaciality of the selected technologies.

Anno di stipula	2017
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 Energy
Data inizio	01-mag-17
Data scadenza	30-apr-20
Contributo totale	€ 14.952.065
Costo eleggibile totale	€ 26.557.004
Contributo a ENEA	€ 566.388
Costo eleggibile ENEA	€ 566.388
Doc. approvazione	12/E/2017/DTE
Codice atto	PT2AAE
Resp.scientifico ENEA	IZZI MASSIMO
Unità	DTE-FSN-TEF

Attività ENEA:

L'ENEA svolge il ruolo di supporto tecnico scientifico per la simulazione computazionale, la verifica in laboratorio e soprattutto lo sviluppo e la sperimentazione di materiali innovativi, come ossidi e metalli trasparenti, in grado di massimizzare le rese delle celle ad eterogiunzione.

N° Contratto: 785122

ANTICSS

ANTI-Circumvention of Standards for better market Surveillance

Coordinatore OEKO-INSTITUT E.V.
Germania

n. partner: 19

Abstract

ANTICSS objectives are:
(i) to assess and define "circumvention" in order to achieve a better product positioning in relation to EU Ecodesign and Energy labelling legislation and relevant harmonised standards; this includes clear delimitation from other effects to facilitate unambiguous public (media) communication;
(ii) to collect, analyse and learn from cases of circumvention by literature research and dedicated expert interviews, as well as analysing existing EU Ecodesign and Energy labelling legislation and standardisation for possible loopholes. The potential relation between circumvention and "smart" products with specific embedded software will be also addressed. From these findings, conclusions how to better detecting and preventing future circumvention will be derived;
(iii) to assess impacts 'if' and 'how much' energy consumption and/or functional performance modifications could be ascribed to circumvention by conducting appliance testing;
(iv) to define alternative test procedures or check lists with the aim to by-pass any possible measurement circumvention;
based on the results ANTICSS will ensure sustainability beyond the project life by
(v) practical capacity building measures for key actors of market surveillance and test laboratories,
(vi) supporting communication and collaboration platforms between major stakeholders and
(vii) providing policy recommendations for policy makers and standardisation bodies to prevent future circumvention under EU Ecodesign and Energy labelling.
ANTICSS will also provide reliability to manufacturers by specifying potentially vague legislation and standards which might be interpreted differently by market actors and some of them taking unfair advantages so far. By overall awareness raising on circumvention among stakeholders, ANTICSS will be supporting an effective EU legislation enforcement and thus increasing acceptance and trust of market actors and civil society into the Ecodesign and Energy labelling legislation.

Anno di stipula	2018
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-apr-18
Data scadenza	31-mar-21
Contributo totale	€ 1.961.949
Costo eleggibile totale	€ 1.961.949
Contributo a ENEA	€ 118.804
Costo eleggibile ENEA	€ 118.804
Doc. approvazione	4/2018/UTEE-AVEE
Codice atto	PE2AAK
Resp.scientifico ENEA	PRESUTTO MILENA
Unità	DUEE

Attività ENEA:

L'ENEA è coinvolto in tutte le attività del progetto.

N° Contratto: 820999

ARCH

Advancing Resilience of Historic Areas against Climate-related and other Hazards

Coordinatore FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.

Germania

n. partner: 15

Abstract

ARCH will develop a unified disaster risk management framework for assessing and improving the resilience of historic areas to climate change-related and other hazards. This will be achieved by developing tools and methodologies that will be combined into a collaborative disaster risk management platform for local authorities and practitioners, the urban population, and (inter)national expert communities. To support decision-making at appropriate stages of the management cycle, different models, methods, tools, and datasets will be designed and developed. These include: technological means of determining the condition of tangible and intangible cultural objects, as well as large historic areas; information management systems for georeferenced properties of historic areas and hazards; simulation models for what-if analysis, ageing and hazard simulation; an inventory of potential resilience enhancing and reconstruction measures, assessed for their performance; a risk-oriented vulnerability assessment methodology suitable for both policy makers and practitioners; a pathway design to plan the resilience enhancement and reconstruction of historic areas; and an inventory of financing means, categorised according to their applicability in different contexts. The project ensures that results and deliverables are applicable and relevant by applying a co-creation process with local policy makers, practitioners, and community members. This includes the pilot cities Bratislava, Camerino, Hamburg, and Valencia. The results of the co-creation processes with the pilot cities will be disseminated to a broader circle of other European municipalities and practitioners. ARCH includes a European Standardisation organization (DIN) as a partner in order to prepare materials that ensure that resilience and reconstruction of historic areas can be progressed in a systematic way, through European standardisation, which will ensure practical applicability and reproducibility.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-giu-19
Data scadenza	31-mag-22
Contributo totale	€ 5.999.963
Costo eleggibile totale	€ 5.999.963
Contributo a ENEA	€ 548.531
Costo eleggibile ENEA	€ 548.531
Doc. approvazione	46/E/2019/DTE
Codice atto	PT5AAZ
Resp.scientifico ENEA	GIOVINAZZI SONIA
Unità	DTE-SEN-APIC

Attività ENEA:

L'ENEA è responsabile del Workpackage 5 'Impact & Risk Assessment' nel quale dovrà customizzare il sistema di analisi e previsione del rischio sui vari test sites.
ENEA è coinvolta anche in altri Workpackage per la realizzazione della valutazione del 'Resilience Scorecard', della identificazione dei rischi di varia natura in particolare sul test site nazionale, lo sviluppo di strategie per la formulazione di piani di resilienza e di conservazione dei beni.

N° Contratto: 847594

ARIEL

Accelerator and Research reactor Infrastructures for Education and Learning

Coordinatore HELMHOLTZ-ZENTRUM DRESDEN-ROSSENDORF EV

Germania

n. partner: 23

Abstract

For the continuing improvement of the safety of current and planned nuclear facilities accurate and precise nuclear data are required to simulate the ongoing processes on the atomic level. In order to maintain the transfer of knowledge to the younger generation and to countries with less advanced nuclear programs the most modern and state of the art neutron beam facilities based on accelerators and research reactors will unite in this project international experts with interested early stage researchers (ESR) and technicians to work on the most challenging problems. Experimental work in international teams at these facilities will be the most effective training and competence building tool. The project will provide at least 3000 additional beam time hours for external users groups at the neutron facilities of the consortium. Up to 90 ESR and technicians will be able to receive full mobility and logistical support to participate in these experiments at 23 different accelerator or reactor based neutron facilities. The training of ESR in the field of nuclear physics and nuclear engineering will be complemented by up to 30 research stays of up to 12 weeks duration for extended work at the participating facilities. These activities, which are also open to senior scientists and now also to technical and professional staff, will continue to foster the exchange of knowledge that has grown in earlier EURATOM work programmes, e.g. within CHANDA, or ERINDA. The scientific proposals for experiments and training of ESR will be selected by a Project Advisory Committee consisting of high-level experts based on scientific excellence and relevance to improve nuclear safety and support of current nuclear data needs as addressed by IAEA and NEA. In order to increase the visibility and attractiveness at the university level four summer schools with about 80 participants shall be organized, where the wider target group should be students with physics and engineering backgrounds.

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-19
Data scadenza	31-ago-23
Contributo totale	€ 1.998.670
Costo eleggibile totale	€ 1.998.670
Contributo a ENEA	€ 36.500
Costo eleggibile ENEA	€ 36.500
Doc. approvazione	111/2019
Codice atto	CF3AAM
Resp.scientifico ENEA	FIORE SALVATORE
Unità	FSN-FUSTEC-TEN

Attività ENEA:

ENEA sarà coinvolta nello svolgimento di misure di sezioni d'urto nucleari, verifica di dati nucleari esistenti e caratterizzazione di rivelatori per misure di fisica nucleare, attraverso campagne sperimentali con il generatore di neutroni FNG di Frascati (FSN-FUSTEC-TEN).

N° Contratto: 700581

ATENA

Advanced Tools to assEss and mitigate the criticality of ICT compoNents and their dependencies over Critical InfrAstructures

Coordinatore LEONARDO FINMECCANICA *n. partner:* 13

Italia

Abstract

Over recent years, Industrial and Automation Control Systems (IACS) adopted in Critical Infrastructures (CIs) have become more complex due to the increasing number of interconnected devices, and to the large amount of information exchanged among system components. With the emergence of such an "Internet of Things" generation of IACS, the boundaries to be protected have grown well beyond that of the single or aggregated-plant, typical of the mono-operator or silos vision. That poses new challenges, as more operators become involved in a scenario that naturally demands the introduction of multi-tenancy mechanisms. New ICT paradigms, where virtualization is playing an important role, provide innovative features for flexible and efficient management, monitoring and control of devices and data traffic. With the OT/IT convergence, OT (Operation Technologies) will benefit from IT innovation, but at the same time, they will also inherit new IT threats that can potentially impact CIs.
ATENA project, with reference to the above-mentioned interdependent scenario, aims at achieving the desired level of Security and Resilience of the considered CIs, while preserving their efficient and flexible management. ATENA, leveraging the outcomes of previous European Research activities, particularly the CockpitCI and MICIE EU projects, will remarkably upgrade them by exploiting advanced features of ICT algorithms and components, and will bring them at operational industrial maturity level; in this last respect, ATENA outcomes will be tailored and validated in selected Use Cases. In particular, ATENA will develop a Software Defined Security paradigm combining new anomaly detection algorithms and risk assessment methodologies within a distributed environment, and will provide a suite of integrated market-ready ICT networked components and advanced tools embedding innovative algorithms both for correct static CI configuration and for fast dynamic CI reaction in presence of adverse events.

Anno di stipula	2016
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 Secure societies
Data inizio	01-mag-16
Data scadenza	30-apr-19
Contributo totale	€ 6.889.925
Costo eleggibile totale	€ 8.111.938
Contributo a ENEA	€ 742.500
Costo eleggibile ENEA	€ 742.500
Doc. approvazione	9/E/2016/DTE
Codice atto	PT5AAF
Resp.scientifico ENEA	MINICHINO MICHELE
Unità	DTE-SEN-APIC

Attività ENEA:

L'ENEA è coinvolto principalmente nelle attività di: modellistica per la resilienza ed efficienza delle infrastrutture critiche, progettazione della sicurezza e della consapevolezza distribuita dei sistemi di supervisione, automazione e controllo industriali, implementazione della resilienza e mitigazione distribuita per le infrastrutture critiche, partecipazione allo sviluppo ed integrazione dei componenti del prototipo ATENA, validazione e disseminazione dei risultati progettuali.

N° Contratto: D.M. 28671/7303/15

AVIAMED

Avian VIral disease prevention and control with plant-derived vaccines for the MEDiterranean area

Coordinatore ENEA
Italia

n. partner: 5

Abstract

Emergence and re-emergence of infectious viral poultry diseases remain an important challenge to both productivity and public health especially in the Mediterranean basin. Vaccines are regarded as the most beneficial interventions to prevent this kind of infections. Although most of the vaccines are still based on whole pathogens, many novel vaccine candidates, based only on those pathogen components (antigens) that are critical to initiate protective immune responses, are currently under development. The challenge for these new formulations is to mimic infection by stimulating a complete immune response (innate and adaptive, humoral- and cell-mediated) with minimal morbidity and low production costs.
Infectious Bursal disease virus (IBDV) and Newcastle disease virus (NDV) are the cause of economically important diseases of poultry in Morocco, Egypt and also Southern Europe Mediterranean countries.
The aim of the present project is to use plants as "biofactories" for the transient and stable expression of IBDV and NDV antigens both in their native form or as fusions to carriers able to potentiate their immunogenicity. The transiently and the stably expressed antigens will be used to: i) evaluate the type of immune response they activate by performing immunization trials through subcutaneous and/or mucosal (oral) routes; ii) evaluate the efficacy of the selected prototype vaccines in terms of clinical protection and virus shedding following experimental challenge; iii) set up novel diagnostic assays.
The suggested plant "biofactory"-based approach has the potential to result in: i) ease and rapidity of production scale up at low costs due to the use of plants as expression systems; ii) simplification of the purification procedures; iii) improvement of the immunogenic properties of the antigens obtained by self-assembly in multimeric subviral particles or by the proposed innovative fusion strategies; iv) development of low-cost and ready to use diagnostic tools able to differentiate infected from vaccinated animals (DIVA) in surveillance programs and international trade of poultry and poultry products.

Anno di stipula	2016
Tipo di progetto	ERANET COFUND
Programma UE	Settimo Programma Quadro R&ST (2007-2013) ERA-NET
Data inizio	25-feb-16
Data scadenza	30-apr-20
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 79.200
Costo eleggibile ENEA	€ 80.000
Doc. approvazione	5/2016/PRES
Codice atto	PS1AAD
Resp.scientifico ENEA	BASCHIERI SELENE
Unità	SSPT-BIOAG-BIOTEC

Attività ENEA:

a) Optimization of the nucleotide sequences encoding the proteins to be produced in plants;
b) Design and production in Nicotiana benthamiana plants of the antigens fused to the protein carriers able to potentiate their immunogenic properties;
c) Verification by electron microscopy of IBDV subviral particles formation in plant tissues;
d) Development of new diagnostic assays able to differentiate infected from vaccinated animals (DIVA).

N° Contratto: 731224

BALANCE

Increasing penetration of renewable power, alternatives fuels and grid flexibility by cross-vector electrochemical processes

Coordinatore VTT TECHNICAL RESEARCH CENTRE OF FINLAND

Finlandia

n. partner: 8

Abstract

The main goal of the BALANCE proposal is to gather leading research centres in Europe in the domain of Solid Oxide Electrolysis (SOE) and Solid Oxide Fuel Cells (SOFC) to collaborate and accelerate the development of European Reversible Solid Oxide Cell (ReSOC) technology. ReSOC is an electrochemical device that converts electrical energy into hydrogen (electrolysis mode) or alternatively fuel gas to electrical energy (fuel cell mode). It is characterised by its very high efficiency compared to competing technologies. ReSOC enables to store renewable electricity when it is produced in excess or to convert it into a CO2-free transport fuel.
Therefore, it is considered as a key technology to allow the broad penetration of renewable electricity into the European energy system.
Fragmented national research efforts are currently impeding quicker development and deployment of next-generation fuel cell and hydrogen technologies. Therefore, BALANCE will identify, quantify and analyse national activities dealing with the diverse aspects of ReSOC technology. This analysis will result in an integrated European research agenda for ReSOC technology to gain synergies and to generate breakthroughs in this highly promising but currently low-TRL technology.
Close communication with the advisory board will enable alignment of the proposed agenda with the roadmaps and activities of EERA, IEC and IEA on the topic of hydrogen technologies.
Technical development will cover the development of the next generation of ReSOC cells, their integration in the optimised stack assembly, and investigation of the constraints from reversible operation at system level and integration with the grid. Cost will be addressed by using low-cost materials and improving manufacturability. The experimental work will be supported by modelling and simulation at all scales and by the techno-economic analysis of different integration of the ReSOC technology in industrial applications.

Anno di stipula	2016
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Energy
Data inizio	01-dic-16
Data scadenza	30-nov-19
Contributo totale	€ 2.500.596
Costo eleggibile totale	€ 2.500.596
Contributo a ENEA	€ 301.000
Costo eleggibile ENEA	€ 301.000
Doc. approvazione	30/E/2016/DTE
Codice atto	PT4AAG
Resp.scientifico ENEA	MC PHAIL STEPHEN JOHN
Unità	DTE-PCU-SPCT

Attività ENEA:

L'ENEA svolgerà un ruolo fondamentale nella caratterizzazione avanzata delle celle Ce-SOC sviluppate, nell'analisi di ciclo di vita e nella definizione della European Common Agenda sulle Re-SOC.

N° Contratto: 730258

BE-OI

Beyond EPICA - Oldest Ice

Coordinatore ALFRED-WEGENER-INSTITUTE OF POLAR AND MARINE RESEARCH

Germania

n. partner: 13

Abstract

To better constrain the response of Earth's climate system to continuing emissions, it is essential to turn to the past. A key advance would be to understand the transition in Earth's climate response to changes in orbital forcing during the 'mid-Pleistocene transition' (900 to 1200 thousand years ago) and in particular the role of greenhouse gases. Unravelling such key linkages between the carbon cycle, ice sheets, atmosphere and ocean behaviour is vital for society to better design effective mitigation and adaptation strategies. Only ice cores contain the unique and quantitative information about past climate forcing and atmospheric responses. But the ice providing essential evidence about past mechanisms of climate change more than 1 Ma ago required for our understanding of these changes (termed the "Oldest Ice" core), has not been found to date.
The consortium BEYOND EPICA – OLDEST ICE (BE-OI), formed by 14 European institutions, takes on this challenge to prepare the ground for obtaining 1.5 million year old ice from East Antarctica. BE-OI has the objectives to:
- support the site selection through creation and synthesis of all necessary information on Antarctic sites through specific geophysical surveys and the use of fast drilling tools to qualify sites and validate the age of their ice;
- select and evaluate the optimum drill site for the future "Oldest Ice" core project and establish a science and management plan for a future drilling;
- coordinate the technical and scientific planning to ensure the availability of the technical means to implement suitable drill systems and analytical methodologies for a future ice-core drilling, and of well-trained personnel to operate them successfully;
- establish the budget and the financial background for a future deep-drilling campaign;
- embed the scientific aims of an "Oldest Ice" core project within the wider paleoclimate data and modelling communities through international and cross-disciplinary cooperation.

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-ott-16
Data scadenza	30-set-19
Contributo totale	€ 2.223.000
Costo eleggibile totale	€ 2.594.000
Contributo a ENEA	€ 530.000
Costo eleggibile ENEA	€ 530.000
Doc. approvazione	154/2016/PRES
Codice atto	PA0AAD
Resp.scientifico ENEA	FREZZOTTI M./BIANCHI FASANI G.
Unità	UTA-LOG

Attività ENEA:

L'ENEA avrà il compito di attuare le attività logistiche integrandole nella più ampia e generale gestione delle spedizioni antartiche e della stazione Concordia, e attraverso il Dipartimento Sostenibilità dei sistemi produttivi territoriali che seguirà gli aspetti scientifici del progetto.

N° Contratto: 815384

Beyond EPICA

Beyond EPICA Oldest Ice Core: 1,5 Myr of greenhouse gas – climate feedbacks

Coordinatore CNR - CONSIGLIO NAZIONALE DELLE RICERCHE

n. partner: 12

Italia

Abstract

To better constrain the long-term response of Earth's climate system to continuing greenhouse gas emissions, it is essential to turn to the past. A key advance would be to understand the shift in Earth's climate response to orbital forcing during the 'Mid-Pleistocene transition' [MPT, 900,000 (900 kyr) to 1.2 million years (1.2 Myr) ago], when a dominant 40 kyr cyclicity gave way to the current 100 kyr period. It is critical to understand the role of forcing factors and especially of greenhouse gases in this transition. Unravelling such key linkages between the carbon cycle, ice sheets, atmosphere and ocean behaviour is vital, assisting society to design an effective mitigation and adaptation strategy for climate change. Only ice cores contain direct and quantitative information about past climate forcing and atmospheric responses. However, the longest (EPICA) ice core record available to date covers only the last 800 kyr. The RIA Topic LC-CLA-08-2018 empowers the European ice core community to perform such an oldest ice core drilling and the project 'Beyond EPICA' is taking on this unique challenge and opportunity. The overarching scientific objective driving 'Beyond EPICA' is to obtain quantitative, high-resolution ice-core information on climate and environmental changes over the last 1.5 Myr. The cause and effect relationship that led to the enigmatic MPT change in the climate system is not understood yet, as important information on global changes in the climate system is still missing. Most of this information, including the phasing of these changes in the Earth System can only be derived from a continuous ice core from Antarctica covering the last 1.5 Myr. This proposal uses the planning derived during the recent BE-OI CSA, and offers an excellent team (the only team globally that could at present accept the challenge of the call), underpinned by excellent infrastructure and capacity, and is currently ensuring it has an excellent location for the core.

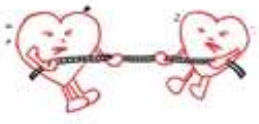
Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-giu-19
Data scadenza	31-mag-25
Contributo totale	€ 10.999.942
Costo eleggibile totale	€ 10.999.942
Contributo a ENEA	€ 2.610.000
Costo eleggibile ENEA	€ 2.610.000
Doc. approvazione	96/2019/PRES
Codice atto	PA0AAK
Resp.scientifico ENEA	FREZZOTTI MASSIMO
Unità	SSPT-PROTER-OAC

Attività ENEA:

L'ENEA è impegnata nel progetto attraverso l'Unità Tecnica Antartide che ha il compito di attuare le attività logistiche, integrandole nella più ampia e generale gestione delle spedizioni antartiche e della stazione concordia. Per gli aspetti scientifici del progetto l'Unità Tecnica Antartide si avvale del supporto del Dipartimento Sostenibilità dei sistemi produttivi e territoriali.

N° Contratto: 691238

Bi-Stretch-4-Biomed



Blaxial STRETCHing of PLLA-WS2 nanocomposites FOR thinner and stronger BIOMEDical scaffolds

Coordinatore ENEA
Italia

n. partner: 3

Abstract

New materials are now opening clinical treatments in which a temporary scaffold is used to support regeneration of healthy tissue. The specific need that inspires our research is for thinner and stronger bioresorbable vascular scaffolds (BVS) for coronary heart disease. BVS are poised to replace metal stents due to the excellent clinical outcomes: beyond keeping the vessel open during the first six months after surgery, the BVS leaves behind a healthy blood vessel after the scaffold is gone, being completely absorbed by the body approximately two years after surgery. The material that has achieved clinical approval for BVS is poly(L-lactic acid), PLLA. It is not as strong and stiff as metals, so the scaffold is three times thicker than the metal stents, making it more difficult for surgeons to move through arteries to reach the site of the lesion. Thinner Scaffolds that can be seen by x-ray imaging during surgery would facilitate adoption of the technology and benefit thousands of patients in the EU and US. The proposed Action will provide the fundamental understanding needed to reinforce PLLA by tungsten disulphide (WS2) nanotubes to achieve both the strength and x-ray opacity needed. Improving materials for BVS requires an interdisciplinary approach by materials science, polymer processing, and bioengineering. The proposed Action will connect EU scientists with a polymer scientist at Caltech in the US who has specialized knowledge of PLLA BVS and the relevant structure-processing-property relationships (Kornfield). European scientists bring expertise in WS2 nanotubes that are powerful additives for enhancing polymer properties (Di Luccio), compounding polymers with nanotubes (McNally), biaxial stretching to induce strength and orientation in polymers (Menary), multiscale modeling to connect nanoscale to continuum scale (Figiel), multimethod characterization of structure in nanocomposites (Schiller) and the response of cells to nanoparticles (Kornfield).

Anno di stipula	2015
Tipo di progetto	MSCA RISE - Research and Innovation
Programma UE	HORIZON 2020 MSCA Marie Skl. Curie Actions
Data inizio	01-feb-16
Data scadenza	31-gen-20
Contributo totale	€ 342.000
Costo eleggibile totale	€ 400.500
Contributo a ENEA	€ 132.800
Costo eleggibile ENEA	€ 139.500
Doc. approvazione	503/2015/COMM
Codice atto	PS0AAB
Resp.scientifico ENEA	DI LUCCIO TIZIANA/VILLANI FULV
Unità	SSPT-PROMAS

Attività ENEA:

L'ENEA coordina il progetto e svolge attività di ricerca dettagliate in task distribuite su sei workpackage.

N° Contratto: 815284

BLAZE

Biomass Low cost Advanced Zero Emission small-to-medium scale integrated gasifier-fuel cell combined heat and power plant

Coordinatore UNIV. GUGLIELMO MARCONI
Italia

n. partner: 9

Abstract

BLAZE aims at developing Low cost, Advanced and Zero Emission first-of-a-kind small-to-medium Biomass CHP. This aim is reached by developing bubbling fluidised bed technology integrating high temperature cleaning & conditioning system (IBFBG, that can convert heterogeneous feedstocks in a syngas with zero particulate matter and ultra-low tar and contaminants content), an integrated high temperature gas cleaning approach for HCl and H2S removal and an innovative key component for thermal and chemical integration of solid oxide fuel cell
(efficient gas recirculation of the fuel cell anode exhaust to the gasification process via a steam-driven high speed micro-compressor using gas bearing technology). The technology is developed for a CHP capacity range from small (25-100 kWe) to medium (0.1-5 MWe) scale and is characterised by the widest fuel spectrum applicable (forest, agricultural, industrial and municipal waste also with high moisture, ash and contaminants content), high efficiencies (50% electrical versus the actual 20%), low investment (< 4 k€/kWe) and operation (≈ 0.05 €/kWh) costs as well as almost zero gaseous and PM emissions, projecting electricity production cost below 0.10 €/kWh . Gasification, gas cleaning & conditioning and fuel cells will be tested at lab scale and 25 kWe SOFC will be thermally and chemically integrated in 100 kWth IBFBG demonstrating the achievement of new milestones, increasing competitiveness of European industry, energy system reliability and flexibility and biomass plants social acceptance. Process simulations, computer aided design, tests, performance evaluation, risk and safety analysis as well as a technology assessment part covering techno-economic, environmental and overall impact assessments and market studies will be carried out together with a clear dissemination, exploitation and communication plan, that can count on the involvement of the main gasifier, gas conditioning and SOFC European companies and research centres.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Energy
Data inizio	01-mar-19
Data scadenza	28-feb-22
Contributo totale	€ 4.255.615
Costo eleggibile totale	€ 4.255.615
Contributo a ENEA	€ 210.375
Costo eleggibile ENEA	€ 210.375
Doc. approvazione	23/E/2019/DTE
Codice atto	PT1AAS
Resp.scientifico ENEA	BARISANO DONATELLA
Unità	DTE-BBC-TER

Attività ENEA:

According to the project framework, ENEA is involved both in work packages (WP) focused on activities of project management and exploitation of results, and in WPs of R&D. Specifically, on these latter, ENEA participates with its consolidated know-how and well-equipped infrastructures on gasification and high-temperature fuel cells.
At Trisaia Research Centre, different types of biomass residues, selected among those considered of major interest and possible use, will be tested. After chemical and physical-chemical characterization, the identified feedstocks will be used in experimental gasification campaigns in fluidized-bed reactor. The objective of these campaigns will be to define the process conditions at which the conversion of biomass into gaseous product will be the highest. Moreover, through the use of primary (in-bed) methods for reducing the load of contaminants directly in the implementation phase of the gasification process, materials will be identified that can contribute to the production of a gaseous stream of high quality, in terms of composition and calorific value, and low degree of contamination.
At Casaccia Research Center, solid-oxide fuel cells (SOFC) will be tested to study their performance according to the quality of the supplied gas. The attention will be focused on the main contaminants of the produced gas to identify the type of SOFC that, in the final

project phase of technologies integration, will achieve the best performances (i.e. high electrical efficiency, stability in operation and long lifetime).

N° Contratto: 5MED18_1.1_M23_072

BLUE DEAL

BLUe Energy Deployment Alliance

Coordinatore UNIV. SIENA

Italia

n. partner: 13

Abstract

BLUE DEAL is a European project co-financed by the European Regional Development Fund based on the capitalization of Blue Energy (BE).
The project aims to increase transnational activity of innovative clusters and networks of the BE sector, develop links and synergies between SME's, public authorities, knowledge institutions and civil society and establish transnational and regional Blue Deal Alliances.
This project will create a favorable environment for BE investments and for developing sustainable actions in the Mediterranean economy.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg MED
Data inizio	01-nov-19
Data scadenza	30-giu-22
Contributo totale	€ 2.415.647
Costo eleggibile totale	€ 2.841.938
Contributo a ENEA	€ 252.799
Costo eleggibile ENEA	€ 297.410
Doc. approvazione	269/2019/SSPT-MED
Codice atto	PS2ABJ
Resp.scientifico ENEA	STRUGLIA MARIA VITTORIA
Unità	SSPT-MET-CLIM

Attività ENEA:

Le attività di competenza dell'Ente riguardano la mappatura delle risorse energetiche marine nel Mediterraneo e la valutazione e sviluppo di tecnologie per la conversione dell'energia del moto ondoso. ENEA contribuirà inoltre alla pianificazione e gestione generale del progetto, alla realizzazione di specifici eventi (workshops) di disseminazione, rivolti sia alla comunità scientifica che a quella industriale, e, infine, alla realizzazione di un piano efficace per il trasferimento dei risultati del progetto verso i decisori politici nazionali ed Europei, e verso altri settori economici potenzialmente interessati.

N° Contratto: 831119

BRIDGeconomies_2_2019

Business Relays for Innovation and Development Growing €conomies

Coordinatore EUROSPORTELLO - SERVIZI INFORMATIVI PER LE IMPRESE CCIAA NAPOLI

Italia

n. partner: 13

Abstract

The project "BRIDGeconomies_2" (Business Relays for Innovation and Development of Growing €conomies) proposed by this consortium covers the following regions of Southern Italy: Abruzzo, Basilicata, Calabria, Campania, Molise, Apulia and Sicily. The members of the consortium mainly include public (semi-public) entities, whose activities are either directly or indirectly addressed to SMEs, guaranteeing an interregional coverage on specific issues. The Consortium, having a multi-annual experience in the Enterprise Europe Network, is able to provide integrated services to SMEs, Clusters and Technology Districts, Productive Districts, Universities, research labs, in the area of innovation and competitiveness according to the "no wrong door" principle. Thanks to the presence of regional partner structures with provincial branches that are strongly specialised and have direct contacts with enterprises, the Consortium satisfy the proximity concept. The project partners will commit themselves to implement the EEN activities in order to achieve the following goals:
- to facilitate access to European and international markets for local SMEs;
- to provide growth oriented, integrated business and innovation support services aiming at strengthening the competitiveness and sustainability of local enterprises;
- to provide fully integrated services across the regional consortium: a cohesive and seamless service delivery;
- to strengthen the link between enterprise and research; - to promote EU policies and programmes; - to provide a link between local SMEs and EU policy making;
- to help SMEs that seek to exploit new opportunities in the Single Market, but also in third countries;
- to ensure the visibility, recognition and local awareness of EEN activities;
- to improve the environment for entrepreneurial activities and promote entrepreneurial culture;
- to ensure that beneficiaries of the SME Instrument (Horizon 2020 programme) receive the most appropriate support.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi COSME (2014-2020)
Data inizio	01-gen-19
Data scadenza	31-dic-19
Contributo totale	€ 1.910.699
Costo eleggibile totale	€ 3.184.499
Contributo a ENEA	€ 277.677
Costo eleggibile ENEA	€ 462.795
Doc. approvazione	17/2019/COM
Codice atto	PM4AAO
Resp.scientifico ENEA	AMMIRATI FILIPPO
Unità	COM-INDAS

Attività ENEA:

L'ENEA partecipa alle attività del nodo della rete Enterprise Europe Network (EEN) nelle regioni del Sud Italia, in particolare per le regioni Campania e Puglia. Oggetto dell'attività è l'analisi e valutazione delle necessità tecnologiche e dell'evoluzione strategica dei principali settori produttivi delle regioni coinvolte, identificazione delle relative risposte tecnologiche e loro indirizzamento alla rete EEN; il potenziamento delle capacità dei fornitori di tecnologia locali nella promozione e sfruttamento dei loro risultati di ricerca verso l'ambiente europeo; l'organizzazione di seminari, workshop e giornate di trasferimento tecnologico; la pubblicizzazione delle attività mediante articoli di stampa, bollettini e supporti multimediali; organizzazione di visite e audit tecnologici ad aziende innovative e a fornitori di tecnologia; scambi di visite transnazioni con imprese innovative, centri di ricerca e altri IRC europei; fornitura di servizi, consulenza e supporto ad aziende e centri di ricerca delle regioni di competenza per la realizzazione e la pubblicizzazione di casi

esemplari di trasferimento tecnologico transnazionale.

N° Contratto: 731101

BRISK II

Biofuels Research Infrastructure for Sharing Knowledge II

Coordinatore KUNGLIGA TEKNISKA HOEGSKOLAN

Svezia

n. partner: 15

Abstract

The vision of BRISK II is to establish a centre of excellence in the field of 2nd and 3rd generation biofuels via the uniting of leading European research infrastructures. Building upon the success of its FP7 predecessor, BRISK II Networking Activities will consolidate knowledge in the field, reaching out to a wide set of stakeholders and potential users. Databases generated within the project will serve as a valuable resource for academia and industry. The business plan will boost momentum beyond H2020 so that the research infrastructures can be utilised between framework programmes or even independently. Joint Research Activities will yield a manifold improvement in the characterisation of feedstocks for thermochemical and biochemical conversion processes, tying micro-scale and macro-scale phenomena in novel ways. Enhanced measurement techniques will lead to significant gains in process flexibility and reliability. New biorefining approaches are intended to explore novel process combinations, ones that cannot be tested without a concerted effort between project partners. Assimilated data and knowledge will be input to simulation tools for use in a broad spectrum of analyses. Transnational Access supports the biofuels research community through the availability of high-quality installations within a well-structured framework.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-mag-17
Data scadenza	30-apr-22
Contributo totale	€ 9.968.144
Costo eleggibile totale	€ 9.977.271
Contributo a ENEA	€ 583.309
Costo eleggibile ENEA	€ 583.309
Doc. approvazione	126/2017/PRES
Codice atto	PT7AAE
Resp.scientifico ENEA	ZIMBARDI FRANCESCO
Unità	DTE-USTS

Attività ENEA:

L'ENEA partecipa a varie attività di network e ricerca.

N° Contratto: 754521

CA-EED 2

Concerted Action EED - Support to Member States and participating countries for the implementation of the Energy Efficiency Directive

Coordinatore MINISTRY OF ECONOMIC AFFAIRS, FARM AND INNOVATION

n. partner: 23

Paesi Bassi

Abstract

The objective of the 2nd Concerted Action for the Energy Efficiency Directive (CA-EED 2) is to foster exchange of information and experience among Member States and other participating countries (Norway) with a view to facilitating to the implementation of the Directive 2012/27/EU of the European Parliament and of the Council on energy efficiency (EED), including the implementation of the foreseen re-cast of this Directive. The specific objectives of the Action are:
•To enhance and structure the sharing of information and experiences from national implementation whilst promoting good practice concepts in activities to improve and strengthen MS implementation of the EED.
•To encourage dialogue between MS on common approaches for the effective implementation of particular parts of the EED.
•To complement the work of the EED Committee assisting the European Commission.
The expected impact of the Action consists of a more harmonized approach and improved implementation of the EED in all MS, as well as the transfer of good practices between countries.
The objectives of the CA-EED 2 will be achieved by organising information exchange via amongst others 8 structured plenary meetings for coverage of the various topics. The meetings will allow experts from implementing bodies and ministries in the MS to discuss and exchange views, and aim to achieve as much convergence of objectives and methodologies as appropriate, avoiding redundant efforts and maximizing the benefits that can be obtained from the work otherwise required from individual MS working on their own. A large part of the work in the CA-EED 2 will be done in the sessions during the plenary meetings, focussing on good practice examples, but also through Working Groups that interact between the meetings and exchange of information through the forum on the CA-EED website.
In order to structure the topics covered by the EED Expert Areas have been identified encompassing the main areas of the EED.

Anno di stipula	2017
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	15-apr-17
Data scadenza	14-apr-21
Contributo totale	€ 4.696.182
Costo eleggibile totale	€ 4.696.182
Contributo a ENEA	€ 169.108
Costo eleggibile ENEA	€ 169.108
Doc. approvazione	100/2017/PRES
Codice atto	PE4AAC
Resp.scientifico ENEA	SALAMA ANNA MARIA
Unità	DUEE-SPS-MPE

Attività ENEA:

Le attività ENEA riguardano il supporto alle istituzioni nazionali competenti nell'attuazione della direttiva 27/2012 e nella riformulazione della stessa a sostegno del MISE. In particolare attraverso lo scambio di:
. Informazioni ed esperienze tra gli Stati Membri e la Norvegia;
. Promozione di buone pratiche e individuazione di approcci comuni per la convergenza degli obiettivi e delle metodologie.

N° Contratto: 820497

CAV_EPBD

Concerted Action Energy Performance of Buildings Directive V

Coordinatore DEA DANISH ENERGY AUTHORITY

Danimarca

n. partner: 29

Abstract

Concerted Action EPBD V aim to support the implementation of the Energy Performance in Buildings Directive through exchange of information and experience among Member States and other participating countries (Norway) with regards to the implementation of the specific European Union legislation and policy on the energy performance of buildings, and in particular with regards to the transposition and implementation of the re-cast of the EPBD (DIRECTIVE 2010/31/EU) and the on-going revision of this directive.
The specific objectives are to:
1. Enhance and structure sharing of information and experience from national implementation and promote good practice in activities required of Member States for implementation of the Energy Performance of Buildings Directive (EPBD).
2. Create favourable conditions for faster convergence of national procedures on EPBD-related matters.
3. Develop a direct link with the other two buildings-related Concerted Actions established within the IEE programme: the CA-RES, focussing on transposition and implementation of the Renewable Energy Systems Directive (DIRECTIVE 2009/28/EC); and the CA-EED, focusing on transposition and implementation of the Energy Efficiency Directive (DIRECTIVE 2012/27/EU), where National Energy Plans include initiatives towards building energy efficiency.
4. Supplement the work of the Article 26 Committee and possible ad-hoc groups on CEN (European Committee for Standardization) standards and certification exercises.
5. Establish a dialogue with the CEN in the implementation of 2nd generation standards to support the implementation of the recast EPBD and its revision.
6. Support for European Member States and Norway to use National Energy Plans to report progress on the EPBD implementation.
The CAV_EPBD will strive to result in a more harmonized approach, improved implementation and actual application of the EPBD in all the countries involved, as well as helping to disseminate best practices between the countries.

Anno di stipula	2018
Tipo di progetto	CA - Azione di coordinamento
Programma UE	HORIZON 2020 Energy
Data inizio	01-mag-18
Data scadenza	30-apr-22
Contributo totale	€ 5.000.000
Costo eleggibile totale	€ 5.000.003
Contributo a ENEA	€ 46.805
Costo eleggibile ENEA	€ 46.805
Doc. approvazione	14/2018/DUEE
Codice atto	PW3AAD
Resp.scientifico ENEA	AZZOLINI GABRIELLA
Unità	DUEE-SPS-SAP

Attività ENEA:

ENEA è l' istituzione rappresentante dell'Italia e coordinatore nazionale
L'ENEA è coinvolta in tutti i moduli tematici del progetto; l'attività progettuale sarà articolata in sei sessioni plenarie e due workshop tematici e attività di scrittura del report nazionale e questionari preliminari alle sessioni plenarie.

N° Contratto: IFS/2015/357-652

CBRN_2

On-site Technical Assistance to the Chemical, Biological, Radiological and Nuclear Centres of Excellence Secretariat in Georgia, Kenya and Morocco

Coordinatore AESA - AGRICONSULTING EUROPE SA

Belgio

n. partner: 7

Abstract

The EU CBRN CoE Initiative covers the Middle East, the region of the Gulf Cooperation Council Countries, Central Asia, North Africa, Atlantic façade (North West Africa), Central and Eastern Africa, South East Europe and Ukraine, Moldova and South Caucasus as well as South East Asia. A network of more than 40 countries is established and its main objective is to improve national CBRN risk mitigation policies and upgrade crisis preparedness mechanisms through the implementation of concrete actions in the areas of export control of dual-use goods, illicit trafficking of CBRN materials, bio-safety and bio-security and the engagement of scientists.
Three CBRN experts will be placed in the CoE Secretariats currently located in, Nairobi, Rabat and Tbilisi, for a duration of three years. The main task is to provide technical support to the CBRN Centers of Excellence Secretariats in the respective regions, to identify and develop and formulate regional projects in the field of CBRN Risk Mitigation. They will be in constant contact with the local actors and entities, with the EU Commission (JRC, Devco) and the EU Delegations in order to identify and formulate the necessary actions to contribute to the risk mitigation in the respective region.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	ISF Instrument for Stability EUROPEAID-DEVCO
Data inizio	18-apr-16
Data scadenza	17-apr-19
Contributo totale	€ 2.969.700
Costo eleggibile totale	€ 2.969.700
Contributo a ENEA	€ 132.577
Costo eleggibile ENEA	€ 132.577
Doc. approvazione	59/2016/PRES
Codice atto	PF6AAB
Resp.scientifico ENEA	RIZZO ANTONIETTA
Unità	FSN-SICNUC-TNMT

Attività ENEA:

Supporto scientifico di ENEA allo sviluppo delle capacità tecniche dei Segretariati dei centri di eccellenza CBRN "On-site Technical Assistance to the Chemical, Biological, Radiological and Nuclear Centres of Excellence Secretariat in Georgia, Kenya and Morocco".

N° Contratto: 755371

CHANCE

Characterization of conditioned nuclear waste for its safe disposal in Europe

Coordinatore ANDRA - AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS

Francia

n. partner: 12

Abstract

Successful interim storage and final disposal of radioactive waste (RW) requires effective characterization and quality control of the waste. CHANCE aims to address the as yet unsolved and specific issue of the characterization of conditioned radioactive waste (CRW).
CHANCE will establish a comprehensive understanding of current characterization methods and quality control schemes for conditioned radioactive waste in Europe.
Furthermore, CHANCE will develop, test and validate already-identified and novel new techniques that will undoubtedly improve the characterization of CRW.
Input from "end users" (mainly WMOs and waste producers) on methods of CRW characterization is critical to the success of CHANCE. Therefore, a dedicated End-Users Group will be established within CHANCE in order to represent and promote the interests and requirements of end-users.
One of the project's key tasks will be dedicated to the identification of links and overlaps between waste acceptance criteria and actual waste characterization technologies available, in order to identify specific, as yet unsolved, methodology issues and technology gaps.
CHANCE's R&D programme consists of the testing and evaluation of the performance of 3 innovative characterization techniques that are complementary and supplementary to current techniques for the non-destructive assay of RW, specifically:
• Calorimetry as an innovative non-destructive technique to reduce uncertainties on the inventory of radionuclides (RN), namely from hidden RN-compounds with a weak gamma signal.
• Muon Tomography to address the specific issue of the non-destructive interrogation of the content of large volume RW.
• Cavity Ring-Down Spectroscopy as an innovative technique to characterize outgassing of RW at a very low detection level.
The activities performed and the results obtained within CHANCE will be integrated and disseminated both between the partners and the whole European community involved in RW management.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-giu-17
Data scadenza	31-mag-21
Contributo totale	€ 3.982.604
Costo eleggibile totale	€ 4.253.326
Contributo a ENEA	€ 218.750
Costo eleggibile ENEA	€ 218.750
Doc. approvazione	87/2017/FSN
Codice atto	PF6AAF
Resp.scientifico ENEA	RIZZO ANTONIETTA
Unità	FSN-SICNUC-TNMT

Attività ENEA:

L'ENEA sarà coinvolto principalmente nei WP2, WP4 e WP5 occupandosi di:
. Identificazione di parametri specifici per la caratterizzazione dei rifiuti radioattivi, delle tecnologie per la loro verifica e delle sfide tecnologiche a loro associate;
. Analisi di dati sperimentali ottenuti tramite tomografica muonica;
. Progettazione di un sistema di progettazione e raccolta delle emissioni gassose dai materiali costituenti rifiuti radioattivi;
. Misura dell'attività di C-14 e di Cl-36 attraverso tecniche convenzionali e confronto con i dati ottenuti tramite spettroscopia laser cavity ring down.

N° Contratto: 820707

CICERONE

CIrCular Economy platfoRm for eurOpeaN priorities strategic agEnda

Coordinatore EIT CLIMATE KIC SL

Spagna

n. partner: 24

Abstract

CICERONE brings together programme owners, research organizations and other stakeholders to create a platform for efficient Circular Economy programming. The priority setting and the organization of the future platform will be driven by Programme Owners (POs), involved either as project partners, or via a stakeholder network. Diversity of national / regional situations is reflected in the partnership. The work will be carried out in close cooperation with research & technology organisations (RTOs), which contribute with their expertise of the main scientific and technological challenges. Consultation mechanisms will also ensure that all stakeholders will be able to actively contribute (civil society, industry, innovative SMEs, startups, cities, investors, networks, etc.). An initial benchmarking exercise will be carried out for a deeper understanding of the state of the art, mapping stakeholders, existing RDI priorities as well as funding and legal mechanisms. A prioritisation methodology will be developed to support an analysis of the current performance: synergies, gaps and duplications will be characterised, and pathways for improvements will be formulated. Identified best practices will drive the definition of policy recommendations. Once the state of the art has been clearly mapped out, the actual prioritisation work will be carried out. This includes building a Strategic Research and Innovation Agenda (SRIA), performing an ex-ante impact assessment of joint programming on circular economy R&I, and developing a policy toolkit to promote the priorities and foster adoption by policy-makers. The project will also set the grounds for the future PO platform, starting with defining its strategic role in the existing landscape. The next step will be to specify governance and possible legal frameworks, as well as creating a financially sustainable model. It is a key objective that the platform be sustained after the end of the project.

Anno di stipula	2018
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-nov-18
Data scadenza	31-ott-20
Contributo totale	€ 1.998.860
Costo eleggibile totale	€ 2.027.611
Contributo a ENEA	€ 118.448
Costo eleggibile ENEA	€ 118.448
Doc. approvazione	99/2018/SSPT-USER
Codice atto	PS6ABS
Resp.scientifico ENEA	BRUNORI CLAUDIA
Unità	SSPT-USER

Attività ENEA:

L'ENEA è leader del workpackage Research & Innovation priorities, con contributi su:
. Descrizione di un caso esemplificativo per lo stato dell'arte
. Definizione dell'Agenda Strategica
. Calcolo degli impatti ex ante dell'Agenda
L'ENEA contribuisce inoltre ad altri workpackage, con contributi prevalenti su:
. Definizione stato dell'arte sull'economia circolare
. Identificazione dei gap e delle sinergie
. Hub del network degli stakeholder del mondo della ricerca

N° Contratto: 662287

CONCERT

European Joint Programme for the Integration of Radiation Protection Research

Coordinatore BFS - FEDERAL OFFICE FOR RADIATION PROTECTION

Germania

n. partner: 32

Abstract

The proposed European Concerted Programme on Radiation Protection Research (acronym: CONCERT) aims to contribute to the sustainable integration of European and national research programmes in radiation protection. It will do so by focusing resources and efforts in five key directions:
• Bring together the elements of the European scientific communities in the fields of radiation effects and risks, radioecology, nuclear emergency preparedness, dosimetry and medical radiation protection, whose joint expertise is essential to continue the development of radiation protection knowledge in a multidisciplinary mode to reduce further the uncertainties in radiation protection.
• Strengthen integrative activities between the various areas of expertise, in particular biology, biophysics, epidemiology, dosimetry and modelling as well as fostering the use of existing infrastructures and education and training activities in radiation protection.
• Stimulate and foster scientific excellence, by setting up and co-funding advanced research programmes with the potential to enhance current knowledge and the scientific evidence base for radiation protection.
• Exchange and communicate with all stakeholders, including the professional organizations concerned with radiation protection, the regulatory organizations across Europe, the public and media where necessary, and the international community of scientific, technical, legal and other professional experts in radiation protection.
• Foster the harmonious application of available scientific basis for radiation protection practices across Europe, by bringing together scientific and technical expertise in radiation protection issues, standard setting know how, particularly with respect to the implementation of the Euratom Basic Safety Standards (BSS) at the legal, administrative and operational level.
To reach its goals, CONCERT will have seven Work Packages each of which will focus on each of the key directions.

Anno di stipula	2015
Tipo di progetto	EJP COFUND - Coordinamento di prog
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-giu-15
Data scadenza	31-mag-20
Contributo totale	€ 19.822.878
Costo eleggibile totale	€ 29.249.863
Contributo a ENEA	€ 60.247
Costo eleggibile ENEA	€ 92.954
Doc. approvazione	306/2015/SSPT-TECS
Codice atto	PS5AAA
Resp.scientifico ENEA	SARAN ANNA
Unità	SSPT-TECS-TEB

Attività ENEA:

L'ENEA collabora allo sviluppo di una 'Strategic Research Agenda' per la ricerca nel campo degli effetti delle basse dosi di radiazioni. Fornisce inoltre supporto all'identificazione delle priorità di ricerca in radioprotezione e partecipa al coordinamento della linea politica e delle strategie per 'Education and Training'.

N° Contratto: PGI05560

CONDEREFF

Construction & demolition waste management policies for improved resource efficiency

Coordinatore UNIV. POLITECNICA VALENCIA *n. partner:* 8

Spagna

Abstract

The challenge and opportunity faced by the CONDEREFF regions is to accelerate their policy work on improving resource efficiency at territorial level. The EU Construction & Demolition Waste Management Protocol and the transition towards Circular Economy can guide the regulative roll-out of C&D waste management across EU regions; accordingly, the proliferation of infrastructures & methods for recycling and re-use of C&D waste materials can introduce a green growth opportunity. Regions can exploit this opportunity by improving their policy instruments to factor these developments in, and support projects and processes to this direction.
OBJECTIVE AND EXPECTED CHANGE
The CONDEREFF project brings together 8 partners from 7 countries to exchange experiences and practices on how to move forward from existing procedures on C&D waste management towards the adoption and further exploitation of the best practices and measures applied in the field. The project will enable the participating regions to advance their goals for resource efficiency and green growth through the proper management of C&D waste, which can boost demand for C&D recycled materials and support both sustainability and recycling in the construction sector.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg Europe
Data inizio	01-giu-18
Data scadenza	31-mag-23
Contributo totale	€ 1.354.450
Costo eleggibile totale	€ 1.617.955
Contributo a ENEA	€ 141.664
Costo eleggibile ENEA	€ 166.663
Doc. approvazione	105/SSPT-USER
Codice atto	PS6ABU
Resp.scientifico ENEA	LUCIANO ANTONELLA
Unità	SSPT-USER-RISE

Attività ENEA:

ENEA will develop a methodology to assess the methodology for partners to survey on public awareness, perception and acceptance of C&D waste and to analyse the perceived value and potential for re-use. ENEA will assist the consortium with the collection/provision of input relevant to baseline studies, supporting the CONDEREFF partnership in the description and assessment of the regional context in the field of C&D waste management, and providing insights from EU regions beyond the partnership.
As recicling and C&D waste expert, ENEA will participate in the interregional workshops. ENEA will be responsible for the exchange of experience visit on selection, permits and monitoring of C&D waste management sites and facilities preparing the thematic input paper and organising the event. It will also participate in the policy and industry symposium on promoting and incentivising re-use of C&D waste.

N° Contratto: 754046

CONZEBS

Solution sets for the Cost reduction of new Nearly Zero-Energy Buildings

Coordinatore FHG FRAUNHOFER GESELLSCHAFT

Germania

n. partner: 9

Abstract

CoNZEBs will identify and assess technology solution sets that lead to significant cost reductions of new Nearly Zero-Energy Buildings. The focus of the project is on multi-family houses. Close cooperation with housing associations allows for an intensive interaction with stakeholders and tenants.
The project will start by setting baseline costs for conventional new buildings, currently available NZEBs and buildings that go beyond the NZEB level based on the experience of the consortium. It will analyse planning and construction processes to identify possible cost reductions. An investigation of end-users' experiences and expectations together with a guide on co-benefits of NZEBs will promote living in these buildings and enhance the energy performance by conducive user behaviour.
The technology solution sets will include approaches that can reduce costs for installations or generation systems, pre-fabrication and construction acceleration, local low temperature district heating including RES, and many more. Examples are pure electrical heating in combination with PV, PV/T in conjunction with a heat pump so that no earth coupling is required, ventilation supply through the walls to reduce the costs for ducts, larger bricks including insulation, decentral domestic hot water generation (fresh-water stations), etc. All solution sets will be assessed regarding cost savings, energy performance and applicability in multi-family houses. A life cycle assessment of different building levels and NZEBs using the solution sets will provide a longer term perspective. Communication to stakeholders and dissemination of the project results will include events and discussions with the national housing associations.
The project consortium is comprised of the leading national research organisations in the field of high performance buildings in 4 countries incl. the core theme leaders of the Concerted Action EPBD working areas “Nearly Zero-Energy Buildings” and “Cost-optimal levels”.

Anno di stipula	2017
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-giu-17
Data scadenza	30-nov-19
Contributo totale	€ 1.561.651
Costo eleggibile totale	€ 1.561.651
Contributo a ENEA	€ 204.850
Costo eleggibile ENEA	€ 204.850
Doc. approvazione	26/E/2017/DTE
Codice atto	PT5AAM
Resp.scientifico ENEA	ZINZI MICHELE
Unità	DTE-SEN

Attività ENEA:

L'ENEA è coinvolta principalmente nelle seguenti attività:
. Definizione dei costi di investimento per i diversi livelli prestazionali da raggiungere dagli edifici e delle misure tecnologiche necessarie per conseguire tali prestazioni;
. Analisi del processo progettuale e costruttivo in edifici multifamiliari e individuazione delle possibili aree di intervento per la riduzione dei costi;
. Raccolta e interpretazione dei dati relativi allo user acceptance in edifici a basso consumo energetico;
. Definizione, valutazione e dimostrazione di set di soluzioni correntemente usate sul mercato;
. Introduzione di aspetti di life cycle-analysis per espandere l'analisi dei costi benefici a tutto il ciclo di vita dell'edificio.

N° Contratto: 730427

COP21 RIPPLES

COP21: Results and Implications for Pathways and Policies for Low Emissions European Societies

Coordinatore IDDRI - FONDATION INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT DURABLE ET LES RELATIONS INTERNATIONALES

Francia

n. partner: 18

Abstract

The COP21 outcome represents an important new strategic context for EU climate policy. Analysing the implications of this new context requires an interdisciplinary approach, combining analysis of the evolution of the international climate regime as well as of NDCs and their socio-economic implications. Such analysis is also urgent, given the timelines imposed by the Paris Agreement for a "facilitative dialogue" in 2018 with a view to creating the conditions for the revision of NDC in 2020. In order to address the context described above, this project has four objectives : 1) Assess the adequacy of the NDCs submitted at COP21 in light of the global temperature target of limiting warming to 2°C/1.5°C. Through the analysis of GHG scenarios and energy system scenarios , the project will pay particular attention to the concrete system changes induced by NDCs, and compare them with the changes required to meet the global temperature limit. The project will also analyse scenarios limiting warming to 1.5°C, and the impact of NDCs on other sectors, in particular land-use. 2) Assess the implications of NDCs and deeper mitigation pathways on other European socio-economic objectives. By integrating GHG and energy system scenarios into a range of different macro-economic, global energy system models and other quantified methodologies, the project will investigate implications for European socio-economic objectives related to innovation and technology deployment; trade and competiveness; investment, financial flows and economic growth ("green growth"); and global energy markets and energy security. 3. Assess the adequacy of the outcomes of COP21, and the implications and opportunities emerging from ongoing UNFCCC negotiations. The project will undertake a social sciences-based (in particular international law and international relations) assessment of the outcome of COP21. 4) Policy recommendations for EU climate policy and climate diplomacy.

Anno di stipula	2016
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-dic-16
Data scadenza	30-nov-19
Contributo totale	€ 2.986.924
Costo eleggibile totale	€ 2.986.924
Contributo a ENEA	€ 55.017
Costo eleggibile ENEA	€ 55.017
Doc. approvazione	25/E/2016/DTE
Codice atto	PT0AAA
Resp.scientifico ENEA	VIRDIS MARIA ROSA
Unità	SSPT-MET

Attività ENEA:

L'ENEA è responsabile della raccolta degli scenari relativi all'Italia e della loro compilazione in un database e svilupperà un'analisi degli scenari (workpackage 2).
L'ENEA inoltre si occuperà dell'analisi degli scenari energetici ed emissivi dei settori low-carbon in cui i principali paesi europei e extraeuropei potrebbero avere o sviluppare un vantaggio comparativo.

N° Contratto: ECMWF/COPERNIC

COPERNICUS SIS

Sectorial information systems to support transport, engineering and associated standards

Coordinatore FUNDACION TECNALIA RESEARCH & INNOVATION

Spagna

n. partner: 2

Abstract

The project is intended to bridge this gap by characterizing and quantifying (to the degree possibile) uncertainty in future climate and taking such findings into consideration when planning, designing and operating infrastructure in five case studies.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Copernicus
Data inizio	01-ago-19
Data scadenza	29-feb-20
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 40.161
Costo eleggibile ENEA	€ 40.161
Doc. approvazione	81/E/2019/DTE
Codice atto	CT4AAR
Resp.scientifico ENEA	POLLINO MAURIZIO GIACOMO FRA
Unità	DTE-SEN-APIC

Attività ENEA:

Le attività ENEA sono relative ai seguenti Workpackage:
WP0-management e attività di coordinamennto
WP2-analisi eventi estremi
WP4-test cases

N° Contratto: 641816

CRESCENDO

Coordinated Research in Earth Systems and Climate: Experiments, kNowledge, Dissemination and Outreach

Coordinatore UNIV. LEEDS
Regno Unito

n. partner: 25

Abstract

CRESCENDO brings together seven Earth System Modelling (ESM) groups with three Integrated Assessment Modelling teams, as well as experts in ESM evaluation, ESM projection and feedback analysis, climate impacts and science communication to address the following goals; (i) improve the process-realism and simulation-quality of European ESMs in order to increase the reliability of future Earth system projections; (ii) develop and apply a community ESM evaluation tool allowing routine ESM performance benchmarking, process-based ESM evaluation and the analysis of Earth system projections. The resulting tool will be installed and made openly-available on the Earth System Grid Federation (ESGF); (iii) further develop the discipline of emergent constraints in order to better constrain the representation of key biogeochemical and aerosol feedbacks in ESMs and thereby reduce overall uncertainty in Earth system projections; (iv) quantify the effective radiative forcing of key biogeochemical and aerosol feedbacks in ESM projections; (v) contribute to the development of a new set of combined socio-economic and climate emission scenarios that more explicitly link future socio-economic development pathways with global radiative forcing; (vi) apply the project ESMs to these new scenario data to generate an ensemble of Earth system projections for the coming century and, in combination with the underlying socio-economic scenarios, use these projections to assess joint risks and co-benefits related to climate change, climate impacts, adaptation and mitigation; (vii) ensure data produced by CRESCENDO is available to the international community through timely archival on the ESGF and work closely with climate impact assessment and regional downscaling teams to ensure maximum uptake and use of these data in such complementary areas of science; (viii) actively disseminate knowledge generated in CRESCENDO to fellow scientists, policymakers and the general public.

Anno di stipula	2015
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-nov-15
Data scadenza	31-ott-20
Contributo totale	€ 14.338.876
Costo eleggibile totale	€ 15.003.511
Contributo a ENEA	€ 259.400
Costo eleggibile ENEA	€ 259.400
Doc. approvazione	50872015/SSPT
Codice atto	P50AAC
Resp.scientifico ENEA	ALESSANDRI ANDREA
Unità	SSPT-MET-CLIM

Attività ENEA:

Le attività ENEA riguardano l'implementazione e l'utilizzo di approcci innovativi per analizzare le simulazioni storiche e di scenario compiuto e questo al fine di meglio comprendere l'accoppiamento e i feedbacks tra uso del suolo e cambiamenti climatici. Una parte rilevante delle attività ENEA mirerà anche a contribuire allo sviluppo tecnico di uno strumento di valutazione degli ESMs apertamente disponibile (ESMval tool).

N° Contratto: CA15102

CRM-EXTREME

Solutions for Critical Raw Materials Under Extreme Conditions (CRM-EXTREME)

Coordinatore UNIV. POLITECNICA MARCHE
Italia

n. partner: 40

Abstract

Difficulties in the access to critical raw materials (CRMs) are expected to depress industrial sectors vital to Europe.
The Action focuses on the substitution of CRMs (like Cr, Co, Nb, W, Y) in high value alloys and metal-matrix composites used under extreme conditions of temperature, loading, friction, wear, corrosion, in Energy, Transportation and Machinery manufacturing industries.
The Action aims to set up a network of expertise to define the state of knowledge and gaps in multi-scale modelling, synthesis, characterization, engineering design and recycling, that could find viable alternatives to CRMs and promote the industrial exploitation of substituted materials.
The Action envisions a fully Sustainable Value Chain approach for:
Machinery manufacturing industry
Alternatives for Co and W in WC/Co cemented carbide wear resistant tool materials (Hard Metals and Cutting Tools)
Alternatives for chromium- and tungsten-alloyed tool steels
Energy Industry
Reduction of Cr and Y in high-strength steel alloys
Alternatives for Cr and other CRMs by hard, wear and corrosion resistant surface coatings
Transportation Industry
Alternatives for Nb in high-strength low-alloy (HSLA) steel (Automotive)
Alternatives for high-temperature Ni-based superalloys (Aerospace)
A four-year Action oriented to strengthen collaboration between active researchers working in the different areas of investigation involving CRMs, is the most suitable initiative to seed the initial catalytic nucleus of growth for EU excellence in strategic CRMs substitution.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 COST
Data inizio	10-mar-16
Data scadenza	09-mar-20
Contributo totale	€ 0
Costo eleggibile totale	€ 0
Contributo a ENEA	€ 0
Costo eleggibile ENEA	€ 0
Doc. approvazione	
Codice atto	
Resp.scientifico ENEA	GRILLI MARIA LUISA
Unità	DTE-PCU-IPSE

Attività ENEA:

L'ENEA partecipa attivamente al progetto.
Rappresentanti ENEA sono infatti presenti sia nel core group dell'Azione (coordinatore dei 4 Working Groups (WGs coordinator)) sia come partecipanti ai WGs.L'ENEA collabora alla organizzazione di workshop ed eventi. Ha co-organizzato il Workshop Industriale a Burgos (5-7 ottobre 2016) e partecipato alla prima Training School (Lisbona, 6-7 febbraio 2017) in qualità di Trainer. Gli esperti ENEA si occuperanno della realizzazione di materiali in forma di bulk e rivestimenti a contenuto ridotto di CRMs per applicazioni in condizioni estreme.

N° Contratto: UIA 04-137

DARE

Digital Environment for collaborative Alliances to Regenerate urban Ecosystems in middle-sized cities

Coordinatore COMUNE DI RAVENNA
Italia

n. partner: 12

Abstract

DARE proposes an Urban Regeneration Process based on new alliances between public, private profit and non-profit sectors and residents. In order to create a collaborative platform, we will develop a digital environment and a participatory process. The digital platform will make data accessible, understandable and useful, describing the district, the process and the changes and enabling, in so doing, not only decision makers but also citizens to become active part in the process. Such system has to rely on a widespread DIGITAL CULTURE to allow people to become aware digital city changers and interact with regenerations iconic services/engagement actions based on data & digital tools. Platform and skills will allow us to collaborate rapidly and effectively to co-develop and start-up a set of new integrated and concrete actions for regeneration.
The new governance will include a multidisciplinary expert team supporting feasibility and sustainability of projects and a specific focus on "story telling" the whole process.
Finally, we propose to assess our results against a new set of quality of life indicators, that may truly seize the improvements in the life of citizens.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi UIA - Urban Innovative Actions
Data inizio	01-set-19
Data scadenza	31-ago-22
Contributo totale	€ 4.998.004
Costo eleggibile totale	€ 6.247.505
Contributo a ENEA	€ 367.000
Costo eleggibile ENEA	€ 458.750
Doc. approvazione	36/2020/DTE
Codice atto	PT5ABE
Resp.scientifico ENEA	CLERICI MAESTOSI PAOLA
Unità	DTE-SEN

Attività ENEA:

L'ENEA lavora a fianco del Comune di Ravenna per la progettazione della prima infrastruttura digitale della città nell'area portuale-industrale, interessata da profondi processi di dismissione, dove attualmente vivono 20.000 persone.
L'ENEA guida il workpackage (WP)7 che mira a testare l'implementazione del meccanismo di governance iniziato nel WP 5 (emersione delle idee di progetto); nel WP2 è responsabile del database dei contatti all'interno delle attività di capitalizzazione; nel WP4 svilupperà ulteriormente la piattaforma ENEA Smart City; nel WP6 collaborerà con la CertiMaC nell'implementazione del gioco di ruolo urbano.

N° Contratto: INEA/CEF/ICT/A2018

DYDAS

Dynamic Data Analytics Services

Coordinatore KEY2 - KEY TO BUSINESS SRL
Italia

n. partner: 5

Abstract

The Action aims to develop a collaborative platform DYDAS (Dynamic Data Analytics Services) for offering data, algorithms, processing, and analysis services to a large number of users from different public and private user communities. The platform will act as an e-marketplace enabling transactions for accessing data and added value services enabled by High Performance Computing (HPC) and based on Big Data technologies, Machine Learning (ML), Artificial Intelligence (AI) and advanced data analytics. Geospatial Data Architecture will be a key element of the platform, which through the adoption of a Geospatial Data Model and of interoperability rules will enable seamless large dataset integration and processing capabilities for using geospatial data of different type and sources with data that are not intrinsically geo-referenced.
The Action will test the platform data analytics capabilities through the integration and operation of three use cases (maritime, energy and mobility), which will demonstrate functionalities and service potential of the DYDAS platform. Finally, the exploitation and dissemination activities will foster the uptake of the platform by national and local administrations, industry, application developers and service providers, academia and research centres.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi CEF (Connecting Europe Facility) - TEL
Data inizio	01-ott-19
Data scadenza	30-set-22
Contributo totale	€ 2.045.580
Costo eleggibile totale	€ 2.727.440
Contributo a ENEA	€ 341.865
Costo eleggibile ENEA	€ 455.820
Doc. approvazione	61/E/2019/DTE
Codice atto	PT3AAI
Resp.scientifico ENEA	PONTI GIOVANNI
Unità	DTE-ICT-HPC

Attività ENEA:

Il contributo dell'ENEA al progetto è relativo all'area tecnico scientifica dell'High Performance Computing con particolare riguardo alla gestione di grandi moli di dati, alla loro fruizione e alla definizione dell'infrastruttura di cloud computing; sarà inoltre definito lo scenario per lo use case marittimo (unità organizzative coinvolte DTE-ICT e SSPT-MET).

N° Contratto: 723623

EC4SafeNano

European Centre for Risk Management and Safe Innovation in Nanomaterials Nanotechnologies

Coordinatore INERIS Institut National de l'Environnement Industriel e des Risques

Francia

n. partner: 15

Abstract

A significant challenge to ensuring sustainable production and use of nanotechnologies is to understand safety and health risks of the technology and its end-products, and to implement practical strategies to manage these risks. Knowledge is growing rapidly, but effective use of this knowledge for risk management is lagging behind. We therefore need to bridge the gap between knowledge on hazard and risk, and 'fit-for-purpose' risk management tools and strategies supported by measurement and control methods.
EC4SafeNano will bridge this gap in an efficient and sustainable way by setting up an independent, science-based, managed Centre (hub) linked with several networks (spokes) to act at the interface between research organisations, industry, regulatory bodies, and civil society.
The objectives are to: 1) understand the needs of all stakeholders along the innovation value chain for nanotechnologies, ensuring safer, marketable, regulated and accepted long-lived products; 2) identify the resources and capabilities available to address these needs, and evaluate the capacity to provide technical solutions and actions; 3) build, test and benchmark a range of services, based on selected resources that answer stakeholder needs across the innovation value chain; 4) develop mechanisms and operating procedures to facilitate periodic updating of the "needs and resources" mapping and of the service provision; 5) develop networking activities aiming to share, benchmark and promote the EC4SafeNano services thereby enhancing and harmonizing the overall expertise, at EU level and beyond; and 6) develop governance rules and a strategic plan to prepare for self-sufficient operation beyond the project lifetime.
The main outcome is the definition of a legal entity with operating procedures, gathering, integrating and sharing available technology, tools, skills and processes and promoting services and capabilities to support stakeholder needs in risk management and safe innovation.

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 NMBP Nanotechn., Adv Materials, Adv
Data inizio	01-nov-16
Data scadenza	31-ott-19
Contributo totale	€ 1.999.014
Costo eleggibile totale	€ 1.999.014
Contributo a ENEA	€ 31.150
Costo eleggibile ENEA	€ 31.150
Doc. approvazione	139/2016/SSPT-USER
Codice atto	PS6AAH
Resp.scientifico ENEA	SCALBI SIMONA
Unità	SSPT-USER-RISE

Attività ENEA:

L'ENEA è coinvolta nel task 'Inventory on available tools, methods, approaches, best practices, training' per individuare strumenti, metodi, corsi e best practice per promuovere la sicurezza dei nanomateriali rispetto agli aspetti ambientali. Inoltre il laboratorio ENEA sarà il referente del nodo italiano del network che si verrà a creare.

N° Contratto: 832558

EEPLIANT 3

Energy Efficiency Compliant Products 3

Coordinatore PROSAFE - THE PRODUCT SAFETY ENFORCEMENT FORUM OF EUROPE

Paesi Bassi

n. partner: 29

Abstract

This proposal proposes a substantial project of a pan-EU market surveillance action to achieve impacts in line with the aims and objectives of the Horizon 2020 — Work Programme 2018-2020 Secure, Clean and Efficient Energy. The project, if approved, will be the most comprehensive and complex product market surveillance exercise ever undertaken in the EU's energy efficiency and Ecodesign sector, building on and reinforcing the successes and momentum of the predecessor programmes: Energy Efficiency Compliant Products (ECOPLIANT, EEPLIANT2014 and EEPLIANT2), Market Surveillance Project for TYRES 2015 (MSTyr15).
The proposed activities are structured around the needs and priorities identified by the memberships of the Energy Labelling and Eco-design ADCOs. These, without surprise, closely match the requirements set in the Call with ref. no. H2020-IBA-SC3-energy-2018, Exchange of information and best practices, development of common methods, protocols, checklists or IT tools (e.g. web crawlers), execution of joint surveillance activities, strengthening the collaboration with customs authorities, communication, establishment of centres of excellence for product testing, support the development of the Energy Labelling products registration database, input into standardisation, addressing challenging issues like defeat devices, software updates, plausibility testing, support for international alignment of test standards are all covered.
The methodology to be used for addressing those requirements will include the delivery of a programme structure consisting of a matrix of activities both horizontal (method development and capacity improvement) and vertical (product inspection and testing). This will result in building further expertise, developing and adopting common best practices and protocols by the Member State Authorities (MSAs). Altogether, Energy Efficiency Compliant Products 3 (EEPLIANT3) is expected to substantially enhance the impacts and the overall effectiveness and efficiency of market surveillance across the European Union (EU).

Anno di stipula	2019
Tipo di progetto	
Programma UE	HORIZON 2020 Energy
Data inizio	01-giu-19
Data scadenza	31-mag-23
Contributo totale	€ 6.851.481
Costo eleggibile totale	€ 6.851.481
Contributo a ENEA	€ 146.123
Costo eleggibile ENEA	€ 146.123
Doc. approvazione	17/2019/DUEE
Codice atto	PW3AAH
Resp.scientifico ENEA	PRESUTTO MILENA
Unità	DUEE

Attività ENEA:

Le attività progettuali a carico ENEA prevedono principalmente il supporto nella creazione di centri di eccellenza per testare i prodotti, nel lancio di nuove sfide per la sorveglianza del mercato, nei controlli su condizionatori e ventilatori, nei controlli sulle asciugatrici, nei controlli su lampade. In particolare l'ENEA è workpackage leader nel WP6 'Nuove sfide per la sorveglianza del mercato'.

N° Contratto: 6243

EFFICIENT BUILDINGS

Efficient buildings

Coordinatore CITY OF NICE

Francia

n. partner: 8

Abstract

As a MED hub for Energy Efficiency (EE) innovative and shared solutions, the Efficient Buildings Community will anchor a
MED community around energy issues that public organisations face in order to promote modular projects' outcomes and
increase their impact on public policies.
Indeed, in the MED area, the majority of public buildings is not adequately designed to reduce their energy consumption and improve their EE performance. This is partly due to a lack of awareness of owners and managers and knowledge gaps regarding common answers to this transnational challenge.
By establishing a joint transnational framework around energy efficiency in public buildings to propose solutions to energy
issues faced by public organizations in the MED area, the Efficient Buildings community will contribute to increase the capacity of owners and managers of public buildings to design and implement better energy efficiency practices.
On the other hand, the Efficient Buildings Community will promote its results at national and EU levels to influence policies
and call for new national and European regulatory framework that take into account MED specificities and the innovative solutions proposed by the community.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg MED
Data inizio	01-nov-19
Data scadenza	30-giu-22
Contributo totale	€ 1.354.794
Costo eleggibile totale	€ 1.593.876
Contributo a ENEA	€ 103.148
Costo eleggibile ENEA	€ 121.350
Doc. approvazione	7/2020/SSPT-USER
Codice atto	PS6ACO
Resp.scientifico ENEA	TARANTINI MARIO
Unità	SSPT-USER-RISE

Attività ENEA:

Il progetto prevede l'esecuzione di attività di comunicazione, di trasferimento di conoscenze mediante l'organizzazione di meeting e corsi di formazione articolati secondo differenti metodologie, di capitalizzazione dei risultati dei progetti modulari tra cui il progetto TEESCHOOLS di cui ENEA è capofila.

N° Contratto: LIFE16ENV/IT/000172

EFFIGE

Environmental Footprint For Improving and Growing Eco-efficiency

Coordinatore SCUOLA SUPERIORE SANT'ANNA

Italia

n. partner: 7

Abstract

The EFFIGE project, adopting the 2013/179/EU Commission Recommendation of 9 April 2013 on the use of common methods to measure and communicate the life cycle environmental performance of products and organizations, will calculate the companies PEF 'Product Environmental Footprint' to better manage their resources, reduce economic risk, and improve human well-being.
The Environmental Footprint (EF) pilot phase will test the process for developing products and the life cycle environmental performance. The EFFIGE project participants will cooperate with other company stakeholders to develop the rules for their products, test different approaches to verification and communication vehicles for communicating to partners and consumers. The results of this pilot project will be the basis for the communication phase and for disseminating the PEF method and make it more accessible (training programs will be designed for companies and students).

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi LIFE (2014-2020)
Data inizio	01-set-17
Data scadenza	30-giu-21
Contributo totale	€ 959.434
Costo eleggibile totale	€ 1.642.867
Contributo a ENEA	€ 132.379
Costo eleggibile ENEA	€ 226.676
Doc. approvazione	301/2017/PRES
Codice atto	PS6ABE
Resp.scientifico ENEA	BUTTOL PATRIZIA
Unità	SSPT-USER-RISE

Attività ENEA:

L'ENEA è coinvolto in tutte le azioni del progetto, in particolare le attività includono:
- la raccolta di buone pratiche di certificazione ambientale del prodotto:
- lo sviluppo di Product Environmental Footprint (PEF) Category rules per il servizio di fornitura pasti, lo sviluppo di PEF in aziende pilota e la validazione del piano di azioni di miglioramento;
- il supporto al partner di progetto per la definizione delle strategie di replicabilità e le azioni di implementazione per il servizio di fornitura pasti;
- il supporto al coordinatore nelle iniziative di formazione alle imprese;
- il coordinamento e l'attività di sviluppo di toolkit e database a supporto dell'implementazione PEF nelle PMI;
- il coordinamento dell'azione di monitoraggio dei risultati del progetto in termini di miglioramento degli impatti ambientali;
- azioni di disseminazione dei risultati.

N° Contratto: TC2018_4.2.2.-BMB_P

EIT CLIMATE KIC - BMB

Energy CheckUp Building Market Briefs

Coordinatore ASTER

Italia

n. partner: 2

Abstract

Building Market Brief (BMB) is a Climate-KIC initiative within the Building Technologies Accelerator (BTA) flagship, which aims at collecting and generating insights on the building sector to foster low-carbon investment.
The Building Market Brief (BMB) initiative will provide these insights in the form of market reports and an interactive online tool. Each market report will aim to profile a single country's building sector condensed into 50 pages. The provided content is methodologically aligned, thus enabling comparison between them.

Anno di stipula	2019
Tipo di progetto	
Programma UE	HORIZON 2020 EIT - Climate KIC
Data inizio	31-mag-18
Data scadenza	31-mar-20
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 36.125
Costo eleggibile ENEA	€ 42.500
Doc. approvazione	45/2019/DUEE-SPS
Codice atto	PW3AAJ
Resp.scientifico ENEA	SEGRETO MARIA-ANNA
Unità	DUEE-SPS-SEI

Attività ENEA:

Le attività ENEA rientrano tra quelle istituzionali dell'ENEA per quanto concerne il supporto tecnico-scientifico alla PA centrale e locale e al sistema edilizio italiano sui tempi di efficienza energetica ed uso di energia; prevedono il supporto all'aggiornamento del modello esistente italiano e all'individuazione della esatta composizione degli edifici esistenti caratterizzandone le tipologie costruttive per periodo, i materiali e le soluzioni tecnologiche utilizzate, nonché le tipologie impiantistiche. ENEA collabora inoltre alla ricognizione sul territorio nazionale per la raccolta dati, distribuendo un questionario sull'efficienza energetica che coinvolgerà utenti finali, tecnici, esperti del settore ed impiantisti.

N° Contratto: APUT0178_2017-1.1.4-

EIT Climate-KIC BEST

Business parks Energy positive & Sme energy checkup neTworks

Coordinatore CCS - CORNELISSEN CONSULTING SERVICE

Paesi Bassi

n. partner: 4

Abstract

By combining two existing energy scaving scans for SMEs, BE+ and SME Energy CheckUp, this project will implement full spectrum energy savings both on individual and regional level by tapping in on existing organizations or by creating new Energy Networks if no regional organization exists. The consortium will organise and encourage professional cooperation between business entrepreneurs with a view to achieving maximum energy savings and renewable energy production.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Climate KIC
Data inizio	01-set-17
Data scadenza	31-ago-20
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 160.016
Costo eleggibile ENEA	€ 240.000
Doc. approvazione	03/2018/UTEE-AVE
Codice atto	PE2AAJ
Resp.scientifico ENEA	SEGRETO MARIA-ANNA
Unità	DUEE-SPS-SEI

Attività ENEA:

ENEA will develop following activities:
. Kickoff meeting participation, contribution to the general project ;
. Italian case activities detailed planning and starting .

N° Contratto:

EIT Climate-KIC Circular Economy Training

Circular Economy Training - ItalyPilot

Coordinatore ENEA

Italia

n. partner: 6

Abstract

Climate-KIC has created its new circular economy training activities to complement existing place-based strategies that tackle climate change. This approach builds a strong integration of circular economy concepts with practical climate change adaptation and mitigation measures, and supports efforts to make cities more climate-resilient. It also enables Climate-KIC to incorporate their training activities alongside other leading circular economy research, training and development organisations. A focus on addressing local barriers and challenges visible 'in the community' also demonstrates the 'real-life', practical application of circular economy approaches and tools.
The project team have developed a training programme through short, practice-based, interactive workshop approaches for businesses, professionals and delivery organisations. Each of the three target areas are tackling a particular climate-related issue led by local partners:
•Italy – Circular economy – energy and resource efficiency in business parks in Bologna.
•Spain – reduced plastic use and waste in in Alicante.
•Romania – increased efficiency of the electronics and automotive sector in Timisoara.
In Italy, the project is coordinated by ENEA in collaboration with AESS (Agenzia per l'Energia e lo Sviluppo Sostenibile, Modena). The training is delivered by experts in the circular economy from the local training areas. In particular, the workshops are realized in the framework of Roveri Industrial District located in Bologna (Italy).
The training will provide links to other tools and resources to help participants create their action plans.A resource pack of all training materials and presentations will be available for participants.
More information: https://learning.climate-kic.org/en/courses/spotlight/circular-economy-energy-and-resource-efficiency-in-business-parks

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Climate KIC
Data inizio	01-nov-18
Data scadenza	31-mag-19
Contributo totale	€ 23.035
Costo eleggibile totale	€ 34.802
Contributo a ENEA	€ 12.055
Costo eleggibile ENEA	€ 18.340
Doc. approvazione	129/2018/SSPT
Codice atto	PS0AAN
Resp.scientifico ENEA	CAPPELLARO FRANCESCA
Unità	SSPT-SEC

Attività ENEA:

Le attività dell'ENEA, che coordina il progetto, prevedono la progettazione delle attività al fine di facilitare il coinvolgimento delle imprese nel percorso di formazionein collaborazione con gli stakeholder territoriali e l'organizzazione di workshop formativi sui temi dell'economia circolare e della simbiosi industriale.
L'ENEA è work package leader dei WP 1 (Co-design of circular Enablers Workshops) e 3 (Circular Economy Training Workshops). Partecipa inoltre ai WP 2 (Stakeholder engagement) e 4 (participants feedback evaluation and recommendations for scalability).

N° Contratto:

EIT CLIMATE-KIC
Circular Learning Hub CL-
A learning hub for engagement and transition towards circular thinking (phase 1)

Coordinatore UNIV. POLITECNICA MARCHE *n. partner:* 6

Italia

Abstract

Despite alarms on the need to unlock financial capitals to reverse the trend of the climate change has been rising for years, humans' cognitive biases have prevailed. This project works on an awareness-intention-action path fostering problem-owners in the ecosystem to a deeper understanding of circular thinking. On the basis of a de-biasing experiment, the co-creation of innovative learning and nudging initiatives on circular thinking and investing will be carried out in 2020. Based on empirical behavioural economics, firstly we will test on a defined group of investors and entrepreneurs some de-biasing videos specifically designed to overcome the hyperbolic discount bias on one of the priori1es for the contrast to the climate change, which is the implementation of circular thinking in the industry production to reduce waste and gas emissions coming from the materials' processes and the re-orientation of capitals towards circular models. The information collected during the experiment will allow for the co-creation of innovative learning initiative on circular thinking adding to previous pilot experiences that ENEA and AESS realized in 2019 with a particular focus on the construction sector. Nudging initiatives on circular investing will also be co-created and designed to simulate capital inflows to circular businesses, also supported and endorsed by the active role that CONSOB (the supervisory authority for the Italian financial products market) will play in the project. The pan-European extension of this project (Italy, Greece and Bulgaria) will also allow for a more effective co-creation of scaled nudging and learning solutions based on the experiences of the different geographical contexts involved

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Climate KIC
Data inizio	01-lug-19
Data scadenza	31-dic-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 3.875
Costo eleggibile ENEA	€ 5.167
Doc. approvazione	221/2019/SSPT
Codice atto	PS0AAQ
Resp.scientifico ENEA	CAPPELLARO FRANCESCA
Unità	SSPT-SEC

Attività ENEA:

L'ENEA è coinvolta nel WP2 Ecosystem engagement al fine di facilitare il coinvolgimento delle imprese nei percorsi di economia circolare in collaborazione con gli stakeholder territoriali; è inoltre coinvolta nell'organizzazione delle attività 'Train-the-Trainer' con i manager locali per trasferire le conoscenze.

N° Contratto:

EIT CLIMATE-KIC GECO

Green Energy Community

Coordinatore AESS - AGENZIA PER L'ENERGIA E LO SVILUPPO SOSTENIBILE

Italia

n. partner: 3

Abstract

GECO is a pilot Green Energy Community that experiment in Bologna, Pilastro – Roveri district, the creation of a energy community, recently introduced by the EU Clean Energy Package (CEP). GECO intends to tackle all the socio, technical and economic aspects that contribute to the creation of the energy community, contributing to the CEP transposition into the national law framework, increasing the sustainability, reducing the energy poverty and generating a low carbon economy cycle, enabling it through the digitalization, data collection, smart opmization algorithms, blockchain technologies and Internet of Things (IoT). The project seeks to experiment the newest smart solutions to maximize the energy self-consumption, the storage and the decentralized energy resources, increasing the flexibility through real-time monitoring, predictive analytics and automated response. Those activities will be performed by the GECO entity, that will manage the energy community and also provides climate services to its members related to energy saving technical assistance, renewable energy plant design, stakeholder engagement, training, disseminaon, and promotion of behavioral changes among the community stakeholders. In the end, all local households and business members of the community will benefit from the GECO acvies. It is expected that the synergies, frictions and disruptions arising from the smart energy community proposed will help to shape the neighbourhood and the Italian energy systems in the low carbon economy transion. The community will not only provide competitive clean energy prices, but also fight climate change, develop cooperation among neighbours and provide added-value to the local economy.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Climate KIC
Data inizio	01-set-19
Data scadenza	31-dic-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 52.710
Costo eleggibile ENEA	€ 79.062
Doc. approvazione	66/E/2019/DTE
Codice atto	PT5ABC
Resp.scientifico ENEA	D'AGOSTA GIANLUCA
Unità	DTE-SEN-CROSS

Attività ENEA:

Enea, per contribuire al progetto, ha sviluppato un modello di business green basato su blockchain, finalizzato a rendere flessibile la domanda di energia dei partner della comunità energetica. I ricercatori Enea si occuperanno anche di definire una piattaforma ICT per raccogliere i dati con al fine di migliorare la consapevolezza dei consumatori.

N° Contratto: TaskCT2018B_3.3.9

EIT Climate-KIC Inno-WEEE

Innovative WEEE traceability and collection system and geo-interoperability of WEEE data

Coordinatore DEDAGROUP PUBLIC SERVICES SRL

n. partner: 5

Italia

Abstract

InnoWEE has two interrelated key objectives:
. Objective 1: the project aims to increase the amount of collected electric/electronic devices;
. Objective 2: it aspires to put into practices resource efficient processes for the collected devices: EEE will be reused/refurbished while WEEE will be recycled or it will evaluate the preparation for reuse. The target products are especially small appliances from citizens, offices, schools, etc. that will be collected through new systems able to determine if the received item can be categorized as WEEE, so it has to be transported to a treatment plant and disposed in a proper manner (that includes secondary raw material recover), or as a EEE, so operations to extend the life cycle of the product have to be tested.
Overall, the traceability of the collected equipment will be improved through innovative geo-ICT services to monitor several steps of the product lifecycle: collection, recovery, recycling and reuse of appliances and secondary materials along the whole value chain.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Climate KIC
Data inizio	02-lug-18
Data scadenza	31-dic-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 159.402
Costo eleggibile ENEA	€ 239.103
Doc. approvazione	62/2018/SSPT-USER
Codice atto	PS6ABQ
Resp.scientifico ENEA	TAMMARO MARCO
Unità	SSPT-USER-T4RM

Attività ENEA:

L'ENEA è coinvolta nelle seguenti fasi:
- stato dell'arte e best practices per la raccolta dei RAEE ed allungamento della vita degli AEE;
- studio dei meccanismi di tracciabilità dei RAEE;
- studio della attuale configurazione della raccolta RAEE del Comune di Cava de' Tirreni e individuazione della migliore soluzione per applicare i modelli di economia circolare individuati;
- comunicazione ed informazione all'utenza cittadina;
- individuazione di sistemi di comunicazione/informazione in real time all'utenza;
- sperimentazione sul campo dei sistemi individuati sia relativamente alla tracciabilità dei RAEE sia all'allungamento di vita degli AEE, anche mediante lo studio di sistemi di incentivazione/premialità (ipotesi gamification con altre città europee).

N° Contratto: Task TC_4.1.4_19057_

EIT Climate-KIC Young Innovators

Young Innovators

Coordinatore AESS - AGENZIA PER L'ENERGIA E LO SVILUPPO SOSTENIBILE

Italia

n. partner: 5

Abstract

Young Innovators is an experimental programme aimed to introduce a systems innovation approach to 12-18 year olds to foster social awareness and entrepreneurial thinking towards tackling climate change challenges in the school environment through visual thinking and participatory techniques.
The next few years are the most important in our history to prepare future generations to lead a prosperous, inclusive, resilient society based on a net-zero carbon circular economy. Our mission is to empower 30,000 teens by 2020, and 3 million by 2030, transforming over 10% of all teens living in Europe, and beyond, into Champions to become climate innovators.
With Young Innovators, the future generation is being prepared with the knowledge and understanding to lead the movement for a systemic change. As part of this movement, Young Innovators offers students the methodological approach, visual tools and entrepreneurial mindset to change the economy and society immediately. Working with EIT Climate-KIC partners, learning designers and teachers as multipliers of change, we aim to integrate climate change challenges as part of our teens' life at school.

Anno di stipula	2019
Tipo di progetto	
Programma UE	HORIZON 2020 EIT - Climate KIC
Data inizio	29-mar-19
Data scadenza	31-dic-19
Contributo totale	€ 35.436
Costo eleggibile totale	€ 47.248
Contributo a ENEA	€ 6.497
Costo eleggibile ENEA	€ 8.662
Doc. approvazione	2018/2019/SSPT-USER
Codice atto	PS6ACI
Resp.scientifico ENEA	TAMMARO MARCO
Unità	SSPT-USER-T4RM

Attività ENEA:

N° Contratto: 16327

EIT Raw Materials RESIELP

Recovery of Silicon and other materials from End-of-Life Photovoltaic Panels

Coordinatore CEA

Francia

n. partner: 8

Abstract

ReSiELP aims at recovering critical and precious as well as non-critical raw materials with innovative technologies from the largely available quantity of EOL PV waste.
ReSiELP proposes a circular economy with a producT centric zero-waste approach.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	01-apr-17
Data scadenza	31-dic-19
Contributo totale	€ 2.378.978
Costo eleggibile totale	€ 2.378.978
Contributo a ENEA	€ 277.166
Costo eleggibile ENEA	€ 277.166
Doc. approvazione	56/2017, 102/2018, 49/2019/SSPT-USE
Codice atto	PS6AAW
Resp.scientifico ENEA	TAMMARO MARCO
Unità	SSPT-USER-T4RM

Attività ENEA:

L'ENEA si occupadi valutare gli aspetti ambientali dei processi di recupero e supportare la progettazione dell'impianto per il trattamento termico dei pannelli e dei sistemi di trattamento dei reflui liquidi e gassosi.

N° Contratto: 16290

EIT Raw Materials SPARK

Substitution and recycling of critical elements in materials for ionizing radiation detection

Coordinatore UNIV. MILANO BICOCCA
Italia

n. partner: 9

Abstract

The project meets a strategic goal of the EIT RawMaterials, consisting of substitution or recycling of rare earths, which are a class of critical raw materials for the EU industry, in a significant market like that of radiation detectors.
Main objectives are:
. To establish a broad network able to provide several types of experimental services and consultations to research groups and companies aiming at using already available materials or at developing novel material systems;
. To promote networking between partners and matchmaking with other EIT RawMaterials (EIT RM) partners and non-EIT RM institutions;
. To promote educational activities through the exchange of students and young researchers between academic institutions and participating companies.
The activities are organized into three work packages:
WP1 (Creation and development of the infrastructure services)
WP2 (Education activities)
WP3 (Management and networking)
Target end-customers are companies and research institutions. Beneficiaries of intersectoral educational activities are PhD students and young researchers.
High school students, undergraduate students, and professionals will also be beneficiaries of educational activities of the network.
Activities in SPARK are linked with AIDA2 H2020 Infrastructure Project and INTELUM project (H2020-MSCA-RISE-2014) in which the coordinator is a partner.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	01-gen-17
Data scadenza	31-dic-19
Contributo totale	€ 282.898
Costo eleggibile totale	€ 428.898
Contributo a ENEA	€ 30.500
Costo eleggibile ENEA	€ 49.500
Doc. approvazione	152/2017, 216/2018, 135/2019/PRES
Codice atto	PF0AAG
Resp.scientifico ENEA	BACCARO STEFANIA
Unità	FSN

Attività ENEA:

L'ENEA svolge attività di caratterizzazione delle proprietà di materiali scintillanti sottoposti ad irraggiamento gamma, al fine di valutarne la resistenza a radiazione in condizioni sperimentali differenti.

N° Contratto: 18072

EIT RAW MATERIALS 3DMPWIRE

Material-efficient Cu wire-based 3D printing technology

Coordinatore IMN - INSTITUTE OF NON FERROUS METALS

Polonia

n. partner: 5

Abstract

Project addresses needs for more efficient and waste-free production, specifically production of corrosion-resistant components operating in marine environments using newly developed Cu-based alloys. Upscaling will bring to TRL9 technology of production of components by 3D printing from wires. Thanks to the application of wires significant reduction of material loss (with a factor of 10), production costs and energy consumption will be reached.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	02-gen-19
Data scadenza	31-dic-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 7.275
Costo eleggibile ENEA	€ 8.083
Doc. approvazione	25/2019/SSPT-PROMAS
Codice atto	PS3ABM
Resp.scientifico ENEA	SCAFE' MATTEO
Unità	SSPT-PROMAS-TEMAF

Attività ENEA:

L'ENEA riveste il ruolo di core partner e leader del Work Package 4.
Le attività ENEA prevedono l'esecuzione di attività sperimentali di caratterizzazione di campioni e componenti, che verranno realizzati mediante la tecnologia di additive manufacturing WAAM ed usando le nuove leghe di rame messe a punto da IMN nell'ambito del progetto.

N° Contratto: 18052

EIT Raw Materials C2CC

Cradle-to-Cradle Composites

Coordinatore ENEA

Italia

n. partner: 7

Abstract

Existing CO2 emissions regulations force car manufacturers to aim at significant weight reduction, which seems possible only through the substitution of metals (which are also critical raw materials) with polymer composite materials (PMC). These PMC, however, should also be recyclable, in order to be compliant with End-of-Life Vehicles (ELV) regulations as well as low cost, in order to be mass produced. Currently, PMC are used only for luxury cars, and are not environmentally friendly, due to the significant productions of wastes during production and non-recyclability.
C2CC will employ new basalt derived mineral fibres (BDMF) which are fully recyclable. They will be associated with innovative bio-mass derived thermo-set resins to produce Basalt-PMC (B-PMC) that can be chemically "cleaved" to recovery both a polymer (which will be used for producing automotive internal parts) and the fibres (which will be re-employed for the original components). The project will bring this solution on the verge of being mass produced and will assess all environmental benefits of the new solution, particularly lower energy use and lower C-emissions.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	01-apr-19
Data scadenza	31-dic-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 62.771
Costo eleggibile ENEA	€ 80.709
Doc. approvazione	191/2019/PRES
Codice atto	PS3ABT
Resp.scientifico ENEA	MINGAZZINI CLAUDIO
Unità	SSPT-PROMAS-TEMAF

Attività ENEA:

L'ENEA coordina il progetto; le attività prevedono l'esecuzione di attività sperimentali dimostrative relative alla produzione e qualificazione di nuovi materiali, nonché un contributo alla messa a punto dei processi, con approfondimento degli aspetti di fattibilità tecnico-economica e scale-up.

N° Contratto: 18368

EIT Raw Materials CIRCuIT

CIRcular Cities Transition needs - Transition to circular cities

Coordinatore ENEA

Italia

n. partner: 3

Abstract

The CIRCuIT innovation project will deliver:
• Identification of gaps and needs of cities
• Drafting strategy to overcome the identified needs and gaps:
The project will:
• Analyse the existing data and documents, pointing out the relevant themes for the transition towards circular cities
• Collect feedback from stakeholders collaborating in other project/initiatives with project consortium, through existing data and at least one dedicated workshop, inviting experts with particular focus on cities/local administration representatives
• Ranking the collected factors that enable (or hamper) the implementation (transition) to circular practices in cities
A major outcome of the project will be a ranking list of factors, technological developments as well as "transversal factors" such as legal, promote collaboration (vs competition), knowledge transfer, data/digital (as an accelerator of c.e.), governance.
Overall project strategy will address important topics for urban areas (Waste prevention and management; Urban water management and reuse; Urban mining; New business models; Building; Citizen awareness).
Furthermore, it will contribute to defining a preliminary strategy to overcome needs and gaps for the transition toward circular cities, contributing to:
• Funnelling synergies and expertise already existing
• Identifying future challenges and developing the ability to address them

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	01-lug-19
Data scadenza	31-dic-19
Contributo totale	€ 69.615
Costo eleggibile totale	€ 69.615
Contributo a ENEA	€ 23.750
Costo eleggibile ENEA	€ 23.750
Doc. approvazione	194/2019/SSPT
Codice atto	PS0AAP
Resp.scientifico ENEA	INNELLA CAROLINA
Unità	SSPT-SEC

Attività ENEA:

L'ENEA, in qualità di Lead Partner, si occupa del Project Management, assicurando che vengano rispettati i tempi e la qualità degli obiettivi e che siano gestite le questioni amministrative, finanziarie e legali.
Sono anche a carico di ENEA:
. Analisi dei documenti esistenti sui temi rilevanti per la transizione verso città circolari;
. Sintesi e conclusioni delle attività che emergeranno dalla consultazione con gli stakeholder.

N° Contratto: 18064

EIT Raw Materials Circular TP

Composites based multi-materials parts designed for circular economy

Coordinatore ARKEMA FRANCE SA

Francia

n. partner: 8

Abstract

The increasing drive to reduce the weight of vehicles has resulted in the gradual replacement of dense ferrous metals by lower density materials, like plastics and short-fibre reinforced plastics. Today, plastic materials represent 12% to 15% of the weight of a car and this number has remained stable for many years. A further very significant weight reduction is rendered mandatory by the new EU or other regulations on Green House Gas emissions, which can only be achieved by massively substituting today's steel by lighter weight materials in the car body structure and powertrain. The CIRCULAR-TP project aims at developing cost-effective, light-weighting materials and technologies that will allow the European automobile manufacturers to introduce light-weight solutions in existing plants in the short- to mid-term. The main objectives of the project are to scale-up the production of thermoplastics reinforced with continuous carbon or glass fibre, and to develop production tools and processes that will allow the combination of very thin steel sheets with such thermoplastic composites. This approach shall lead to metal/hybrid composites with expected weight losses of 30% compared to pure steel while allowing a fast implementation in the existing car manufacturing processes. At the same time, this technology shall help to reduce production waste by as much as 90% compared to current thermoset or organosheet composite solutions.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	02-gen-19
Data scadenza	31-dic-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 17.437
Costo eleggibile ENEA	€ 19.375
Doc. approvazione	53/2019/SSPT-USER
Codice atto	PS6ACE
Resp.scientifico ENEA	CHIAVETTA CRISTIAN
Unità	SSPT-USER-RISE

Attività ENEA:

ENEA si occupa della valutazione di sostenibilità ambientale della nuova soluzione tecnologica proposta che ricorre all'utilizzo di materiali compositi, confrontata con la soluzione attualmente utilizzata dall'industria dell'automotive e alla valutazione di sostenibilità del processo di riciclaggio dei componenti che potranno essere realizzati tramite la soluzinoe innovativa proposta dal progetto (secondo la metodologia del Life Cycle Assessment). L'ENEA è coinvolta nel WP6 ' Validation of the business model' e nel WP7 'Recycling and validation of the secondary business case'.

N° Contratto: 10014

EIT Raw Materials HUB - Regional Centre South Italy

Regional center South Italy (EIT RIS activity related to action line II)

Coordinatore NON PREVISTO DAL PROGETTO *

n. partner: 1

Abstract

The focus area of Innovation Hub CLC South encompasses all the main themes of the EIT RawMaterials: primary resources (geophysics and exploration, rock mechanics, treatment of mineral resources and waste), recycling (metals and minerals processing, refining and recycling; industrial waste; collection and processing of end-of-life products), and substitution (materials and nanomaterials design, bio-based substitution, biopolymers, elastomers, composites and natural rubber).

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	02-gen-19
Data scadenza	31-dic-19
Contributo totale	€ 50.000
Costo eleggibile totale	€ 50.000
Contributo a ENEA	€ 50.000
Costo eleggibile ENEA	€ 50.000
Doc. approvazione	77/2019/SSPT-PROMAS
Codice atto	PS3ABU
Resp.scientifico ENEA	PENZA MICHELE
Unità	SSPT-PROMAS-MATAS

Attività ENEA:

L'ENEA riveste il ruolo di partner unico e si avvale della collaborazione del Co-location Centre South Italy di EIT Raw Materials con sede presso il CR ENEA di Casaccia.
Le attività sono articolate secondo il seguente programma di lavoro:
.WP1 - Network and community building - Build up the local SME/Start-up RM sector system
. WP2 - Business creation and entrepreneurship support
.WP3 - Dissemination, marketing and outreach
.WP4 - Strategy, business plan and mapping of the Regional Center South of Italy
.Workshop

N° Contratto: 17569

EIT RAW MATERIALS
INCO-PILES FAST-TRACK
International Consortium of Europe/RREM to recover CMs fron stockpiles/tailings

Coordinatore UNIV. BOLOGNA ALMA MATER STUDIORUM

Italia

n. partner: 4

Abstract

Stockpiles and tailings are strategic sources to recover Critical Raw Materials (CRMs). Gaps in retreatment technologies exist. The international consortium will transfer methods and technologies through KIC Partners. This cooperation will improve knowledge by anallysing stockpile case studies in RREM and ESEE countries. Environmental issues and CRMS market will be assessed. The results will valorize innovations (TRL>5) for scaled up projects.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	01-gen-19
Data scadenza	31-gen-19
Contributo totale	€ 14.975
Costo eleggibile totale	
Contributo a ENEA	€ 6.025
Costo eleggibile ENEA	
Doc. approvazione	286/2019/SSPT-USER
Codice atto	PS6ACN
Resp.scientifico ENEA	CHIAVETTA CRISTIAN
Unità	SSPT-USER-RISE

Attività ENEA:

Preparazione di una valutazione preliminare dei benefici economici ed ambientali generati dallo sfruttamento degli sterili di miniera previsto dal progetto INCO-PILES in confronto con le tradizionali pratiche estrattive di materie prime critiche

N° Contratto: 16211

EIT Raw Materials REVALUE

REcycled carbon fibres for high VALUE composites

Coordinatore ENEA
Italia

n. partner: 6

Abstract

The goal of the project is the scaling up of the process for the recycled carbon fiber surface modification and thermoplastic compound manufacturing, thus leading to high performance eco-innovative composite materials. By the optimization of the RCF surface modification process and of the compounding process, carbon fiber reinforced thermoplastics will be available for the automotive market, having properties similar to those of the virgin carbon fiber reinforced compounds, but with 75% fiber cost saving. The consequences will be a wider use of carbon fibers in automotive components, with a clear advantage in terms of automotive lightening.
The main environmental impact of the project is linked to the minimization of the pollution due to the carbon fiber manufacturing. The global carbon fibres demand is expected to grow at an annual rate of 10%, reaching 89kton in 2020. About 30% of the manufactured carbon fibres becomes industrial scrap. Moreover, current methods for manufacturing new carbon fibres are very energy intensive, while producing Recycled Carbon Fibres (RCF) by pyrolysis requires only 1/10 of the energy as compared to new carbon fibres. The project will foster a massive use of recycled carbon fibers, providing a clear advantage in terms of reduction of landfill waste and CO2 emissions. Another important environmental impact is relevant to the significant contribute that will be provided to solve the impelling need to reduce the CO2 emissions of the vehicles. The vehicles weight reduction is an immediate way to reduce the CO2 emissions, letting the reduction of fuel consumption.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	02-gen-17
Data scadenza	31-dic-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 234.189
Costo eleggibile ENEA	€ 234.189
Doc. approvazione	56/2017, 91-SA/2018 42/2019/SSPT-P
Codice atto	PS3AAT
Resp.scientifico ENEA	CARETTO FLAVIO
Unità	SSPT-PROMAS-MATAS

Attività ENEA:

L'ENEA coordina il progetto e partecipa al WP0 Feasibility Study relativo ad attività di valutazione tecnico-economico sulla sostenibilità del progetto (IPR strategy, business model e business plan); nel 2018 inoltre è coinvolta nel WP2 RCF treatment process optimization and sculing-up (messa a punto di opportuni sizing per fibre di carbonio da riciclo e scaling-up del relativo processo di deposizione).

N° Contratto: 18183

EIT Raw Materials Train Call

Call for training Ideas of EIT rAWmATERIALS High-Level

Coordinatore UNIV. TECHN. BERGAKADEMIE FREIBERG

Germania

n. partner: 9

Abstract

This project aims to find the most promising training ideas that infuse the industry with new research results, and encourages experts to share their knowledge with professionals. A call asks all subject experts to provide their solutions to the industry's current challenges. The best ideas will be selected and the Subject Experts will be assisted with a programme to guarantee that their topic and pedagogical implementation will fit industry needs.
The project encourages subject experts of all fields to propose solutions for the industry's pressing training needs and will develop new state of the art training courses. Elaborating on successful methods and with mapping processes already in place, it is possible to provide focus topics that challenge trainers and professionals to provide training solutions.
A board of educational and industry experts will evaluate the training proposals and the best ideas will be developed into courses. Content experts and trainers will be supported by a trainer seminar and personal coaching sessions to assist them in designing effective training programmes, and to develop a common training style throughout all EIT RawMaterials Professional School courses. A team of experienced event managers will support the trainers to organize the courses and assure a high level of quality throughout the whole EIT RawMaterials Professional School, which will guarantee customer satisfaction and brand recognition. A pre-existing network and professional processes already developed will make sure that industry's current needs will be constantly assessed so that new courses will exactly meet the demand.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 EIT - Raw Materials KIC
Data inizio	01-gen-19
Data scadenza	31-dic-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 1.500
Costo eleggibile ENEA	€ 1.500
Doc. approvazione	267/2019/PRES
Codice atto	PS3ABW
Resp.scientifico ENEA	MONTONE AMELIA
Unità	SSPT-PROMAS

Attività ENEA:

L'ENEA partecipa alle attività di valutazione delle espressioni di interesse e partecipa ai meeting del board di valutazione.

N° Contratto: 847553

ELSMOR

Towards European Licencing of Small Modular Reactors

Coordinatore VTT TECHNICAL RESEARCH CENTRE OF FINLAND

Finlandia

n. partner: 15

Abstract

ELSMOR (towards European Lisencing of Small MOdular Reactors) aims to create methods and tools for the European stakeholders to assess and verify the safety of light water small modular reactors (LW-SMR) that would be deployed in Europe.
ELSMOR advances the understanding and technological solutions pertaining to light water SMRs on several fronts:
• Collection, analysis, and dissemination of the information on the potential and challenges of Small Modular Reactors to various stakeholders, including the public, decision makers and regulators.
• Development of the high level methods to assess the safety of LW-SMRs
• Improvement of the European experimental research infrastructure to assist in the evaluation of the novel safety features of the future LW-SMRs.
• Improvement of the European nuclear safety analysis codes to demonstrate the capability to assess the safety of the future LW-SMRs
Establishing education and training in the field of innovative nuclear reactors for young professionals is also emphasized.
The ELSMOR project is built upon the expertise of the consortium that consists of technical support organizations, technical research centres, industrial partners, and universities with the long experience in European nuclear safety analysis and the development and implementation of innovative nuclear technologies. The industrial partners include utilities, small medium sized enterprises as well as the consortium currently developing the French LW-SMR (F-SMR design). The developers of European safety analysis tools and other computer codes use their well-established paths for exploitation of the improved and validated simulation tools.
The licencing approaches and methods would be expected to be directly utilized by SMR designers like the French consortium. The outcomes should make the licensing process more fluid and comprehensive; this should also be true from the regulator point of view.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-19
Data scadenza	28-feb-23
Contributo totale	€ 3.494.704
Costo eleggibile totale	€ 4.279.581
Contributo a ENEA	€ 217.000
Costo eleggibile ENEA	€ 270.900
Doc. approvazione	072/2019/FSN
Codice atto	PF6AAK
Resp.scientifico ENEA	LOMBARDO CALOGERA
Unità	FSN-SICNUC-SIN

Attività ENEA:

L'ENEA coordina il workpackage 3 "Core cooling safety functions" e partecipa a tutti i workpackage del progetto:
1 Identification of improved safety features of LW-SMRs
2 Development of safety case methodology
4 Containment safety functions
5 Application of safety case methodology
6 Synthesis, Recommendations and Dissemination
7 Education and training
8 Management

N° Contratto: EASME/EMFF/2018/1.

EMODnet Data Ingestion II

Ingestion and safe-keeping of marine data - no 2

Coordinatore HELLENIC CENTRE FOR MARINE RESEARCH

Grecia

n. partner: 3

Abstract

The European Marine Observation and Data Network (EMODnet) is a network of organisations supported by the EU's integrated maritime policy. These organisations work together to observe the sea, process the data according to international standards and make that information freely available as interoperable data layers and data products. This "collect once and use many times" philosophy benefits all marine data users, including policy makers, scientists, private industry and the public. It has been estimated that such an integrated marine data policy will save at least one billion Euros per year, as well as opening up new opportunities for innovation and growth.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi EMFF - European Maritime and Fisheri
Data inizio	11-ott-19
Data scadenza	10-ott-21
Contributo totale	€ 1.000.000
Costo eleggibile totale	€ 1.000.000
Contributo a ENEA	€ 13.500
Costo eleggibile ENEA	€ 13.500
Doc. approvazione	9/2020/SSPT/PROTER
Codice atto	PS4ACC
Resp.scientifico ENEA	PECCI LEDA
Unità	SSPT-PROTER-BES

Attività ENEA:

All'ENEA è assegnato il ruolo di centro dati ed ha il compito di preparare dati e metadati, assegnati per competenza, in collaborazione con i produttori dei dati, per la trasmissione nei principali repository europei e nel portale del progetto EMODnet Data Ingestion.

N° Contratto: 740560

ENTRAP

Enhanced Neutralisation of explosive Threats Reaching Across the Plot

Coordinatore FOI SWEDISH DEFENCE RESEARCH AGENCY

Svezia

n. partner: 16

Abstract

ENTRAP will deliver combined operational research (OR) methods for assessing and identifying emerging and future counter-measures. The tools will be used for identifying the needed step-changes for countering present, emerging and future explosive threats.
The OR tools will encompass methods including morphological analysis, attack-defence trees, Bow-tie diagrams and wargaming. The tools have been well-established for decades and they will be further developed and adapted for explosive threats. The proposed research aims to assess the effectiveness of counter-tools and their combinations across the plot. This will give a value on the efficiency they can provide for historical cases or emerging and future scenarios for an attack. The project will strive to identify commonalities in the timeline where a counter-tool can be effective for several different scenarios. Thus, an effectiveness assessment will be made not only across the timeline for one scenario but also across different scenarios.
The research and development efforts on a European level over the last decades will be a main source of background data.
A gap analysis over the plot will in combination with the OR methods identify the need of required preventive counter-measures. A gap bridging assessment will together with the researcher and practitioner think-tank in ENTRAP ensure a step-change vision of counter-tools for important gaps.
Historical attacks, scenarios defined in FP 7 projects, the EU Matrix group and NDE will be used as the basis. A cost assessment will be included giving an estimate for the required further developments.
The ENTRAP consortium will bring together a world-leading team where the consortium includes 11 practitioners supported by an advisory board of key entities whereof 18 Letter of Supports have been obtained.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Secure societies
Data inizio	01-mag-17
Data scadenza	30-apr-20
Contributo totale	€ 4.978.249
Costo eleggibile totale	€ 4.978.249
Contributo a ENEA	€ 133.875
Costo eleggibile ENEA	€ 133.875
Doc. approvazione	111/2017/FSN
Codice atto	PF7AAD
Resp.scientifico ENEA	PALUCCI ANTONIO
Unità	FSN-TECFIS-DIM

Attività ENEA:

L'ENEA contribuisce a nove degli undici workpackage previsti dal progetto. Ha inoltre un ruolo preminente sugli aspetti di disseminazione dei risultati, attingendo alle competenze maturate negli anni nel settore della Security.

N° Contratto: 824158

EoCOE-II

Energy oriented center of excellence: towards exascale for energy

Coordinatore CEA

Francia

n. partner: *18*

Abstract

The Energy-oriented Centre of Excellence (EoCoE) applies cutting-edge computational methods in its mission to accelerate the transition to the production, storage and management of clean, decarbonized energy. EoCoE is anchored in the High Performance Computing (HPC) community and targets research institutes, key commercial players and SMEs who develop and enable energy-relevant numerical models to be run on exascale supercomputers, demonstrating their benefits for low-carbon energy technology. The present project will draw on a successful proof-of principle phase of EoCoE-I, where a large set of diverse computer applications from four such energy domains achieved significant efficiency gains thanks to its multidisciplinary expertise in applied mathematics and supercomputing. During this 2nd round, EoCoE-II will channel its efforts into 5 scientific Exascale challenges in the low-carbon sectors of Energy Meteorology, Materials, Water, Wind and Fusion. This multidisciplinary effort will harness innovations in computer science and mathematical algorithms within a tightly integrated co-design approach to overcome performance bottlenecks and to anticipate future HPC hardware developments. A world-class consortium of 18 complementary partners from 7 countries will form a unique network of expertise in energy science, scientific computing and HPC, including 3 leading European supercomputing centres. New modelling capabilities in selected energy sectors will be created at unprecedented scale, demonstrating the potential benefits to the energy industry, such as accelerated design of storage devices, high-resolution probabilistic wind and solar forecasting for the power grid and quantitative understanding of plasma core-edge interactions in ITER-scale tokamaks. These flagship applications will provide a high-visibility platform for highperformance computational energy science, cross-fertilized through close working connections to the EERA and EUROfusion consortia.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-gen-19
Data scadenza	31-dic-21
Contributo totale	€ 8.303.455
Costo eleggibile totale	€ 8.621.955
Contributo a ENEA	€ 501.750
Costo eleggibile ENEA	€ 501.750
Doc. approvazione	74/E/2018/DTE
Codice atto	PT3AAE
Resp.scientifico ENEA	CELINO MASSIMO
Unità	DTE-ICT

Attività ENEA:

N° Contratto: 818783

ERN-APULIA

European Researchers Night Apulia 2018_2019

Coordinatore UNIV. SALENTO
Italia

n. partner: 9

Abstract

ERN-Apulia targets to bring Apulian population closer to the research world and viceversa. Apulia is an Italian region with about 4.1 million inhabitants (approximately 7% of the whole Italian population), with 4 public universities having a total of about 2750 permanent researchers in addition to those from the Public and Private Research Institutions. Thus, ERN-Apulia has a large capacity of potential contributors and beneficiaries, which increases the overall impact of the planned initiatives.
Our main objectives are:
- to plan and implement preparatory events (during the year) and two ERN (2018 and 2019) where researchers meet the society, with particular attention to students, industrial and professional organizations, municipalities and public administrations;
- to increase public awareness and recognition of the importance and impact of research in daily life, with specific examples from ICT to health and life sciences, from elementary particle to astrophysics research, from robotics to the preservation of cultural heritage, etc;
- to stimulate curiosity and interest and explain the fascinating world and the opportunities in research, especially to the youngest as a mean to encourage them to embark scientific careers;
- to establish a tight connection among population/institutions and researcher to continue during the year;
- to prepare and publicize dissemination materials along with scientific games and site visits (including laboratories and sites of cultural interest) to be available during the whole year for the general public;
- to explain the spirit and opportunities of the European Research Area, the H2020 agenda, the Marie Skłodowska-Curie actions and the principles of "The European Charter for Researchers";
- to reach a number of followers close to 500,000, a number of participants larger than 200,000 (among all the various initiatives) and a number of participants to the ERN larger than 100,000.

Anno di stipula	2018
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 MSCA Marie Skl. Curie Actions
Data inizio	01-apr-18
Data scadenza	30-nov-19
Contributo totale	€ 171.000
Costo eleggibile totale	€ 171.000
Contributo a ENEA	€ 16.000
Costo eleggibile ENEA	€ 16.000
Doc. approvazione	70/2018/SSPT-PROMAS
Codice atto	PS3ABD
Resp.scientifico ENEA	PENZA MICHELE
Unità	SSPT-PROMAS-MATAS

Attività ENEA:

Le attività ENEA coinvolgono tutto il persona del Centro di Brindisi e consistono nella visita guidata ai laboratori, allestimento di stand dimostrativi, presentazioni, discussioni, opendesk, esperimenti didattici, esperienze multi-laboratoriali, giochi di ricerca con studenti, dibattiti, commenti a libri, conversazioni divulgative, illustrazione di dimostratori e prototipi, video esplicativi di scienza e tecnologia, video-collegamenti, tele-conferenze, interviste ad esperti.

N° Contratto: 754501

ESFR-SMART

European Sodium Fast Reactor Safety Measures Assessment and Research Tools

Coordinatore PAUL SCHERRER INSTITUT
Svizzera

n. partner: 19

Abstract

To improve the public acceptance of the future nuclear power in Europe we have to demonstrate that the new reactors have significantly higher safety level compared to traditional reactors. The ESFR-SMART project (European Sodium Fast Reactor Safety Measures Assessment and Research Tools) aims at enhancing further the safety of Generation-IV SFRs and in particular of the commercial-size European Sodium Fast Reactor (ESFR) in accordance with the ESNII roadmap and in close cooperation with the ASTRID program. The project aims at 5 specific objectives:
1) Produce new experimental data in order to support calibration and validation of the computational tools for each defence-in-depth level.
2) Test and qualify new instrumentations in order to support their utilization in the reactor protection system.
3) Perform further calibration and validation of the computational tools for each defence-in-depth level in order to support safety assessments of Generation-IV SFRs, using the data produced in the project as well as selected legacy data.
4) Select, implement and assess new safety measures for the commercial-size ESFR, using the GIF methodologies, the FP7 CP-ESFR project legacy, the calibrated and validated codes and being in accordance with the update of the European and international safety frameworks taking into account the Fukushima accident.
5) Strengthen and link together new networks, in particular, the network of the European sodium facilities and the network of the European students working on the SFR technology.
Close interactions with the main European and international SFR stakeholders (GIF, ARDECo, ESNII and IAEA) via the Advisory Review Panel will enable reviews and recommendations on the project's progress as well as dissemination of the new knowledge created by the project. By addressing the industry, policy makers and general public, the project is expected to make a meaningful impact on economics, EU policy and society.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-17
Data scadenza	31-ago-21
Contributo totale	€ 5.000.000
Costo eleggibile totale	€ 9.911.150
Contributo a ENEA	€ 124.381
Costo eleggibile ENEA	€ 269.613
Doc. approvazione	86/2017/FSN
Codice atto	PF6AAE
Resp.scientifico ENEA	LOMBARDO CALOGERA
Unità	FSN-SICNUC-SIN

Attività ENEA:

L'ENEA è coinvolta nei seguenti workpackage:
WP1.1 - 'New safety measures' con il compito di revisione del lavoro degli altri partners nelle tasks 1.1.1 e 1.1.3
Wp1.3 - 'Normal operation' relativamente a: assessment della transiione da circolazione forzata a circolazione naturale; assessment delle pompe primarie; assessment dei sistemi di rimozione del calore di decadimento e assessment del sistema passivo di core shutdown.
WP2.1 - 'Codes calibration and validation' partecipando allo 'SPX thermal hydraulics benchmark exercise' e all'assessment di modelli numerici
WP3.1 - Dissemination, education and training per l'organizzazione del Workshop W1 Sodium facilities design and safe operation presso l'ENEA Casaccia.

N° Contratto: 653782

EUPRAXIA

Proposal for a Horizon 2020 Design Study on the "European Plasma Research Accelerator with eXcellence In Applications"

Coordinatore DEUTSCHES ELEKTRONEN SYNCHROTRON DESY

Germania

n. partner: 16

Abstract

EuPRAXIA will produce a conceptual design report for the worldwide first 5 GeV plasma-based accelerator with industrial beam quality and user areas. EuPRAXIA is the required intermediate step between proof-of-principle experiments and ground-breaking, ultra-compact accelerators for science, industry, medicine or the energy frontier ("plasma linear collider"). The study will design accelerator technology, laser systems and feedbacks for improving the quality of plasma-accelerated beams. Two user areas will be developed for a novel Free Electron Laser and High Energy Physics detector science. An implementation model will be proposed, including a comparative study of possible sites in Europe, a cost estimate and a model for distributed construction and installation at one central site. EuPRAXIA will be a new large research infrastructure with an estimated footprint of about 250 m. If the design study is approved, then it will lay the foundation for a possible decision on construction in 2020.

A consortium of 16 laboratories and universities from 5 EU member states has formed for preparing this proposal. 18 associated partners from 8 countries have joined with in-kind commitments (linking 3 additional EU member states). The scientists represent expertise from accelerator operation for photon science and HEP, design and construction of leading accelerators like LHC and Soleil, advanced acceleration test facilities like SPARC and frontier laser projects like CLF, CILEX-APOLLON and ELI. A project with 14 work packages has been defined, 8 of them with funding requested from EU. The proposal has been discussed in the European Steering Group for Accelerator R&D (ESGARD). A statement of strong support has been received. The EuPRAXIA technology is closely linked to EU industry. The director of the THALES Laser Business Unit and the CEO of Amplitude Technologies have sent letters of strong support for the EuPRAXIA proposal.

Anno di stipula	2015
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-nov-15
Data scadenza	31-ott-19
Contributo totale	€ 2.999.900
Costo eleggibile totale	€ 2.999.900
Contributo a ENEA	€ 185.000
Costo eleggibile ENEA	€ 185.000
Doc. approvazione	02/2016/FSN
Codice atto	PF2AAD
Resp.scientifico ENEA	DATTOLI GIUSEPPE
Unità	FSN-FUSPHY-TSM

Attività ENEA:

L'ENEA è principalmente coinvolta nel Work Package 6 riguardante la fattibilità di una sorgente FEL pilota che utilizzi un fascio di elettroni prodotto con accelerazione a plasma.

N° Contratto: 15136

EUROCAROTEN

European network to advance carotenoid research and applications in agro-food and health

Coordinatore UNIV. DE SEVILLA
Spagna

n. partner: 46

Abstract

The goal of EUROCAROTEN is to enhance the competitiveness of the European agro-food industry and promote health by coordinating research on carotenoids. These are of great importance in this context as they are versatile and can be used as natural colorants, antioxidants, sources of vitamin A and functional ingredients. Of the over 750 carotenoids described ca. 10 are being thoroughly studied, so there is much potential to produce positive impacts at different levels. The research question EUROCAROTEN will address is: what novel sources of carotenoids, little studied carotenoids and/or beneficial actions can be harnessed to increase the competitiveness of the European agro-food industry and promote health? However, research on carotenoids is challenging as they are very difficult to work with. This and the lack of dialogue between largely scattered groups result in a waste of resources that hinders progress. Unlike in other regions, there is not a European network on carotenoids. This scenario is not appropriate to optimize efforts and create synergies and undoubtedly places Europe in a disadvantageous position. EUROCAROTEN will gather and articulate a critical mass of European actors to promote the co-operative use of infrastructures, synergistic interactions and the sharing, generation, application and communication of knowledge. This will contribute to strengthening Europe's research and innovation capacities. As a result it will generate breakthroughs leading to applications like new technologies and/or high-quality foods and the establishment of health-promoting nutritional recommendations. Thus, the Action will contribute to create wealth, improve health and reduce costs related to serious diseases.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 COST
Data inizio	18-apr-16
Data scadenza	17-apr-20
Contributo totale	€ 141.000
Costo eleggibile totale	
Contributo a ENEA	€ 0
Costo eleggibile ENEA	
Doc. approvazione	
Codice atto	
Resp.scientifico ENEA	DIRETTO GIANFRANCO
Unità	SSPT-BIOAG-BIOTEC

Attività ENEA:

L'ENEA svolgerà attività di:
. ingegneria metabolica dei carotenoidi in sistemi vegetali;
. metabolomica di matrici vegetali arricchite in carotenoidi;
. Scoperta di meccanismi di accumulo dei carotenoidi.

N° Contratto: 786805

EXERTER

Security of Explosives pan-European Specialists Network

Coordinatore FOI SWEDISH DEFENCE RESEARCH AGENCY

Svezia

n. partner: 21

Abstract

EXERTER connects 22 practitioners from 13 EU Member States into a Network with Explosives Specialists within the Security of Explosives (SoE) area. The objective of the EXERTER Network is to bridge the difficulties for security practitioners to capture and utilize research results and to direct the industry's innovation efforts to address the most pressing needs in the fight against terrorism and serious crime. Practitioners will via EXERTER get improved operational capability via novel technologies, methods and knowledge to aid them in executing more efficient countermeasures in a changing threat environment.
In cooperation with key practitioners in the Network, the project will each year define one unique scenario based on past events to facilitate the identification of capability gaps along different counter-terrorist phases associated with PREVENT, DETECT, MITIGATE and REACT.
With its explosives expertise, EXERTER will provide recommendations to the SoE community on how these gaps can be countered by (i) directing innovators into targeted areas to which research programmes should focus, (ii) proposing standardization priority areas and (iii) advising on exploitation and commercialisation opportunities.
Ongoing research activities will continuously be reviewed to promote practitioners' uptake of results and knowledge.
Academia and research institutes will be supported by the technical expertise within EXERTER to lower exploitation barriers for promising research by enhancing their interaction with security industry. EXERTER will assess evolving threats requiring immediate attention of the SoE community - thus widely addressing emerging technologies and trends. Annual interaction workshops will be held where explosives practitioners, research institutes and academia as well as industry gather to discuss the current state of play and future roadmaps to answer to urgent capability requirements.

Anno di stipula	2018
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Secure societies
Data inizio	01-giu-18
Data scadenza	31-mag-23
Contributo totale	€ 3.498.869
Costo eleggibile totale	€ 3.498.869
Contributo a ENEA	€ 150.313
Costo eleggibile ENEA	€ 150.313
Doc. approvazione	052/2018/FSN
Codice atto	PF7AAG
Resp.scientifico ENEA	CHIRICO ROBERTO
Unità	FSN-TECFIS-DIM

Attività ENEA:

Diagnostiche fisiche finalizzate all'uso di precursori degli esplosivi.

N° Contratto: 726744

EXPAND

EXPAND - enhancing co-creation in JPI Urban Europe through widening Member State and stakeholder participation

Coordinatore NWO - NETHERLANDS ORGANISATION FOR SCIENTIFIC RESEARCH

Paesi Bassi

n. partner: 16

Abstract

EXPAND intends to support the implementation of the JPI Urban Europe Strategic Research and Innovation Agenda (SRIA) by (1) supporting JPI Urban Europe's widening activities towards new countries, stakeholders and partners; and (2) focusing on the development and piloting of new instruments, framework conditions and methods for transnational and transdisciplinary cooperation.
Since urban transformations to sustainable and liveable futures depends on a broad commitment and co-creation among a diverse set of actors, the identified challenge to be tackled by EXPAND is widening the community. Specifically in terms of member countries. But also in terms of stakeholder involvement in core activities. Furthermore, the challenge is also to be tackled by the development and implementation of new instruments and framework conditions that support such a co-creation and alignment of European, national and local research and innovation actions.
As the basic concept for widening participation, a Stakeholder Involvement Platform (SIP) will be developed that anticipates the needs of different stakeholder groups and regions to facilitate the strategic dialogue between all stakeholder groups and implement the SRIA.
The SIP relates to new approaches in programme management, alignment of national programmes, strategies and policies as well as new instruments for research funding and new formats for dissemination and exploitation of research results.
Strategic relationships will be developed with national, European and international organisations and special attention will be given to reach out and mobilise actors in Widening countries. Two JPI Urban Europe Conferences will be organised to position JPI Urban Europe in the wider European Research and Innovation community and a self-monitoring system will be developed and tested to allow a consistent monitoring of JPI Urban Europe activities.

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Spreading Excellence and Widening Par
Data inizio	01-set-16
Data scadenza	28-feb-19
Contributo totale	€ 1.499.999
Costo eleggibile totale	€ 1.499.999
Contributo a ENEA	€ 111.344
Costo eleggibile ENEA	€ 111.344
Doc. approvazione	19/E/2016/DTE
Codice atto	PT5AAG
Resp.scientifico ENEA	CLERICI MAESTOSI PAOLA
Unità	DTE-SEN

Attività ENEA:

L'ENEA nell'ambito delle attività di progetto svolge un ruolo fondamentale nella definizione delle strategie di allineamento dei programmi nazionali ed internazionali della ricerca in ambito urbano.

N° Contratto: 857160

EXPAND II

Widening participation of countries and stakeholders in JPI Urban Europe through capacity building in urban policy, funding and research

Coordinatore NWO - NETHERLANDS ORGANISATION FOR SCIENTIFIC RESEARCH

Paesi Bassi

n. partner: 17

Abstract

In an era of global competition for commerce, industry, tourism, labour and investment, Europe's cities should transition towards a future that maximises sustainability, resilience and liveability. This is the goal of the Joint Programming Initiative (JPI) Urban Europe Strategic Research and Innovation Agenda 2.0 (SRIA 2.0) which responds to the urgent need for ambitious, sustained and inter- and trans-disciplinary research. The EXPAND II project will widen the community and build capacities in research, urban policy and society. As such, it will target Widening Countries to launch national dialogues and processes, mobilise national research & innovation (R&I) communities, intensify strategic relationships of urban stakeholders at a transnational level, and assess national programmes and instruments for transnational R&I cooperation.

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Spreading Excellence and Widening Par
Data inizio	01-giu-19
Data scadenza	30-nov-21
Contributo totale	€ 1.499.438
Costo eleggibile totale	€ 1.499.438
Contributo a ENEA	€ 54.250
Costo eleggibile ENEA	€ 54.250
Doc. approvazione	54/E/2019/DTE
Codice atto	PT5AAB
Resp.scientifico ENEA	MASSA GILDA
Unità	DTE-SEN-CROSS

Attività ENEA:

L'ENEA partecipa al progetto e coordina il workpackage 3: 'ampliamento dell'azione di capacity building e allineamento: soluzioni congiunte per policy, programmi e ricerca e coinvolgimento degli stakeholder a livello nazionale.
Partecipa inoltre alle attività di comunicazione e diffusione previste dal workpackage 6.

N° Contratto: f4e-fpa-327-sg02

F4E-FPA-327-SG02

Coordination Support Office of framework partnership agreement for diagnostic development and design of radial neutron camera and radial gama-ray spectrometer

Coordinatore ENEA

Italia

n. partner: 2

Abstract

N/D

Anno di stipula	2014
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 - Euratom F4E - Fusion for energy
Data inizio	27-nov-14
Data scadenza	26-mar-19
Contributo totale	€ 912.761
Costo eleggibile totale	€ 1.807.410
Contributo a ENEA	€ 881.263
Costo eleggibile ENEA	€ 1.728.663
Doc. approvazione	01/2015/UTFUS
Codice atto	0LPN9
Resp.scientifico ENEA	BELLI FRANCESCO
Unità	FSN-FUSTEC-TEN

Attività ENEA:

N/D

N° Contratto: F4E-FPA-327-SG06

F4E-FPA-327-SG06

Preliminary design and R&D activities for RNC IN-PORT system

Coordinatore ENEA

Italia

n. partner: 7

Abstract

N/D

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 - Euratom F4E - Fusion for energy
Data inizio	31-mag-17
Data scadenza	31-mag-20
Contributo totale	€ 718.467
Costo eleggibile totale	€ 1.622.649
Contributo a ENEA	€ 529.597
Costo eleggibile ENEA	€ 1.153.431
Doc. approvazione	170/2017/FSN
Codice atto	PF3AAD
Resp.scientifico ENEA	MAROCCO DANIELE
Unità	FSN-FUSTEC-TEN

Attività ENEA:

L'ENEA coordina il progetto.

N° Contratto: F4E-FPA-372-SG04

F4E-FPA-372-SG04

Experimental tests in support of the preliminary design of the European TBS

Coordinatore ENEA

Italia

n. partner: 2

Abstract

The objective of the project is to perform experimental activities in support of the design of the HCLL and HCPB-TBS.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 - Euratom F4E - Fusion for energy
Data inizio	05-dic-16
Data scadenza	01-lug-19
Contributo totale	€ 320.000
Costo eleggibile totale	€ 718.545
Contributo a ENEA	€ 269.084
Costo eleggibile ENEA	€ 613.755
Doc. approvazione	101/2017/FSN
Codice atto	PF4AAC
Resp.scientifico ENEA	UTILI MARCO
Unità	FSN-ING-QMN

Attività ENEA:

L'ENEA coordina il progetto e svolge attività tecniche nei seguenti services:
. Service 0 - management activities
. Service 6 - analysis of experiment runs carried out in IELLLO and evaluation on MHD effect on safety draining
. Service 7 - analysis and tests on PbLi instrumentation
. Service 18 - Tests on efficiency of Hydrogen Extraction System

N° Contratto: F4E-OPE-0841

F4E-OPE-0841

Testing of 1/5 scale precompression ring MOCK_UPS

Coordinatore NON PREVISTO DAL PROGETTO *

n. partner: 1

Abstract

N/D

Anno di stipula	2017
Tipo di progetto	service
Programma UE	HORIZON 2020 - Euratom F4E - Fusion for energy
Data inizio	04-lug-17
Data scadenza	03-lug-19
Contributo totale	€ 105.095
Costo eleggibile totale	€ 105.095
Contributo a ENEA	€ 105.095
Costo eleggibile ENEA	€ 105.095
Doc. approvazione	136/2017/FSN; 54/2018/FSN
Codice atto	CF3AAF
Resp.scientifico ENEA	ROSSI PAOLO
Unità	FSN-FUSTEC-TES

Attività ENEA:

N/D

N° Contratto: F4E-OPE-0956-01

F4E-OPE-0956-01

Measurement of N16 during irradiation of first wall mock-up

Coordinatore NON PREVISTO DAL PROGETTO *

n. partner: 1

Abstract

The activity concerns the measurement of Nitrogen-16 (N16) after Deuterium-Tritium neutron irradiation of a water cooled ITER First Wall mock-up. The scope includes the design of the irradiation experiment, the preparation of the experimental setup, the irradiation and online measurements of the activated water and the assessment of the calculation over experiment results.

Anno di stipula	2019
Tipo di progetto	Service contract
Programma UE	HORIZON 2020 - Euratom F4E - Fusion for energy
Data inizio	21-dic-18
Data scadenza	30-ott-19
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 110.000
Costo eleggibile ENEA	€ 110.000
Doc. approvazione	009/2019/FSN
Codice atto	PF3AAE
Resp.scientifico ENEA	PILLON MARIO
Unità	FSN-FUSTEC-TEN

Attività ENEA:

ENEA svolge attività di misure, tramite rilevatori nucleari già in possesso di ENEA, di decadimento gamma e neutronica su una portata di acqua da far scorrere all'interno di pannelli di prima parete.

N° Contratto: 662284

FASTNET

FAST Nuclear Emergency Tools

Coordinatore IRSN INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE

n. partner: 19

Francia

Abstract

When dealing with emergency, two issues with fully different time requirements and operational objectives, and thus different methods and tools, have to be considered: emergency preparedness and emergency response. This project will address both issues by combining the efforts of organizations active in these two areas to make already identified deterministic reference tools and methods a decisive step toward. In particular capabilities of these methods and tools will be extended to tackle main categories of accident scenarios in main types of operating or foreseen water-cooled NPPs in Europe, including Spent Fuel Pools. A first task will be the identification of these categories of scenario, the proposition of a methodology for their description and the development of a database of scenarios. Building this database will constitute a first important step in the harmonisation goal defended in this project. Promising probabilistic approaches based on Bayesian Belief Networks (BBN) are currently developed to complement operational deterministic methodologies and tools by contributing to diagnosis accidental situations. The development of the methodologies will be pursued in this project with the extension of the existing deterministic ones to European reactors. Both approaches will be assessed against the above mentioned database of scenarios. Finally a comprehensive set of emergency exercises will be developed and proposed to be run by a large set of partners. A first series of exercises will address source term evaluations that will be compared to the reference source terms from the scenarios database. Then a second series of exercises will be proposed on the same scenarios that will be used for the first series but accounting for the main emergency objective : to protect the populations. Progresses made by the methods and tools developed within this project will be notably assessed by comparing the results obtained in these two series of exercises.

Anno di stipula	2015
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-ott-15
Data scadenza	30-set-19
Contributo totale	€ 2.831.910
Costo eleggibile totale	€ 4.573.905
Contributo a ENEA	€ 149.939
Costo eleggibile ENEA	€ 199.919
Doc. approvazione	55/2015/FSN
Codice atto	0LPQ2
Resp.scientifico ENEA	ROCCHI FEDERICO
Unità	FSN-SICNUC-PSSN

Attività ENEA:

L'ENEA svolge le seguenti attività:
calcolo di termini sorgente per incidenti severi ad impianti nucleari;
valutazioni con codici di trasporto atmosferico dell'impatto off site di incidenti severi;
benchmarch ed interconfronto tra codici di calcolo per stima di dose alla popolazione;
collaborazione al set up di esercizi di riferimento finalizzati alla diffusione di best-practice e di armonizzazione degli approcci all'emergency preparedness and response;
coordinazione delle attività di disseminazione e training.

N° Contratto: CE1014

FEEDSCHOOLS

Financing Environmental and Energy efficiency Development in SCHOOLS

Coordinatore ENEA

Italia

n. partner: 11

Abstract

The FEEDSCHOOLS project aims to provide local authorities with new solutions, both technical and financial, which will help them to implement 'nearly Zero Energy Building' (nZEB) renovation activities in schools. The innovative approach consists in developing a transnational and holistic support toolkit and a web database of innovative best practices for nZEB renovation. FEEDSCHOOLS will also provide open lessons focused on behavioural change in schools. At least 48 energy audits will be implemented and preliminary plans for nZEB renovation of existing schools will become a reference models for the region.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg Central Europe
Data inizio	01-set-17
Data scadenza	31-ago-20
Contributo totale	€ 1.646.879
Costo eleggibile totale	€ 1.971.837
Contributo a ENEA	€ 247.999
Costo eleggibile ENEA	€ 309.999
Doc. approvazione	186/2017/PRES
Codice atto	PS6ABD
Resp.scientifico ENEA	TARANTINI MARIO
Unità	SSPT-USER-RISE

Attività ENEA:

L'ENEA è il Lead partner ed è responsabile del coordinamento tecnico scientifico del progetto e della sua gestione amministrativa e finanziaria.
Le attività progettuali includono la creazione di app dedicate per il calcolo del carbon foot print per le operazioni di ristrutturazione degli edifici scolastici, la implementazione di un dbase di meccanismi di finanziamento innovativi nonché esperienze pilota da condursi in sette regioni europee associate.

N° Contratto: 863059

FNS-CLOUD

Food Nutrition Security Cloud

Coordinatore RTDS ASSOCIATION
Austria

n. partner: 35

Abstract

FNS-Cloud will overcome fragmentation problems by integrating existing FNS data, which is essential for high-end, pan-European FNS research, addressing FNS, diet, health, and consumer behaviours as well as on sustainable agriculture and the bio-economy. Current fragmented FNS resources not only result in knowledge gaps that inhibit public health and agricultural policy, and the food industry from developing effective solutions, making production sustainable and consumption healthier, but also do not enable exploitation of FNS knowledge for the benefit of European citizens.
FNS-Cloud will, through three Demonstrators; Agri-Food, Nutrition & Lifestyle and NCDs & the Microbiome to facilitate:
(1) Analyses of regional and country-specific differences in diet including nutrition, (epi)genetics, microbiota, consumer behaviours, culture and lifestyle and their effects on health (obesity, NCDs, ethnic and traditional foods), which are essential for public health and agri-food and health policies;
(2) Improved understanding agricultural differences within Europe and what these means in terms of creating a sustainable, resilient food systems for healthy diets; and
(3) Clear definitions of boundaries and how these affect the compositions of foods and consumer choices and, ultimately, personal and public health in the future.
Long-term sustainability of the FNS-Cloud will be based on Services that have the capacity to link with new resources and enable cross-talk amongst them; access to FNS-Cloud data will be open access, underpinned by FAIR principles (findable, accessible, interoperable and re-useable). FNS-Cloud will work closely with the proposed Food, Nutrition and Health Research Infrastructure (FNHRI) as well as METROFOOD-RI and other existing ESFRI RIs (e.g. ELIXIR, ECRIN) in which several FNS-Cloud Beneficiaries are involved directly.

Anno di stipula	2019
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 Food Security, Sustainable Agriculture
Data inizio	01-ott-19
Data scadenza	31-dic-23
Contributo totale	€ 10.912.775
Costo eleggibile totale	€ 10.912.775
Contributo a ENEA	€ 331.138
Costo eleggibile ENEA	€ 331.138
Doc. approvazione	229/219/SSPT-BIOAG
Codice atto	PS1AAB
Resp.scientifico ENEA	ZOANI CLAUDIA
Unità	SSPT-BIOAG

Attività ENEA:

L'attività dell'ENEA s'inserisce pienamente negli obiettivi e nelel azioni condotte per la realizzazione e il coordinamento dell'infrastruttura di ricerca METROFOOD-RI. L'ENEA partecipa alle attività previste nei seguenti workpackage:
2. Data standardisation and interoperability;
4. Use cases;
5. FSN demonstrators;
6. Education and training;
7. Dissemination, exploitation, communication and community;
8. Coordination

N° Contratto: 823964

FocusCoE

Concerted action for the European HPC CoEs

Coordinatore SCAPOS AG
Germania

n. partner: 11

Abstract

High Performance Computing (HPC) has been recognised by the European Union as a key component of the digital single market strategy. The EuroHPC Joint Undertaking is being created to support an integrated European HPC ecosystem covering all scientific and industrial value chain segments (hardware, software, applications, services, interconnections, and skills). HPC applications have a pivotal role in the HPC ecosystem: borrowing a promotional slogan used previously by the IEEE SC (supercomputing) conference – HPC Matters, primarily because the use of HPC (to address industrial, scientific and societal challenges) matters! As has been presented by the European Commission and the European Technology Platform for HPC (ETP4HPC) when establishing the contractual public private partnership (cPPP) for HPC, the European HPC Centres of Excellence (CoEs) constitute the applications-oriented pillar of the European HPC Initiative (complementing infrastructure and computing technology development). FocusCoE will contribute to the success of the EU HPC Ecosystem and the EuroHPC Initiative by supporting the EU HPC CoEs to more effectively fulfil their role within the ecosystem and initiative: ensuring that extreme scale applications result in tangible benefits for addressing scientific, industrial or societal challenges. It will do this by creating an effective platform for the CoEs to coordinate strategic directions and collaboration (addressing possible fragmentation of activities across the CoEs and coordinating interactions with the overall HPC ecosystem) and will provide support services for the CoEs in relation to both industrial outreach and promotion of their services and competences by acting as a focal point for users to discover those services.

Anno di stipula	2018
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-dic-18
Data scadenza	30-nov-21
Contributo totale	€ 1.997.921
Costo eleggibile totale	€ 1.997.921
Contributo a ENEA	€ 194.625
Costo eleggibile ENEA	€ 194.625
Doc. approvazione	62/E/2018/DTE
Codice atto	PT3AAD
Resp.scientifico ENEA	CHINNICI MARTA
Unità	DTE-ICT-PRA

Attività ENEA:

L'ENEA è impegnata in task chiave che la pongono al centro di numerose attività strategiche verso l'industria e i Centri di eccellenza.
In particolare l'ENEA è impegnata nei seguenti workpackage:
WP1 Management: task 'Operational Management'
WP3 CoE-Industri interaction: task 'Action planning and monitoring of success'; 'Sectorial communication activities'; 'Coordination with HPC SMEs initiatives';
WP5 Promoting EU HPC CoEs: task 'Support for CoE Event Management'; task 'Operational Support for Dissemination and outreach Infrastructure'

N° Contratto: 677379

G2P-SOL

Linking genetic resources, genomes and phenotypes of Solanaceous crops

Coordinatore ENEA
Italia

n. partner: 19

Abstract

G2P-SOL is a research alliance bringing together the major European and International repositories of germplasm with public and private institutions active in genomics, phenotyping and breeding in the four major Solanaceous crops: potato, tomato, pepper and eggplant. These four crops constitute 66% of the value of European horticultural production, and over 65,000 accessions are available within the consortium. By harnessing the available global biodiversity, novel genotyping and phenotyping concepts and data analysis tools, the G2P-SOL project will link the genetic code underlying Solanaceae biodiversity with the traits that improve productivity, adaptation and human health. By making this information accessible to end-users, the awareness of the available diversity will be increased and use of this genetic diversity in breeding programs will be stimulated, resulting in diversified production chains. The phenotypes and traits of material held in European and major international collections will be described using common ontology terms developed in this project and this information will be housed in an open source software platform, allowing easy interfacing with existing platforms for germplasm cataloguing. G2P-SOL will develop shared values in science and education in the following areas: 1) Defining and maintaining genetic pools for crop improvement. 2) Phenomic and genomic data: generation, analysis, storage, and linkage with gene banks. 3) Pre-breeding and germplasm enhancement. 4) Training, workshops and public outreach. G2P-SOL will redefine how to manage and organize genetic resources and linked genomic and phenomic information in a manner that will make them accessible to naturalists, geneticists and breeders for conservation, scientific research, and breeding in the post genomic era, in compliance with the objectives of the International Treaty on Plant Genetic Resources and the Nagoya Protocol.

Anno di stipula	2016
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Food Security, Sustainable Agriculture
Data inizio	01-mar-16
Data scadenza	28-feb-21
Contributo totale	€ 6.891.265
Costo eleggibile totale	€ 6.891.265
Contributo a ENEA	€ 851.375
Costo eleggibile ENEA	€ 851.375
Doc. approvazione	20/2016/COMM
Codice atto	PS1AAA
Resp.scientifico ENEA	GIULIANO GIOVANNI
Unità	SSPT-STS

Attività ENEA:

G2P-SOL is a research alliance bringing together the major European and International repositories of germplasm with public and private institutions active in genomics, phenotyping and breeding in the four major Solanaceous crops: potato, tomato, pepper and eggplant. These four crops constitute 66% of the value of European horticultural production, and over 65,000 accessions are available within the consortium.By harnessing the available global biodiversity, novel genotyping and phenotyping concepts and data analysis tools, the G2P-SOL project will link the genetic code underlying Solanaceae biodiversity with the traits that improve productivity, adaptation and human health. By making this information accessible to end-users, the awareness of the available diversity will be increased and use of this genetic diversity in breeding programs will be stimulated, resulting in diversified production chains. The phenotypes and traits of material held in European and major international collections will be described using common ontology terms developed in this project and this information will be housed in an open source software platform,
allowing easy interfacing with existing platforms for germplasm cataloguing. G2P-SOL will develop shared values in science and education in the following areas: 1) Defining and maintaining genetic pools for crop improvement. 2) Phenomic and genomic data: generation, analysis, storage, and linkage with gene banks. 3) Pre-breeding and germplasm enhancement. 4) Training, workshops and public outreach. G2P-SOL will redefine how to manage and organize genetic resources and linked genomic and phenomic information in a manner that will make them accessible to naturalists, geneticists and breeders for conservation, scientific research, and breeding in the post genomic era, in compliance with the objectives of the International Treaty on Plant Genetic Resources and the Nagoya Protocol.

N° Contratto: 727550

GEMex

Cooperation in Geothermal energy research Europe-Mexico for development of Enhanced Geothermal Systems and Superhot Geothermal Systems

Coordinatore HELMHOLTZ ZENTRUM POTSDAM DEUTSCHESGEOFORSCHUNGSZENTRUM GFZ

Germania

n. partner: 24

Abstract

The GEMex project is a complementary effort of a European consortium with a corresponding consortium from Mexico, who submitted an equivalent proposal for cooperation. The joint effort is based on three pillars:
1 – Resource assessment at two unconventional geothermal sites, for EGS development at Acoculco and for a super-hot resource near Los Humeros. This part will focus on understanding the tectonic evolution, the fracture distribution and hydrogeology of the respective region, and on predicting in-situ stresses and temperatures at depth.
2 – Reservoir characterization using techniques and approaches developed at conventional geothermal sites, including novel geophysical and geological methods to be tested and refined for their application at the two project sites: passive seismic data will be used to apply ambient noise correlation methods, and to study anisotropy by coupling surface and volume waves; newly collected electromagnetic data will be used for joint inversion with the seismic data. For the interpretation of these data, high-pressure/ high-temperature laboratory experiments will be performed to derive the parameters determined on rock samples from Mexico or equivalent materials.
3 – Concepts for Site Development: all existing and newly collected information will be applied to define drill paths, to recommend a design for well completion including suitable material selection, and to investigate optimum stimulation and operation procedures for safe and economic exploitation with control of undesired side effects. These steps will include appropriate measures and recommendations for public acceptance and outreach as well as for the monitoring and control of environmental impact.
The consortium was formed from the EERA joint programme of geothermal energy in regular and long-time communication with the partners from Mexico. That way a close interaction of the two consortia is guaranteed and will continue beyond the duration of the project.

Anno di stipula	2016
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Energy
Data inizio	01-ott-16
Data scadenza	30-set-19
Contributo totale	€ 9.999.793
Costo eleggibile totale	€ 9.999.793
Contributo a ENEA	€ 126.063
Costo eleggibile ENEA	€ 126.063
Doc. approvazione	135/2016/SSPT-PROTER
Codice atto	PS4AAE
Resp.scientifico ENEA	ANGELONE MASSIMO
Unità	SSPT-PROTER

Attività ENEA:

Le attività ENEA sono relative a due workpackage:
. WP7: sismicità indotta e rischio ambientale (mappatura delle aree sismicamente sensibili, zonazione sismica; valutazione dell'impatto su acqua, suolo, piante);
. WP8: concetti, idee per lo sviluppo di risorse geotermiche ad elevata temperatura.

N° Contratto: 755269

GEMMA

GEneration IV Materials Maturity

Coordinatore ENEA

Italia

n. partner: 23

Abstract

GEMMA Project addresses the action NFRP 5 of the 2015 EU call: “Materials research for Generation-IV reactors”, which has the scope to investigate the areas where further research and innovation is needed to reach technological maturity in the frame of the development of Generation IV reactor materials. The proposal is prepared under the auspices of the Joint Program on Nuclear Materials of the European Energy Research Alliance (EERA JPNM). It is based on the contents of seven Pilot Projects recently approved by EERA JPNM dealing with environmental characterizations of materials and welds, numerical modeling accompanied by dedicated experiments and development of mitigation measures towards materials degradation.
The general objective of GEMMA Project is to qualify and codify the selected structural materials for the construction of Generation IV reactors, as envisaged within the European Sustainable Nuclear Industrial Initiative (ESNII). The structural materials, to be considered in the GEMMA project, are those selected by the designers of the ESNII systems for fuel cladding and, in some cases, for the main vessel and the internals. Their qualification means that their resistance to harsh exposure conditions of high temperature, highly corrosive environment and intense flux of fast neutrons, will be experimentally verified and/or numerically modelled. The applicability of materials to the reactors' construction implies also that relevant welded joints will be tested as well as corrosion protection treatments. Even the corrosion resistance of new Alumina Forming Alloy steels and surface treatments will be tested in representative conditions. The codification of the project results entails that a large amount of experimental data will be generated and that such data will be transformed to useful rules, for system and component designers, to be expressed in a suitable way for inclusion in the Design Rules of the RCC-MRx code.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-giu-17
Data scadenza	31-mag-21
Contributo totale	€ 3.999.182
Costo eleggibile totale	€ 6.370.380
Contributo a ENEA	€ 650.612
Costo eleggibile ENEA	€ 1.095.440
Doc. approvazione	61/2017/FSN
Codice atto	PF0AAI
Resp.scientifico ENEA	AGOSTINI PIETRO
Unità	FSN

Attività ENEA:

L'ENEA coordina il progetto.
Parteciperà inoltre alle attività di sviluppo di rivestimenti protettivi per componenti non esposti a neutroni, coordinerà la produzione di giunti saldati secondo le normative nucleari, fornirà uno dei tre acciai di riferimento per la realizzazione di provini rappresentativi delle guaine di combustibili, effettuerà qualifiche di saldatura con tecniche neutroniche, effettuerà caratterizzazioni meccaniche in metallo liquido e produrrà modelli numerici descrittivi della corrosione da metallo liquido sulla base delle prove pilota che svolgerà.

N° Contratto: 2019-1-IT02-KA204-06

GreenAbility

Green abilities to tackle social issue

Coordinatore FRATELLO SOLE SCARL

Italia

n. partner: 4

Abstract

Energy poverty is an increasing socio-economic problem affecting over 50 million households in the European Union and 1 out of 10 Eu citizens.
Defined by EU as a set of conditions where 'individuals or households are not able to adequately heat or provide other required energy services in their homes at affordable cost', energy poverty is a key societal challenge to be addressed urgently.
Energy poverty has severe health and environmental implications which have an impact on both low-income households and on Third Sector Organisations (TSOs) providing social services for children, youths, the elderly, families, the disabled and the disadvantaged people, both at their home and inside dedicated structures like care homes.
To address the issue, four EU organizations joined in the proposal 'GreenAbility' which has recently been funded by the EU program Erasmus+.
The project consists of an education program, based on collaboration and exchange among partners which are expert in providing social services, starting from an environmental approach, and in facing these issues both in their relation to low-income families and inside communities hosting vulnerable people in specific care homes.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Erasmus +
Data inizio	01-ott-19
Data scadenza	28-feb-22
Contributo totale	€ 275.356
Costo eleggibile totale	€ 275.356
Contributo a ENEA	€ 55.666
Costo eleggibile ENEA	€ 57.046
Doc. approvazione	59/2019/DUEE-SPS
Codice atto	PW3AAM
Resp.scientifico ENEA	VIOLA CORINNA
Unità	DUEE-SPS-MPE

Attività ENEA:

Le attività a carico dell'ENEA prevedono principalmente lo sviluppo dei contenuti formativi e relativi materiali informativi:
1) Linee guida per gli operatori del terzo settore:
- comportamento: misure a costo zero;
- interventi di efficienza energetica a basso costo;
- interventi strutturali.
2) Booklet sulle buone pratiche
3) Policy brief
I prodotti saranno sia sul sito web sia nel corso degli eventi di progetto e dei corsi di formazione:

N° Contratto: 1759

GREENCAP

Capitalisation on the green energy projects in the MED area

Coordinatore BISTRA

Slovenia

n. partner: 10

Abstract

The transnational challenge of the project is the cohesion and blending of the results arising from modular projects by creating a common network among all the established partnership resulting in a community in which activities and results will be shared. This objective will be achieved by creating links among different consortia that could share results of activity afferent the same fields of competence, thus widening the targets achieved by individual projects through the complementarity of skills and the sharing of the results. The main outputs of the project will be the creation of a MED community and of synergies among the projects, the analysis and management of the community project results, the dissemination and capitalization of the outcomes. The approach of the project foresees a common and easy to use communication supports realisation, the participation to thematic events and the enlargement of existing thematic networks dedicated to renewable energy in islands and rural areas. These activities will also involve actors other than the modular projects partners in order to create the conditions and links allowing to exploit and use the different projects results at larger scale. The expected change will be the boosting of the impact that each project can achieve thanks to the immediate multiplication of the targets reached and the growth of the expertise gained by comparing the results obtained with different approaches.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg MED
Data inizio	01-nov-16
Data scadenza	31-ott-19
Contributo totale	€ 1.039.550
Costo eleggibile totale	€ 1.223.000
Contributo a ENEA	€ 0
Costo eleggibile ENEA	€ 0
Doc. approvazione	277/2016/PRES
Codice atto	0T7AAA
Resp.scientifico ENEA	MORENO ANGELO
Unità	DTE-USTS

Attività ENEA:

L' ENEA parteciperà alle attività di disseminazione dei risultati e di divulgazione delle tecnologie oggetto della proposta (essenzialmente rinnovabili, idrogeno e celle a combustibile).

N° Contratto: 696040

guarantEE

Energy Efficiency with Performance Guarantees in Private and Public Sector

Coordinatore BERLIN ENERGY AGENCY
Germania

n. partner: 14

Abstract

Energy Performance Contracting (EPC) is a proven model for modernizing mostly public buildings by ESCOs with guaranteed energy and cost savings. Nevertheless, a broad roll-out of EPC is being prevented mainly because of two unresolved issues: the split incentives dilemma and the lack of adequately flexible contract models.
The guarantEE project will address prevailing barriers to EPC in a team of 14 experienced partners, covering large parts of Europe in a mix of advanced and emerging ESCO markets. Based on a concise market analysis, guarantEE will develop innovative business and financing models addressing and overcoming the split incentives dilemma in performance based ESCO projects. This will be done by adequately sharing costs and benefits between user, building owner and ESCO (triple-win approach), thus opening up new project opportunities. Furthermore, EPC contract variants will be elaborated and tested, addressing the need for enhanced flexibility (e.g. exit clauses, simplified M&V, future energy market needs, storage). The target groups are public and – especially in advanced EPC markets – private sector clients.
The developed models will be applied in 33 pilot projects involving private and public building owners. The project will achieve 78 GWh PE and 18000 tCO2 savings per year and will trigger investments of >11 M€.
Particularly in emerging EPC markets, guarantEE will support market development by providing standards, an online EPC pre-check, good practice examples, EPC information and project facilitation for mainly municipal clients. Broad dissemination activities, including the European Energy Service Award, will maximise the project visibility.
The project will address or consult at least 1000 building owners and EPC facilitators and will inform at least 2000 energy sector stakeholders on EPC.
The guarantEE project will unlock additional EPC project opportunities, contribute to standardisation, and provide political advice and steps towards a common energy service market in Europe.

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-apr-16
Data scadenza	31-mar-19
Contributo totale	€ 1.699.993
Costo eleggibile totale	€ 1.699.993
Contributo a ENEA	€ 98.475
Costo eleggibile ENEA	€ 98.475
Doc. approvazione	17/2016/COMM
Codice atto	PE5AAC
Resp.scientifico ENEA	CENTI GIULIA
Unità	DUEE-SPS-ESU

Attività ENEA:

L'ENEA partecipa a tutti i workpackage:
1 - Management
2 - EPC extension
3 - EPC capacity building
4 - EPC implementation
5 - EPC recommendation
6 - Dissemination

N° Contratto: 847049

HARP

Heating Appliances Retrofit Planning

Coordinatore ADENE AGENCIA PARA A ENERGIA

Portogallo

n. partner: 18

Abstract

Consumers do not think about heating until their system breaks down. When it does, the replacement is always an urgent process, hindering the possibility to look for the best solutions in the market and making smarter choices regarding a heating system that will likely be in operation for the next 20 years. In Europe, there are more than 300 million heaters (space, water or combi) that have, on average, been installed more than 20 years ago. Considering the heating energy label framework, market assumptions are that more than 50% of these equipments perform as C or lower. Old and inefficient, this is the status of the installed heating stock. Now is the time to act and raise consumers' awareness about the opportunities of a planned replacement. Taking advantage of the energy label for space and water heating, we can mainstream the labelling concept to the installed heating stock, allowing to use a well-known support decision tool to communicate and motivate the consumer to replace its heating system with modern high-efficiency and renewable solutions. HARP accompanies the consumer decision process, providing an impartial message, based on the energy label and presenting the market solutions that respond to the consumer's heating needs, providing a quantified approach for economic and non-economic benefits and bridging the gap with the market providers and available national incentives. HARP is promoted by key knowledgeable partners in the fields of consumer behaviour, energy efficiency, heating solutions and business models, working directly with the consumer, or indirectly via professionals who are critical multiplying agents. Promoting dynamic efficient heating communities, where all the agents, from the supply to the demand side are committed to an efficient heating market, supporting the consumer to make smarter choices.
This allows HARP to build a solid concept that will succeed in the participating countries and within the EU reach.

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-mag-19
Data scadenza	31-lug-22
Contributo totale	€ 1.992.608
Costo eleggibile totale	€ 1.992.608
Contributo a ENEA	€ 75.788
Costo eleggibile ENEA	€ 75.788
Doc. approvazione	16/2019/DUEE-SPS
Codice atto	PW3AA4
Resp.scientifico ENEA	PRISINZANO DOMENICO
Unità	DUEE-SPS-SAP

Attività ENEA:

Le attività ENEA prevedono principalmente il supporto alla definizione delle metodologie di etichettatura, alla definizione dei piani d'azione nazionali per l'utilizzo di tale etichetta, partecipanto attivamente alla comunicazione e diffusione dei risultati progettuali.

N° Contratto: 838514

HORIZON-STE

Implementation of the Initiative for Global Leadership in Solar Thermal Electricity

Coordinatore ESTELA EUROPEAN SOLAR THERMAL ELECTRICITY ASSOCIATION

Belgio

n. partner: 5

Abstract

Since 2007, the initial deployment of CSP/STE in Spain has brought the European STE sector to be a worldwide technology leader. But the further deployment has been hindered in Europe since 2013 due to the retroactive changes in the investment conditions in Spain. To unlock this situation, the EC has launched in 2015 a dedicated Initiative – Initiative for Global Leadership in Concentrated Solar Power (CSP). This Initiative, focusing on 2 targets (a cost reduction target and an innovation target), was adopted in 2016 within the SET-Plan structures. A working group gathering representatives from several SET-Plan countries and the STE stakeholders from both industry and research sectors was set up to define a corresponding Implementation Plan (IP), which was officially adopted in June 2017, including 12 R&D action line and the implementation of new innovative, so-called First-Of-A-Kind (FOAK) plants. Thus, as response to the call H2020- LC-SC3-JA-2-2018, this project proposal aims at supporting the full implementation of the a.m. Initiative taking into consideration the political, legislative and institutional as well as the market backgrounds put in perspective to the situation of the STE sector in 2018 – 2 years after the "Initiative" was presented and the corresponding "IP" adopted by the SET-Plan Steering Group. Building bridges to other ongoing projects (MUSTEC, SMARTSPEND, etc), the project will propose solutions and pathways for relevant countries to overcome the main shortcomings of current national strategies related to STE that are: a) for the industry the framework conditions for procurement of manageable RES, and b) for the R&I sector, the extension to more public funding agencies and other sources for the funding of a.m. R&I projects. This will result in national country reports and events as well as an EU-wide cooperation report/event to be extensively covered by national mainstream media and supported by a strong dissemination and political communication campaign.

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-apr-19
Data scadenza	31-mar-22
Contributo totale	€ 999.656
Costo eleggibile totale	€ 999.656
Contributo a ENEA	€ 104.448
Costo eleggibile ENEA	€ 104.448
Doc. approvazione	37/E/2019/DTE
Codice atto	PT7AAK
Resp.scientifico ENEA	DE IULIIS SIMONA
Unità	DTE

Attività ENEA:

L'ENEA è impegnato in tutte le attività realizzattive; i principali contributi forniti da ENEA riguarderanno
. il WP3 (R&I Impact maximization) che mira ad individuare e a definire le condizioni/azioni necessarie al raggiungimento degli obiettivi SET-PLAN con riferimento al settore CSP/STE;
. Il WP1 che propone, come fase iniziale delle attività del progetto, un aggiornamento su base annuale dello stato del CSP/STE in termini di ricerca, innovazione e sviluppo industriale.

N° Contratto: 735977

HYLAW

Identification of legal rules and administrative processes applicable to Fuel Cell and Hydrogen technologies' deployment, identification of legal barriers and advocacy towards their removal

Coordinatore HYDROGEN EUROPE
Belgio

n. partner: 23

Abstract

The fuel cells and hydrogen (FCH) industry has made considerable progress toward market deployment. However existing legal framework and administrative processes (LAPs) – covering areas such as planning, safety, installation and operation – only reflect use of incumbent technologies. The limited awareness of FCH technologies in LAPs, the lack of informed national and local administrations and the uncertainty on the legislation applicable to FCH technologies elicit delays and extra-costs, when they do not deter investors or clients.

This project aims at tackling this major barrier to deployment as follows:
• Systematically identifying and describing the LAPs applicable to FCH technologies in 18 national legal systems as well as in the EU proper legal system.
• Assessing and quantifying LAP impacts in time and/or resource terms and identify those LAP constituting a legal barrier to deployment.
• Comparing the 18 countries to identify best and bad practices
• Raising awareness in the countries where a LAP creates a barrier to deployment.
• Advocating targeted improvements in each of 18 countries + EU level
• It will make all this work widely available through: (1) A unique online database allowing easy identification, description and assessment of LAPs by country and FCH application. (2) Policy papers by applications and by country with identification of best practice and recommendations for adapting LAP. (3) A series of national (18) and European (1) workshops with public authorities and investors.
HyLAW sets up a National Association Alliance not just for the duration of the project, but for the long term consolidation of the sector under a single unified umbrella. By bringing together these national associations and all of Hydrogen Europe's members, it's the first time ever that the entire European FCH sector is brought together with a clear and common ambition.

Anno di stipula	2017
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 JTI - Hydrogen
Data inizio	01-gen-17
Data scadenza	31-mar-19
Contributo totale	€ 1.143.000
Costo eleggibile totale	€ 1.143.000
Contributo a ENEA	€ 39.000
Costo eleggibile ENEA	€ 39.000
Doc. approvazione	45/E/2016/DTE
Codice atto	PT4AAI
Resp.scientifico ENEA	CIGOLOTTI VIVIANA
Unità	DTE-FSN-FOSG

Attività ENEA:

ENEA svolgerà attività nei workpackage:
WP3: mappatura delle barriere non-tecnologiche e delle procedure amministrative riguardanti le tecnologie e i prodotti a celle a combustibile e idrogeno in Italia;
WP6: organizzazione della disseminazione dei risultati delle analisi di progetto.

N° Contratto: 713514

ICARUS

Innovative Coarsening-resistant Alloys with enhanced Radiation tolerance and Ultra-fine - grained Structure for aerospace application

Coordinatore UNIV. BURGOS
Spagna

n. partner: 11

Abstract

ICARUS proposes a new thermodynamic methodology able to identify the elements and the relative chemical composition allowing a nanocrystalline state to occupy a relative minimum of the Gibbs free energy, which makes the nanostructure reasonably stable against coarsening. This approach will be integrated, in synergy with multiscale and thermodynamic (Nano-Calphad) modeling, in order to implement a High-Throughput Screening (HTS) tool that will open a new horizon of discovery and exploration of multinary thermal stable nanocrystalline alloys, exhibiting superb tailored properties. ICARUS brings a radically new concept by addressing a still unsolved problem in the stabilization of nanocrystalline alloys. The materials discovery approach of ICARUS will be synergistic with the forefront industrial production technologies of nanomaterials and alloys.
Results arising from ICARUS exploration will be materialized in specific demo compounds representative of carefully selected new alloys families that will change the present paradigm of EU aerospace industry. The most promising nanocrystallyne material identified will be synthesized by mechanical alloying and physical vapor deposition, and the obtained samples characterized toward the applicability in the aerospace sector. A proof of concept from its approach will be given and tested by experts and specialized industries working in the aerospace sector in close contact with NASA and ESA.
In particular, ICARUS will demonstrate its potential by producing innovative coarsening-resistant nanocrystalline alloys with enhanced radiation tolerance (based on refractory metals), and light-weight high strength (based on Al, Mg, Ti) alloys.

Anno di stipula	2016
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Future and Emerging Technologies (FE
Data inizio	01-set-16
Data scadenza	31-ago-19
Contributo totale	€ 2.698.063
Costo eleggibile totale	€ 2.698.063
Contributo a ENEA	€ 349.250
Costo eleggibile ENEA	€ 349.250
Doc. approvazione	78/2016/SSPT-PROMAS
Codice atto	PS3AAG
Resp.scientifico ENEA	RINALDI ANTONIO
Unità	SSPT-PROMAS-MATPRO

Attività ENEA:

- Computational alloy design by thermodynamic and kinetic softwares (MATCALC, THERMOCAL, J-MATPRO) for predicting compositions and phases, for screening and optimization purposes, in support of experimental work
- Nanomechanical testing by in-situ nanoidentation and loading frame monitored inside high resolution field-emission gun SEM
- TEM

N° Contratto: 11.0661/2017/50680/SU

IDEM

Implementation of the MSFD to the Deep Mediterranean sea

Coordinatore UNIV. POLITECNICA MARCHE *n. partner:* 9

Italia

Abstract

The project IDEM aims to support the next phase of Marine Strategy Framework Directive (MSFD) implementation, in particular to achieve, by the end of the project, a regionally coherent, coordinated and consistent, initial environmental assessment and determination of GES, as well as the definition of sets of environmental targets for the Mediterranean deep sea (below 200 m). Besides this, IDEM aims at understanding, quantifying and mapping drivers, anthropogenic pressures and impacts, current knowledge and spatial coverage of data regarding the MSFD indicators in the Mediterranean deep sea.
Particular to achieve, by the end of the project, a regionally coherent, coordinated and consistent, initial environmental assessment and determination of GES, as well as the definition of sets of environmental targets for the Mediterranean deep.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Marine strategic framework directive
Data inizio	01-apr-17
Data scadenza	31-mar-19
Contributo totale	€ 960.000
Costo eleggibile totale	€ 1.200.000
Contributo a ENEA	€ 81.202
Costo eleggibile ENEA	€ 101.502
Doc. approvazione	83/2017/SSPT-PROTER
Codice atto	PS4AAN
Resp.scientifico ENEA	FANELLI EMANUELA
Unità	SSPT-PROTER-BES

Attività ENEA:

L'ENEA è coinvolta nelle quattro azioni previste dal progetto:
action 1: analisi di tutte le pubblicazioni e report disponibili sull'implementazione della MSFD;
action 2: analisi dei dataset appartenenti ai parner e integrazione con i dati delle diverse sub-regioni mediterranee;
action 3: sulla base dei risultati dell'azione 2, identificazione dei gaps in relazione ai diversi descrittori e aree;
action 4: identificazione e coinvolgimento dei potenziali stakeholder.

N° Contratto: ASP409

IMEAS

Integrated and Multi-level Energy models for the Alpine Space

Coordinatore ENEA

Italia

n. partner: 12

Abstract

Integrated low carbon policies and sustainable energy plans in the Alpine Space region are affected by common challenges. The future energy system, relying on renewable energies, will challenge all governance levels. Therefore, cooperation actions between all governance layers from villages to countries can help to make the Alpine Space a successful partner in the EU "new energy deal" for energy efficiency and renewable energy. The IMEAS multi-disciplinary team of technical, sociological, territorial partners, will develop a consistent methodology and practical guidance for the creation and integration of roadmaps based on multi-level approaches to climate change mitigation, energy innovation potentials, economic structures and control of energy plans. Experiences from some areas will help fill gaps in others through a cooperative and transnational approach capitalising the heterogeneity of the Alpine Space, their different cultures, planning principles and practice with software tools. To enhance the ability of public administrations and other entities to plan sustainable energy policies and select the right measures/instruments to implement them on a multi-level governance perspective, IMEAS will propose a new integrated approach to participatory roadmap development.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg Alpine Space
Data inizio	01-nov-16
Data scadenza	31-dic-19
Contributo totale	€ 1.580.277
Costo eleggibile totale	€ 1.859.855
Contributo a ENEA	€ 272.306
Costo eleggibile ENEA	€ 320.361
Doc. approvazione	40/E/2016/DTE
Codice atto	PT1AAE
Resp.scientifico ENEA	ROBERTO ROBERTA
Unità	DTE-BBC-BBE

Attività ENEA:

L'ENEA coordina il progetto e partecipa in particolare ai workpackage T3 (Development of tools and guidelines to support integrated and armonized models) e T4 (testing activities on tools and guidelines, capacity building and joint actions for integrated roadmaps).

N° Contratto: 16ENV08

IMPRESS II

Metrology for air pollutant emissions

Coordinatore NPL MANAGEMENT LIMITED *n. partner:* 14

Regno Unito

Abstract

Standardised pollutant measurements to meet the requirements of current and future air quality regulations.
Air pollution is responsible for around 400,000 premature deaths and €330-€949 billion in health-related costs each year in Europe. In an effort to protect citizens' quality of life, limits on air pollutants are continually becoming more stringent, and limits continue to be introduced for previously unregulated pollutants. However, the necessary framework of standardised measurement methods to meet these requirements is not fully in place.
This project will use results from EMRP project ENV60 IMPRESS to address this measurement gap by developing measurement methods for newly regulated pollutants, such as ammonia and hydrogen fluoride, address the lack of uncertainty characterisation in flow measurements and develop next-generation techniques for increasingly-stringent pollution limits. The results will enable regulators, process plant operators, manufacturers and measurement service providers to comply with emission limits and monitoring requirements, supporting efforts to ensure cleaner air across Europe for the benefit of public health and the environment.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi EMPIR
Data inizio	01-giu-17
Data scadenza	31-mag-20
Contributo totale	€ 2.273.158
Costo eleggibile totale	€ 2.273.158
Contributo a ENEA	€ 90.311
Costo eleggibile ENEA	€ 90.311
Doc. approvazione	147/2017/PRES
Codice atto	PE1AAD
Resp.scientifico ENEA	HUGONY FRANCESCA
Unità	DUEE-SIST-NORD

Attività ENEA:

Le attività dell'ENEA previste sono le seguenti:
. Dimensionamento della camera di diluizione tramite utilizzo di modelli CFD, validazione della modellazione tramite misure sperimentali, realizzazione della camera di diluizione ottimizzata, test di verifica sulla nuova camera. Sperimentazione di tutto il sistema di campionamento applicato ad una stufa a legna e una a pellet.
. Test in parallelo del sistema con diluizione, sistema di campionamento tedesco e sistema norvegese
. Test di confronto per la determinazione degli IPA con i diversi metodi individuati all'interno del progetto.

N° Contratto: 831206

INCAME_2_2019

INnovation CApacities of Mediterranean Enterprises

Coordinatore S.I. IMPRESA - SERVIZI INTEGRATI IMPRESA

Italia

n. partner: 12

Abstract

The project aims to enhance SMEs' competitiveness and innovation processes management and to improve the regional innovation environment, increasing the efficiency and the effectiveness of investments in research, development and innovation. The project partners will operate in the regions under the EEN BRIDGeconomies consortium: Abruzzo, Basilicata, Calabria, Campania, Molise, Puglia and Sicilia. The overall objective of the project is helping SMEs to adopt, implement and deploy an innovation management system.
The project has two main specific objectives, structured in 2 Work Packages:
WP1) SMEs beneficiaries of the SME Instrument, Fast track to innovation, Future and Emerging technologies Open (Key Account Manager);
WP2) SMEs with innovation potential (EEN Innovation Expert) EIMC.
To reach such specific objectives, during the period covered by the action, the project partnership intends to deliver seven/ten days service packages to a number of 123 SMEs, benefiting from SME Instrument grants and services for enhancing their innovation management capacities.
Project partners intend to implement these actions since SMEs play a crucial role in reaching the objectives of the Europe 2020 Strategy and notably the Innovation Union. SMEs are key drivers of innovation serving as an important conduit for knowledge spill-overs. Tapping the full innovation potential of SMEs requires efficient support mechanisms. The focus needs to be oriented to impact on SMEs, looking at their internationalisation, their knowledge and R&D capabilities, competitiveness and growth.

Anno di stipula	2019
Tipo di progetto	SGA-CSA
Programma UE	HORIZON 2020 Innovation in SMEs
Data inizio	01-gen-19
Data scadenza	31-dic-19
Contributo totale	€ 296.302
Costo eleggibile totale	€ 296.304
Contributo a ENEA	€ 83.318
Costo eleggibile ENEA	€ 83.318
Doc. approvazione	14/2019/COM
Codice atto	PM4AAN
Resp.scientifico ENEA	AMMIRATI FILIPPO
Unità	COM-INDAS

Attività ENEA:

L'ENEA partecipa alle azioni di supporto dello strumento SMEs di Horizon 2020 per il 2019; le attività riguardano la fornitura di servizi di Key Account Manager (KAM) e di Enhancing the Innovatino Management capacity of SMEs (EIMC) nelle regioni del Sud Italia.

N° Contratto: 833573

INCLUDING

Innovative Cluster for Radiological and Nuclear Emergencies

Coordinatore ENEA
Italia

n. partner: *14*

Abstract

INCLUDING connects 15 Partners from 10 EU Member States (MS), bringing together infrastructure, equipment and experts coming from Medical Organizations, Fire Corps, Government Department, Municipalities, Law Enforcement Agencies, Ministries, Governmental and Civilian Research Institutes and Industries operating in the field of radiological and nuclear emergencies. Far from being a simple aggregation of entities separated geographically and with complementary expertise, INCLUDING pursues to develop a Federation in which individual Members will cooperate together to provide a common framework to standardize access to their respective facilities, enhance interoperability and to allow a more intensive use of expensive equipment. The operative tool to manage the Federation will be a web-based platform with a sophisticated architecture and whose functionality has been proven in a previous EU project. At the same time the project aims to enhance practical know-how and to boost a European sustainable training and development framework for practitioners in the Radiological and Nuclear Security sector.
The INCLUDING project will be flexible in order to include new facilities and innovation in technology, organizations and procedures. The plurality of facilities and expertise in the INCLUDING Federation reflects the complex and intertwined structure of the prevention and response phases of RN threats and will provide to the practitioners a set of real or emulated scenarios where to test concept of operations in a controlled environment.
The Joint Actions will be the focal points of the project. They are multidisciplinary field exercises, tabletop exercises, training, serious gaming and simulation organized at their premises by the project partners and with the objective of demonstrating the added value of the Federated scheme and of the use of an innovative tool like the INCLUDING web based Platform to manage a pan European network of training facilities and resources.

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Secure societies
Data inizio	01-ago-19
Data scadenza	31-lug-24
Contributo totale	€ 3.585.529
Costo eleggibile totale	€ 3.585.529
Contributo a ENEA	€ 564.606
Costo eleggibile ENEA	€ 564.606
Doc. approvazione	116/2019/FSN
Codice atto	PF7AAS
Resp.scientifico ENEA	DE DOMINICIS LUIGI
Unità	FSN-TECFIS-DIM

Attività ENEA:

L'ENEA coordina il progetto. La partecipazione al progetto coinvolge personale di diverse unità tecniche dell'ENEA: FSN-TECFIS-DIM, FSN-SICNUC, FSN-FISS, ISER-CAS, DTE-PCU-STMA.

N° Contratto: 671403

INNO-SOFC

Development of innovative 50 kW SOFC system and related value chain

Coordinatore VTT TECHNICAL RESEARCH CENTRE OF FINLAND

Finlandia

n. partner: 7

Abstract

INNO-SOFC project combines leading European SOFC technology companies and research centres to collaborate and form required phases in the SOFC value chain. Within this project a next generation 50 kW SOFC system together with its key components will be developed, manufactured, and validated. This system includes many significant improvements compared to current State of the Art, leading to 30000 hours operating time, 4000 €/kW system costs, 60% electrical efficiency, and 85% total efficiency, which are required for large-scale commercialization of stationary fuel cells. Efficiency, performance, and life-time of the system and its key components will be validated according to IEC standards in conditions that are relevant for end-users. Proof of reliability and durability of the system will be achieved in 3000 hours demonstration together with 10000 hours stack validation runs.
The project is based on the products of industrial partners (Convion, EnergyMatters, Elcogen, and ElringKlinger) and motivated by their interest to further improve their products and consolidate an efficient value chain by collaboration. Industrial partners are operating at different phases of the value chain and are not therefore competing against each other, which enables an efficient collaboration and knowledge sharing within the project. Within this approach, whole system and its components will be optimized comprehensively to fulfil and exceed end-users' requirements. Research centres (VTT, Jülich, and ENEA) support these companies to develop, experimentally validate and demonstrate their products.
Effective exploitation and dissemination of resulting improved products, services, and know-how is a natural purpose of each partner and these actions are boosted by this project. This makes project results available also for other parties and increases competitiveness of European fuel cell industry.

Anno di stipula	2015
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 JTI - Hydrogen
Data inizio	01-set-15
Data scadenza	31-ott-19
Contributo totale	€ 3.998.081
Costo eleggibile totale	€ 3.998.081
Contributo a ENEA	€ 259.375
Costo eleggibile ENEA	€ 259.375
Doc. approvazione	01/2015/DTE
Codice atto	0HI18
Resp.scientifico ENEA	MC PHAIL STEPHEN JOHN
Unità	DTE-PCU-SPCT

Attività ENEA:

ENEA è coinvolta nei seguenti Work Packages (WPs):
WP3: testing di componenti ausiliari del sistema, e progettazione della campagna e dei criteri di validazione del prodotto integrato secondo norme e standard vigenti;
WP4: analisi elettrochimica approfondita dei test di validazione della stack, per cui l'ENEA si avvarra della collaborazione dell 'Universita Politecnica delle Marche con la quale e stato sviluppato 10 specifico protocollo. Pro gettazione della campagna e dei criteri di validazi one della stack secondo gli standard lEe ;
WP5 : gestione del piano di disseminazione e valorizzazione del know- how e del prodotto generato mediante la sua promozione nei mercati, facendo leva sulle piattafonne dedicate Europee (KIC, EEN, ecc). Organizzazione di workshop e produzione di un filmato promozionale.

N° Contratto: 720749

IN-POWER

Advanced Materials technologies to QUADRUPLE the Concentrated Solar Thermal current POWER GENERATION

Coordinatore ACONDICIONAMIENTO TARRASENSE ASSOCIACION

Spagna

n. partner: 10

Abstract

The benefits of high efficiency concentrated solar power (CSP) and photovoltaic (PV) are well known: environmental protection, economic growth, job creation, energy security. Those technologies can only be applied properly in regions with annual mean radiation values higher than 1750 kWh/m2 per year. CSP has advantages in front of PV: possible 24h continuous electricity production, electricity and heat generation, heat for distributed in cogeneration plants. Within CSP, four technologies have been currently developed: parabolic trough collector (PTC), tower solar power, Stirling/ dish collector and linear Fresnel collector with its advance type named compact linear Fresnel collector. In 2015, there is global 4GWe production (96% PTC), almost 3GWe are under construction. However for huge deployment, a reduction of Levelized Cost of Electricty (LCOE) is imperative for industry consolidation, when nowadays is around 0.16 – 0.22 €/KWh depending on the size plant, Direct Normal Irradiance and the legal framework of site installation. CSP main components: solar field for solar to thermal conversion, power block for thermal to electrical conversion, and thermal storage system are the key to reduce LCOE. IN-POWER project will develop High efficiency solar harvesting CSP architectures based on holistic materials and innovative manufacturing process to allow a Innovation effort mainly focus in advanced materials such as High Reflectance Tailored Shape light Free glass mirror, High working temperature absorber in Vacuum Free receiver, optimized Reduced Mass support structure allow upgrading current solar field. IN-POWER reduce environmental impact also by reducing THREE times standard thermal storage systems by novel thermal storage materials; and a amazing reduction FOUR TIMES the required land extension in comparison of current mature PTC power generation with the same thermal power output. IN-POWER solution will bring LCOE below 0.10 €/KWh beyond 2020.

Anno di stipula	2017
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 NMBP Nanotechn., Adv Materials, Adv
Data inizio	01-gen-17
Data scadenza	31-dic-20
Contributo totale	€ 4.998.928
Costo eleggibile totale	€ 5.821.903
Contributo a ENEA	€ 571.875
Costo eleggibile ENEA	€ 571.875
Doc. approvazione	276/2016/PRES
Codice atto	PT6AAE
Resp.scientifico ENEA	GAGGIOLI WALTER
Unità	DTE-STT-ITES

Attività ENEA:

Le attività ENEA riguardano:
. il WP 2: partecipazione al processo di validazione e selezione dei materiali di riferimento e analisi del loro impatto LCEO impianti CSP;
. Il WP7: testing e validazione di tubi ricevitori evacuati presso impianto CSP, e di nuovi materiali di stoccaggio termico presso l'impianto MOSE;
. Il WP9: partecipazione al piano di disseminazione e valorizzazione del know e del prodotto generato nel progetto mediante l'organizzazione di workshop, la pubblicazione di articoli, realizzazione di business plan.

N° Contratto: 731287

INSHIP

Integrating National Research Agendas on Solar Heat for Industrial Processes

Coordinatore FZK FRAUNHOFER-GESELLSCHAFT

Germania

n. partner: 28

Abstract

Despite process heat is recognized as the application with highest potential among solar heating and cooling applications, Solar Heat for Industrial Processes (SHIP) still presents a modest share of about 0.3% of total installed solar thermal capacity. As of today's technology development stage – economic competitiveness restricted to low temperature applications; technology implementation requiring interference with existing heat production systems, heat distribution networks or even heat consuming processes - Solar thermal potential is mainly identified for new industrial capacity in outside Americas and Europe. In this context, INSHIP aims at the definition of a ECRIA engaging major European research institutes with recognized activities on SHIP, into an integrated structure that could successfully achieve the coordination objectives of: more effective and intense cooperation between EU research institutions; alignment of different SHIP related national research and funding programs, avoiding overlaps and duplications and identifying gaps; acceleration of knowledge transfer to the European industry, to be the reference organization to promote and coordinate the international cooperation in SHIP research from and to Europe, while developing coordinated R&D TRLs 2-5 activities with the ambition of progressing SHIP beyond the state-of-the-art through: an easier integration of low and medium temperature technologies suiting the operation, durability and reliability requirements of industrial end users; expanding the range of SHIP applications to the EI sector through the development of suitable process embedded solar concentrating technologies, overcoming the present barrier of applications only in the low and medium temperature ranges; increasing the synergies within industrial parks, through centralized heat distribution networks and exploiting the potential synergies of these networks with district heating and with the electricity grid.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Energy
Data inizio	01-gen-17
Data scadenza	31-dic-21
Contributo totale	€ 2.498.661
Costo eleggibile totale	€ 2.858.799
Contributo a ENEA	€ 10.000
Costo eleggibile ENEA	€ 10.000
Doc. approvazione	17/2017/PRES
Codice atto	PT6AAF
Resp.scientifico ENEA	DE IULIIS SIMONA
Unità	DTE

Attività ENEA:

L'ENEA è coinvolto principalmente nella costruzione della necessaria massa critica transnazionale dei membri del JP CSP (Joint Program Concentrated Solar Power) che permetta un più stretto collegamento tra i vari programmi e progetti nazionali.

N° Contratto: 754329

INSPYRE

Investigations Supporting MOX Fuel Licensing in ESNII Prototype Reactors

Coordinatore CEA

Francia

n. partner: 14

Abstract

INSPYRE, a proposal fully supported and endorsed by the Steering Committee of the EERA Joint Programme on Nuclear Materials, focusses on the investigation of fast reactor MOX fuel to support the licensing of the start-up cores of the ESNII reactor prototypes. It will:
• Use carefully designed separate effect (modelling and experimental) investigations to accurately describe basic phenomena occurring in the fuel with sound physical models, expanding empirical fuel behaviour knowledge gained in the past in irradiation tests and post-irradiation examinations,
• Characterize selected key irradiated fuel samples to fill clearly identified knowledge gaps,
• Combine and leverage basic and technological research to enhance and extend the reliability range of traditionally deduced empirical laws governing performance of nuclear fuels under irradiation,
• Implement the new models and data obtained in the fuel performance codes used for the design of ESNII systems and apply the improved codes to ESNII relevant conditions.
The impacts of the INSPYRE project will be many. Fuel is at the heart of nuclear reactor systems, but its qualification and licensing is challenging due to the complex coupled phenomena (physical, chemical, radiation, thermal and mechanical) induced by fission. INSPYRE represents a paradigm shift. It will enable a timely, facilitated and cost effective licensing of fast reactor fuels, only achievable by generating validated simulation tools capable of limiting qualification to punctual dedicated irradiation experiments. Of foremost importance is the relevant and efficient leveraging of past knowledge, technological and basic science approaches to extend the applicability of codes.
INSPYRE's goals will be achieved by a well-balanced consortium from universities, research and industrial organisations already collaborating in the EERA JPNM, further augmented by a dedicated user group stemming from ESNII representatives, fuel vendors, utilities and TSOs.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-17
Data scadenza	31-ago-21
Contributo totale	€ 3.398.479
Costo eleggibile totale	€ 9.368.684
Contributo a ENEA	€ 102.925
Costo eleggibile ENEA	€ 174.588
Doc. approvazione	76/2017/FSN
Codice atto	PF4AAF
Resp.scientifico ENEA	DEL NEVO ALESSANDRO
Unità	FSN-ING-PAN

Attività ENEA:

Nel progetto l'ENEA coordina il WP 'Derivering parameters and developing models for FPC'; è coinvolta inoltre nei WP 7 'Knowledge transfer to fuel performance codes and to users' e nel WP9 'Communication, dissemination and exploitation of results'.

N° Contratto: 695943

INTAS

INdustrial and tertiary product Testing and Application of Standards

Coordinatore WIP - WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG

Germania

n. partner: 16

Abstract

There is a need to strengthen the capacity of Market Surveillance Authorities (MSAs) to conduct Ecodesign related market surveillance activities with respect to new and pending industrial and tertiary sector products. Especially in the case of customised products which are unsuitable for testing in laboratories. There is a lack of expertise, experience, and resources available across Europe for such kind of testing. An increasing concern is that new regulations addressing these products risk being unenforceable. The aim of the INTAS project is to address these concerns and provide technical and cooperative support, as well as capacity building activities, to MSAs charged with enforcing these regulations. The need for the INTAS project arises from the difficulty that MSAs and market actors face in establishing and verifying compliance with energy performance requirements for large industrial products subject to requirements of the Ecodesign Directive. The focus of the project is to support compliance for very large industrial products, specifically transformers and industrial fans, with the requirements of the Ecodesign Directive. The energy consumption of transformers and industrial fans is very significant and thus the risk of losses due to poor compliance cannot be ignored. The project aims to:
a. support European Member State MSAs deliver compliance for large products (specifically for transformers and large fans);
b. support industry to be sure of what their obligations are under the Ecodesign Directive and to deliver compliance in a manner that will be broadly accepted by MSAs;
c. foster a common European approach to the delivery and verification of compliance for these products.
The INTAS project involves 16 partners among them there are 11 organisations, which are National MSAs or cooperating closely with the National MSAs, targeting 10 European countries (Austria, Belgium, Czech Republic, Denmark, Finland, Poland, Portugal, Romania, Spain and Italy).

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-mar-16
Data scadenza	28-feb-19
Contributo totale	€ 1.880.448
Costo eleggibile totale	€ 1.906.966
Contributo a ENEA	€ 94.812
Costo eleggibile ENEA	€ 94.812
Doc. approvazione	18/2016/COMM
Codice atto	PE0AAC
Resp.scientifico ENEA	PRESUTTO MILENA
Unità	DUEE

Attività ENEA:

L'ENEA è coinvolto in tutti i workpackage, in particolare:
nel WP1 l'ENEA partecipa alla gestione del progetto;
nel WP2 si occupa della raccolta di informazioni relative a come la verifica della conformitè di trasformatori e ventilatori industriali viene realizzata al di fuori dell'UE;
nel WP3 supporta la valutazione delle performace energetiche dei prodotti;
nel WP4 insieme alle altre agenzie nazionali supporta la definizione di una procedura per la verifica della conformità che raccolga gli input derivati dai wp precedenti;
nel WP5 svilupperà la collaborazione e il coordinamento tra le autorità nazionali di sorveglianza del mercato;
nel WP6 l'ENEA è coinvolta nella disseminazione del progetto in qualità di focal point nazionale

N° Contratto: 731220

IntEnSys4EU

IntEgrated Energy System - a pathway FOR Europe

Coordinatore ZABALA INNOVATION CONSULTING

Spagna

n. partner: 9

Abstract

INTENSYS4EU aims at addressing the SET-Plan identified novel interacting integration challenges, where
- the consumer becomes active and is put at the center of the energy system,
- a demand focus that increases energy efficiency across the energy system,
- an energy system optimization leading to a secure, cost-effective, clean and competitive energy supply.
Energy networks are critical to successfully address the above integration challenges. The project managed by four independent players (ZABALA Innovation Consulting (coordinator), TECHNOFI, RSE and BACHER Energie) involves the technical expertise of the members of four associations (ENTSO-E, EDSO, EASE and EERA) to implement parallel processes in view of defining and implementing a novel approach to the subsequent RD&I strategy for energy networks.
The INTENSYS4EU project objectives are :
-To provide strategic guidance about the R&I activities (low to high TRL, priorities) raised by the integration issues of the electricity system into the wider European energy system
-To interact with the stakeholders of the ETIP SNET (European Technology and Innovation Platform Smart Networks for Energy Transition) at European level as well as the ETIP stakeholders at national and international level.
- Setting several long term energy scenarios at European level
- Analyzing the on-going research, development and innovation projects in the EU and, when relevant at Member State levels
- Enhancing collaboration between projects through a support to the on-going BRIDGE process initiated by the European Commission for the funded R&I projects of Horizon 2020
- Maximizing cross border knowledge sharing about energy system optimization through interaction with national level players
- Supporting in fine-tuning the development of an upgraded draft R&I roadmap and its yearly implementation plans for approval at SET plan level,covering integrated network solutions of low (TRL=2) and high (TRL=8) maturity.

Anno di stipula	2017
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-ott-16
Data scadenza	30-set-20
Contributo totale	€ 3.998.285
Costo eleggibile totale	€ 4.325.785
Contributo a ENEA	€ 17.188
Costo eleggibile ENEA	€ 17.188
Doc. approvazione	37/E/2017/DTE
Codice atto	PT2AAH
Resp.scientifico ENEA	GRADITI GIORGIO
Unità	DTE-FSN-FOSG

Attività ENEA:

L'ENEA è coinvolta in qualità di linked third party di EERA AISBL e contribuisce, con le proprie attività, al raggiungimento dell'obiettivo di individuare target di ricerca e sviluppo a breve e lungo termine per migliorare il RL di alcune tecnologie chiave e formulare una roadmap a beneficio dell'obiettivo generale di progetto.
Inoltre è coinvolta anche nelle attività di assessment, valutazione, comunicazione e disseminazione dei risultati.

N° Contratto: 773708

INTERPLAN

INTEgrated opeRation PLAnning tool towards the Pan-European Network

Coordinatore ENEA
Italia

n. partner: 6

Abstract

The European Union (EU) energy security policy faces significant challenges, as we move towards a pan–European network based on the wide diversity of energy systems among EU members. In such a context, novel solutions are needed to support the future operation of the EU electricity system in order to increase security of supply also accounting for the increasing contribution of renewable energy sources. The goal of INTERPLAN project is to provide an INTEgrated opeRation PLANning tool towards the pan-European network, to support the EU in reaching the expected low-carbon targets, while maintaining network security. A methodology for proper representation of a “clustered” model of the pan-European network will be provided, with the aim to generate grid equivalents as a growing library able to cover all relevant system connectivity possibilities occurring in the real grid, by addressing operational issues at all network levels (transmission, distribution and TSOs-DSOs interfaces). In this perspective, the chosen top-down approach will actually lead to an ""integrated"" tool, both in terms of voltage levels, going from high voltage down to low voltage up to end user, and in terms of building a bridge between static, long-term planning and considering operational issues by introducing controllers in the operation planning. Proper cluster and interface controllers will be developed to intervene in presence of criticalities, by exploiting the flexibility potentials throughout the grid. The achievement of the project goal will be ensured by the subdivision of the needed steps in seven Work Packages, each of them, with a specific measurable objective. The project is in line with the Work Programme, in ensuring more flexibility and active involvement of all stakeholders, and a close coordination of TSOs and DSOs. Moreover, its versatility in the concept of grid equivalents, will allow an accurate analysis of the complex network, by considering local active elements in the grid.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Energy
Data inizio	01-nov-17
Data scadenza	31-ott-20
Contributo totale	€ 2.964.363
Costo eleggibile totale	€ 2.964.363
Contributo a ENEA	€ 556.075
Costo eleggibile ENEA	€ 556.075
Doc. approvazione	42/E/2017/DTE
Codice atto	PT2AAK
Resp.scientifico ENEA	GRADITI GIORGIO
Unità	DTE-FSN-FOSG

Attività ENEA:

L'ENEA coordina il progetto, svolgendo attività nei seguenti Workpackage:
WP1: coordination and project management
WP2: technical assessment and regulatory status of the European electricity grid
WP3: requirements, scenarios and use cases definition
WP4: grid equivalenting
WP5: operation planning and semi-dynamic simulation
WP6: INTERPLAN model validation and testing
WP7: dissemination, communication and exploitation

N° Contratto: 662157

IVMR

In-Vessel Melt Retention Severe Accident Management Strategy for Existing and Future NPPs

Coordinatore IRSN INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE

Francia

n. partner: 23

Abstract

The stabilization of molten corium is recognised as essential if a safe and stable state is to be reached following a severe accident. Among the possible options, In-Vessel Melt Retention (IVMR) appears as an attractive solution that would minimize the risks of containment failure (less Hydrogen produced, no corium-concrete interaction), if it can be proved to be feasible.
The strategy is already adopted for the VVER 440 type 213 based on thorough research work for the Finnish Loviisa NPP and Hungarian Paks NPP. It is also included in the design of some new Gen.III reactors like AP-1000, APR 1400 and Chinese CPR-1000. It has also been studied in the past for other reactor concepts like KERENA (BWR) or VVER-640. Current approaches for reactors with relatively small power, such as VVER 440 or AP600, use conservative assumptions. However, for higher power reactors (around 1000 MWe), it is necessary to evaluate the IVMR strategy with best-estimate methods in order to address the uncertainties associated with the involved phenomena. Additional R&D is needed to ensure and demonstrate adequate safety margins, including identification of efficient technical solutions for the external cooling of the vessel and performing best-estimate evaluation of relevant scenarios. Among other provisions, the possibility of cooling the corium inside the vessel by direct injection of water into the degraded core, may be considered because it is likely to remove a significant part of the residual power.
The goal of the project is an analysis of the applicability and technical feasibility of the IVMR strategy to high power reactors, both for existing ones (e.g. VVER 1000 type 320 units) as well as for future reactors of different types (PWR or BWR). The main outcomes of the project will be elevant assumptions and scenarios to estimate the maximum heat load on the vessel wall, improved numerical tools for the analysis of IVMR issues and a harmonized methodology on the IVMR.

Anno di stipula	2015
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-giu-15
Data scadenza	30-gen-20
Contributo totale	€ 4.831.454
Costo eleggibile totale	€ 8.205.085
Contributo a ENEA	€ 109.125
Costo eleggibile ENEA	€ 218.250
Doc. approvazione	15/2015/FSN
Codice atto	0LPQ1
Resp.scientifico ENEA	BANDINI GIACOMINO
Unità	FSN-SICNUC-SIN

Attività ENEA:

L'ENEA partecipa alle attività del workpackage 2 'Methodology, modelling reactor calculation, evaluation of safety margin', in particolare:
attività di sviluppo e qualificazione di modelli numerici e codici di calcolo utilizzati nell'analisi di incidenti severi, attraverso l'analisi di prove sperimentali previste nell'ambito del progetto e finalizzate allo studio del raffreddamento del nocciolo degradato attraverso l'intervento dei sistemi di sicurezza;
Valutazione con codici CFD del comportamento di materiale fuso rilocato fondo vessel e della sua possibile ritenzione attraverso il raffreddamento della parete esterna del vessel;
calcoli di applicazione IVMR con il codice europeo ASTEC per impianti PWR esistenti e di generazioni future.

N° Contratto: 002/2016

LDLensRad

Towards a full mechanistic understanding of low dose radiation cataracts (CONCERT-European Joint Programme)

Coordinatore BFS - FEDERAL OFFICE FOR RADIATION PROTECTION

Germania

n. partner: 4

Abstract

LDLensRad is a project financed by CONCERT - The European Joint Programme for the Integration of Radiation Protection Research - that aims to contribute to the sustainable integration of European and national research programmes in the field of radiation protection.
The lens of the eye is known to be more radiosensitive than previously thought but, despite a substantial reduction in occupational dose limits based on recent epidemiological information and reanalyses, the biological mechanisms that cause low dose radiation cataract induction are still unclear. This is an important current public health issue, for instance for medical radiation workers, many of whom will need to amend their working practices despite the lack of a clear understanding of the effects of chronic, low dose, ionising radiation exposure.
This multidisciplinary project aims to bring together experts from across Europe to answer a number of key research questions on this topic, including: how does low dose radiation cause cataracts; is there a dose rate effect, and how does genetic background influence cataract development after radiation exposure. The research will also address the issue of ageing in a sensitive subset of mice and whether lens effects can be viewed as global biomarkers of radiosensitivity. The partners will work with mouse models supported by cellular studies to investigate the mechanistic chain of events from the initial radiation insult and biological responses through to formation of lens opacities. The biological investigations will be supported by rigorous statistical modelling for hypothesis development. In addition, the partners will explore the potential for a prospective molecular epidemiology programme using human lenses taken from the former Mayak PA workers.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 Euratom radioprotezione
Data inizio	01-gen-17
Data scadenza	31-mar-20
Contributo totale	€ 2.467.290
Costo eleggibile totale	€ 2.467.290
Contributo a ENEA	€ 606.526
Costo eleggibile ENEA	€ 879.024
Doc. approvazione	1072017/SSPT-TECS
Codice atto	PS5AAG
Resp.scientifico ENEA	MANCUSO MARIA TERESA
Unità	SSPT-TECS-TEB

Attività ENEA:

Nell'ambito del progetto l'ENEA si occuperà di:
. Irraggiare con diverse dosi e rateo di dose, modelli animali allo scopo di valutare i meccanismi molecolari coinvolti nell'insorgenza di cataratta a breve e a lungo termine;
. irraggiare linee cellulari di lente, murine e umane, per studi molecolari in vitro a supporto degli studi in vivo;
. Analizzare mediante un approccio immunoistochimico marcatori di neurodegenerazione allo scopo di valutare eventuali danni cerebrali negli animali irraggiati.

N° Contratto: LIFE18 GIE/IT/000813

LIFE BLUE LAKES

Life Blue Lakes

Coordinatore LEGAMBIENTE ONLUS

Italia

n. partner: 7

Abstract

The main goal of LIFE BLUE LAKES is to prevent and reduce plastic waste in Italian and German lakes. The project will apply an integrated approach to five lakes in Germany and Italy, combining governance, training, information and awareness-raising activities. It will contribute to both the EU plastics strategy and the circular economy action plan.
The projects specific objectives include:
•improving the governance, management and decision-making processes concerning microplastic pollution in lakes (e.g. through a new support tool and suggestions on plastic waste treatment, discharge limits, monitoring programmes, wastewater treatment process improvements and awareness-raising initiatives);
•increased commitment by local economic actors (e.g. industries, farmers, tourist operators) near the main lakes in Italy and Germany to reducing the impact of their activities;
•reducing the entry of microplastics into lake basins from WWTPs through developing and disseminating a technical protocol for sewage treatment;
•establishing close cooperation between relevant industries to develop solutions to reduce and prevent additional primary loads of microplastics;
•raising the awareness of residents living close to the main lakes in Italy and Germany about the problem of microplastics; and
•influencing the political agenda at national (German and Italian) and European level in order to improve the existing regulatory framework for tackling microplastic pollution in lake basins.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi LIFE (2014-2020)
Data inizio	01-ott-19
Data scadenza	30-set-23
Contributo totale	€ 1.391.990
Costo eleggibile totale	€ 2.530.927
Contributo a ENEA	€ 123.200
Costo eleggibile ENEA	€ 235.400
Doc. approvazione	375/2019/PRES
Codice atto	PS4ABW
Resp.scientifico ENEA	SIGHICELLI MARIA
Unità	SSPT-PROTER-BES

Attività ENEA:

L'attività ENEA, svolta in collaborazione con gli altri partner italiani e tedeschi, prevede:
. La realizzazione di campagne di formazione destinate alla Pubblica Amministrazione e sviluppo di programmi di monitoraggio delle microplastiche nei laghi;
. La stesura di protocolli tecnici per la valutazione delle microplastiche presenti nelle aree pilota del Nord (Lago di Garda) e Centro Italia (Lago Trasimeno e Lago di Bracciano)
Attività di comunicazione e coinvolgimento delle comunità locali e diffusione dei risultati

N° Contratto: LIFE14 ENV/IT/00046

Life4MarPiccolo

A New Life For Mar Piccolo

Coordinatore ENEA

Italia

n. partner: 5

Abstract

The main objective of the Life4MarPiccolo project is the ecological restoration of Mar Piccolo in Taranto, through the recovery of a contaminated portion of the seabed and seawater.
Specific project objectives are to:
Restore approx. 3 000 square metres of the basin using a purification pilot plant, based on membrane microfiltration, to reduce contamination of PCBs, PAHs and heavy metals on the seabed and, consequently, in the water column above - reaching concentrations within the limits set by existing national and Community legislation;
Provide the authorities in charge of the basin with tools for the sustainable management of marine areas, with the help of an intervention protocol for the environmental recovery of Italian and European coastal marine sites with pollution problems similar to those of the Mar Piccolo; and to define a diagnostic kit for assessing the quality of marine waters.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi LIFE (2014-2020)
Data inizio	01-gen-16
Data scadenza	30-set-20
Contributo totale	€ 1.325.473
Costo eleggibile totale	€ 2.512.171
Contributo a ENEA	€ 715.703
Costo eleggibile ENEA	€ 1.276.320
Doc. approvazione	582/2015/COM
Codice atto	PT1AAA
Resp.scientifico ENEA	PERROTTA GAETANO
Unità	DTE-BBC

Attività ENEA:

L'ENEA guida un network di eccellenza nei campi della ricerca, mettendo a disposizione il know-how e le tecnologie di cui dispone per stimolare misure di recupero ambientale dell'area marina.

N° Contratto: 755039

M4F

MULTISCALE MODELLING FOR FUSION AND FISSION MATERIALS

Coordinatore CIEMAT
Spagna

n. partner: 21

Abstract

The main goal of M4F project is to bring together the fusion and fission materials communities working on the prediction of microstructural-induced irradiation damage and deformation mechanisms of irradiated ferritic/martensitic (F/M) steels. M4F project is a multidisciplinary one, were both modeling and experiments at different scales will be integrated to foster the understanding of complex phenomena associated to the formation and evolution of irradiation induced defects and their role on the deformation behavior. In addition, an attempt to reduce the gap between the materials science activities as model and experiments, and the needed inputs on design codes will be included

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-17
Data scadenza	31-ago-21
Contributo totale	€ 4.000.000
Costo eleggibile totale	€ 6.524.696
Contributo a ENEA	€ 20.000
Costo eleggibile ENEA	€ 24.721
Doc. approvazione	29/E/2017/DTE
Codice atto	PT3AAB
Resp.scientifico ENEA	FERRO GIANCLAUDIO
Unità	DTE-ICT-HPC

Attività ENEA:

Le attività ENEA nel progetto sono focalizzate sul WP7 (disseminazione e data management) e sono relative a:
. Predisposizione di un data base di riferimento relativo ai dati sperimentali e di gestione dei risultati in conformità all'Open data pilot di H2020;
. Attivazione di un virtual research environment al fine di assicurare il massimo impatto dei risultati del progetto M4F e promuovere il networking e la collaborazione tra i ricercatori afferenti alla comunità scientifica.

N° Contratto: LIFE 18 GIE/IT/000735

MA.G.I.S.

Made Green in Italy Scheme

Coordinatore ENEA

Italia

n. partner: 10

Abstract

Supporto e lancio dell'applicazione in Italia del metodo Product Environmental Footprint (PEF), sviluppato dalla CE, anche attraverso l'utilizzo del marchio Made Green in Italy.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi LIFE (2014-2020)
Data inizio	02-set-19
Data scadenza	31-dic-22
Contributo totale	€ 1.385.942
Costo eleggibile totale	€ 2.624.168
Contributo a ENEA	€ 256.249
Costo eleggibile ENEA	€ 450.049
Doc. approvazione	230/2019/SSPT-USER
Codice atto	PS6ACK
Resp.scientifico ENEA	CORTESI SARA
Unità	SSPT-USER-RISE

Attività ENEA:

L'ENEA coordina il progetto. Le attività ENEA prevedono:
. Valutazione dell'implementazione del metodo PEF nelle regole di categoria di prodotto (RCP) sviluppate dai gruppi di lavoro proponenti, come da regolamento dello schema Made Green in Italy;
. Verifica della conformità con il metodo PEF e con lo schema Made Green in Italy delle analisi condotte durante il progetto;
. Sviluppo di dataset conformi allo schema Made Green in Italy, sviluppati a partire dalle analisi condotte durante il progetto;
. Attività di comunicazione, disseminazione e supporto alla replicabilità dello schema a livello europeo;
. Coordinamento e monitoraggio del progetto

N° Contratto: CE897

MaGICLandscapes

Managing Green Infrastructure in Central European Landscapes

Coordinatore UNIV. TECHNISCHE DRESDEN
Germania

n. partner: 10

Abstract

Green Infrastructure (GI) is a key strategy in the European landscape connectivity agenda aimed at reconnecting vital natural areas to urban hubs & restoring and improving their functional roles. Thus, GI is an essential planning concept towards protecting Natural Capital and simultaneously enhancing quality of life. This approach needs to be urgently implemented in Central Europe (CE) landscape planning policies, which seldom consider the ability of land to deliver multiple benefits. MaGICLandscapes (ML) will operationalize the GI concept in Central Europe providing land-managers, policy makers and communities the tools and the knowledge, at different spatial levels, that they need to ensure the persistence of GI functionality & consequent benefits to society. ML will deliver an assessment approach that deals with all spatial levels across CE landscapes types. ML will supply the tools for GI assessment at the transnational level ensuring cross-border GI is understood in a way that reduces mis-matched management approaches. It will provide territories with the means to assess functions of GI to guide planning and conservation approaches. Institutions will have the means to assess the public benefit that can be achieved through GI management approaches and demonstrate how these assessment approaches are used to develop evidence-based strategies and action plans. 9 Multi-scale and multi-thematic case studies in 5 regions offer the testing ground for our trans-disciplinary partner consortium to identify and feedback best practice for assessment, thus creating transnational added value. Outputs include a suite of transferable tools: a series of technical manuals & partner-level evidence-based strategies & action plans to direct future actions & investment. Training in the use of the tools will be provided for institutions inside and outside of the partnership resulting in enhancing the capacities of institutions to better manage our natural heritage.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg Central Europe
Data inizio	01-lug-17
Data scadenza	30-giu-20
Contributo totale	€ 1.777.120
Costo eleggibile totale	€ 2.191.264
Contributo a ENEA	€ 179.365
Costo eleggibile ENEA	€ 224.206
Doc. approvazione	232/2017/PRES
Codice atto	PS4AAO
Resp.scientifico ENEA	ROSSI GIAN LUIGI
Unità	SSPT-PROTER-BES

Attività ENEA:

L'ENEA coordina Il WP3 “Strategies for Intervention at European, Regional and Local Level”.
Partecipa al WP 1 “Concepts and Framework for Green Infrastructure Assessment” e al WP2 “GI at European, Regional and Local Scale – Green Infrastructure Functionality Assessment”.

N° Contratto: 776467

MED-GOLD

Turning climate-related information into added value for traditional MEDiterranean Grape, OLive and Durum wheat food systems

Coordinatore ENEA
Italia

n. partner: 16

Abstract

MED-GOLD will demonstrate the proof-of-concept for climate services in the agriculture sector by developing case studies for three hallmarks of the Mediterranean food system: grapes, olives and durum wheat. Agriculture is primarily climate-driven and hence highly vulnerable to climate variability and change. Evidence suggests that the Mediterranean region is under immediate threat of shifting climate patterns and the associated ecological, economic and social effects. Developing a capacity to turn the increasingly big climate-related data into tailored climate services that can inform decision-making in agriculture, is therefore a priority both in Europe and worldwide. The long-term goal of this project is to make European agriculture and food systems more competitive, resilient, and efficient in the face of climate change, by using climate services to minimize climate-driven risks/costs and seize opportunities for added-value.
The MED-GOLD project aims to develop climate services for olive, grape, and durum wheat crop systems that are the basis for producing olive oil, wine and pasta. This set of crops and related food products is of utmost climatic, ecological, economic, and cultural relevance to the Mediterranean region. Because olive oil, wine and pasta are not only hallmarks of the Mediterranean diet but also food commodities with a global market, there is considerable potential for developing climate services with high added-value for olive, grape, and durum wheat. A key challenge is to co-design prototype pilot service applications involving both suppliers and users in the three major traditional Mediterranean crop systems so as to demonstrate the added-value of data/information-driven responses to changes in the climate system. The operational decision-making of users will be reviewed to either identify key decisions or introduce new actions that can benefit from climate-related information at different timescales from months to decades.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-dic-17
Data scadenza	30-nov-21
Contributo totale	€ 4.990.968
Costo eleggibile totale	€ 4.990.968
Contributo a ENEA	€ 473.588
Costo eleggibile ENEA	€ 473.588
Doc. approvazione	199/201/SSPT-MET
Codice atto	PS2AAK
Resp.scientifico ENEA	DELL'AQUILA ALESSANDRO
Unità	SSPT-MET-CLIM

Attività ENEA:

L'ENEA coordina il progetto e inoltre svolge attività di ricerca e innovazione di propria pertinenza contribuendo alle attività di tutti i pacchetti di lavoro del progetto.

N° Contratto: ENI/2018/395-537

meetMED

Mitigation Enabling Energy Transition in the Mediterranean Region

Coordinatore MEDENER - MEDITERRANEAN ASSOCIATION OF NATIONAL AGENCIES FOR ENERGY MANAGEMENT

n. partner: 11

Organ. Internazion

Abstract

MeetMED is an EU-funded project developed by the Mediterranean Association of the National Agencies for Energy Management (MEDENER) and the Regional Centre for Renewable Energy and Energy Efficiency (RCREEE) that intends to foster energy transition in Southern and Eastern Mediterranean countries.
Through a multipurpose approach, meetMED will contribute to energy supply security, to the mitigation of climate change, to a sustainable growth, to the creation of jobs and the reduction of migration flows. The project intends to assess and support the development and implementation of EE and RES policies and strategies and the harmonization of legislative and regulatory frameworks in the Mediterranean region, as well as reinforce public awareness and capacity building of local stakeholders.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi ENI - European Neighbourhood Instru
Data inizio	01-mag-18
Data scadenza	30-apr-20
Contributo totale	€ 1.510.140
Costo eleggibile totale	€ 1.678.140
Contributo a ENEA	€ 99.770
Costo eleggibile ENEA	€ 114.464
Doc. approvazione	5/2018/DUEE-SPS
Codice atto	PW3AAA
Resp.scientifico ENEA	SALAMA ANNA MARIA
Unità	DUEE-SPS-MPE

Attività ENEA:

ENEA partecipa a cinque azioni che comportano attività di studio, reportistica, creazione di panel di esperti, formazione e trasferte, oltre al contributo alle attività di comunicazione e disseminazione dell'iniziativa.

N° Contratto:

METRODECOM II

In-situ Metrology for Decommissioning Nuclear Facilities

Coordinatore NPL MANAGEMENT LIMITED
Regno Unito

n. partner: 16

Abstract

This project addresses one of the most significant environmental challenges facing EU member states: ensuring the safe disposal of radioactive waste from decommissioning nuclear sites. The key to dealing with such wastes is quantifying the radioactivity content, so that decommissioning can be planned and implemented to minimise the risk to members of the public and the environment.
The project aims to provide nuclear site operators with measurement techniques that can be used to measure radioactivity for planning decommissioning, for segregating and checking waste materials during demolition, and for monitoring the condition of waste packages in radioactive waste repositories.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi EMPIR
Data inizio	01-set-17
Data scadenza	31-ago-20
Contributo totale	€ 2.280.951
Costo eleggibile totale	€ 2.280.951
Contributo a ENEA	€ 52.500
Costo eleggibile ENEA	€ 52.500
Doc. approvazione	102/2017/FSN
Codice atto	PF5AAD
Resp.scientifico ENEA	DE FELICE PIERINO
Unità	FSN-INMRI

Attività ENEA:

L'ENEA partecipa ad attività di:
. Sviluppo di sistemi di caratterizzazione per rifiuti di livello molto basso, basso e intermedio.
. Trasferimento dei risultati del progetto agli operatori coinvolti nel processo di smantellamento nucleare.

N° Contratto: 871083

METROFOOD-RI

METROFOOD-RI Preparatory Phase Project

Coordinatore ENEA

Italia

n. partner: 20

Abstract

METROFOOD-RI – Infrastructure for Promoting Metrology in Food and Nutrition - is a pan-European Research Infrastructure (RI) aimed to promote scientific excellence in the field of food quality and safety. It provides high-quality metrology services in food and nutrition, comprising an important cross-section of highly interdisciplinary and interconnected fields throughout the food value chain, including agrifood, sustainable development, food safety, quality, traceability and authenticity, environmental safety, and human health. METROFOOD-RI has been selected to the ESFRI Roadmap2018 as mature enough to be implemented within the next ten years. The Action is aimed to support METROFOOD-RI to grow from its current status (research-based network of facilities and skills) to a mature, centrally-coordinated, integrated RI, with the legal, financial and technical maturity required for implementing it. The main objective is to develop the organizational, operational and strategic framework of METROFOOD-RI. Activities include legal, governance, financial, technical, strategic and administrative aspects carried out in 15 work packages, organised in 3 blocks dedicated respectively to: the organisation of the legal entity that will manage the future RI, i.e. ERIC; define the operation and the operational standards at the level of the whole RI and for the National Nodes, as well as the role of the RI as service-oriented organisation; define the long term activities for the future RI and update the Strategic Research & Innovation Agenda, in response to the actual and future challenges in the agrifood sector and for the Society. The main outcome will be the establishment of legal and financial commitment for the future ERIC, ensuring long-term common commitment, decision-making and funding engagement. Continuous relations with stakeholders and the user community will be kept in order to ensure the addressing of their needs at the best, and to focus strategies and planned services.

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-dic-19
Data scadenza	31-mag-22
Contributo totale	€ 3.999.890
Costo eleggibile totale	€ 3.999.890
Contributo a ENEA	€ 506.187
Costo eleggibile ENEA	€ 506.187
Doc. approvazione	256/2019/SSPT-BIOAG
Codice atto	PS1ABE
Resp.scientifico ENEA	ZOANI CLAUDIA
Unità	SSPT-BIOAG

Attività ENEA:

L'ENEA coordina il progetto e partecipa alle attività di tutti i workpackage.
Per quanto riguarda le specifiche attività, coordina le attività di predisposizione dello statuto per l'ERIC con le rispettive policy - in previsione dell'assunzione di una propria figa legale da parte di METROFOOD-RI - e di organizzazione dell'infrastruttura con la sua struttura Hub&Nodes. E' inoltre coinvolta in tutte le attività finalizzate alla definizione del piano finanziario e del piano di implementazione, della carta dei servizi, dell'agenda strategia, del posizionamento nel landscape delle infrastrutture i networks impegnati nel settore "Health and Food", delle relazioni con le industrie e delle collaborazioni a livello globale, dell'analisi di impatto e del piano di comunicazione e disseminazione

N° Contratto: 847641

MICADO

Measurement and Instrumentation for Cleaning And Decommissioning Operations

Coordinatore C.A.E.N. SPA COSTRUZIONI APPARECCHIATURE ELETTRONICHE NUCLEARI

Italia

n. partner: 8

Abstract

The goal of the MICADO project is to propose a cost-effective solution for non-destructing characterization of nuclear waste, implementing a digitization process that could become a referenced standard facilitating and harmonizing the methodology used for the in-field Waste Management and Dismantling & Decommissioning operations.
The D&D process of nuclear infrastructures demands methods for a full traceability of waste material to improve quality management and operational safety. Precise procedures provide twofold benefits: the optimization of costs, associated with D&D, and the minimization of the dose exposure to operators and personnel.
The absence of a consistent and straightforward solution to characterize all types of materials, along with the lack of an integrated solution for digitizing the enormous amount of data produced, is a critical issue. Now the systems rely on the operator's ability to maintain high operational skills and quality assurance with precision measurements that unfortunately today very often are associating high uncertainties not allowing therefore a real optimization of the waste.
The utilization of several un-automatized instruments implies taking many notes and inserting them into specific ad-hoc format and on a database manually, without the possibility to combine data including previously available legacy data's if present.
The RCMS Digi-Waste solution proposed in the MICADO project will result in a proven modular solution offering an opportunity to proactively develop a unified and standardized Waste NDA Characterization Procedure and Method that could become an international reference allowing all Nuclear Operators - Research Laboratories & Safety Authorities to facilitate their exchanges.
The MICADO project involves some key EU players with major knowledge in nuclear waste having all in common the interest to converge in technologies, methods and implementing a full digitization process applied to nuclear waste management.

Anno di stipula	2019
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-giu-19
Data scadenza	31-mag-22
Contributo totale	€ 4.442.163
Costo eleggibile totale	€ 4.986.644
Contributo a ENEA	€ 533.858
Costo eleggibile ENEA	€ 533.858
Doc. approvazione	081/2019/FSN
Codice atto	PF1AAE
Resp.scientifico ENEA	CHERUBINI NADIA
Unità	FSN-FISS-CRGR

Attività ENEA:

L'ENEA è leader del workpackage 10 ed è coinvolta principalmente nei workpackage 4, 5, 6, 7 occupandosi di:
. Progettazione e realizzazione di un sistema modulare per la caratterizzazione radiologica di rifiuti contenenti alfa emettitori mediante tecniche neutroniche passive e attive e preparazione dei test dimostrativi sul campo;
. Collaborazione allo sviluppo di un sistema automatico per la caratterizzazione completa dei rifiuti radioattivi contenenti radionuclidi gamma emettitori;
. preparazione di alcuni standard di calibrazione da utilizzarsi come materiali di riferimento nelle attività sperimentali;
. Collaborazione durante la fase di ricerca per l'accoppiamento di sistemi di interrogazione neutronica e fotonica utilizzando un acceleratore di elettroni;
. Partecipazione alla realizzazione e integrazione della piattaforma software DigiWaste;
. Coordinazione delle attività dei partner per la 'Field Demonstration' finale.

N° Contratto: 779373

MILEDI

Micro Quantum Dot-Light Emitting Diode and Organic Light Emitting Diode Direct Patterning

Coordinatore ENEA
Italia

n. partner: 10

Abstract

The project MiLEDI aims to realise micro-Light Emitting Diodes (mQDL) and micro -Organic Light Emitting Diodes (mQDO) using direct laser or electron beam patterning of nanometer-scale Quantum Dots (QDs) to write the Red-Green-Blue (RGB) arrays for display manufacturing.
The main idea sustaining the project is to form the colored green-red light-emitting QDs directly over a matrix of blue emitting micro QDL/QDO arrays, so that the QDs act as frequency down-converters and constitute a RGB micro-display.
Both direct-writing technologies will be thoroughly developed to optimize the QD light emission spectrum of the display and its stability. They are expected to provide patterning resolution at micrometric scales, depending on the laser spot areas and particle beam dimensions and operation. These techniques together with the direct formation of QDs assure highly flexible and simpler manufacturing processes, in few steps and with low chemical impact The MiLEDI approach for both micro QDL and QDO RGB displays manufactured by direct laser/electron beam patterning of QDs, is validated by the production of a final prototype of Rear Projection display through the existing supply chain of the project.

Anno di stipula	2018
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 ICT
Data inizio	01-gen-18
Data scadenza	30-giu-21
Contributo totale	€ 4.130.041
Costo eleggibile totale	€ 4.130.041
Contributo a ENEA	€ 672.500
Costo eleggibile ENEA	€ 672.500
Doc. approvazione	178/2017/FSN
Codice atto	PF7AAE
Resp.scientifico ENEA	ANTOLINI FRANCESCO
Unità	FSN-TECFIS-MNF

Attività ENEA:

The research activity of the MILEDI project includes i) the synthesis of nano-materials, ii) the dissemination of the results and iii) the coordination. The chemical synthesis of the nanoparticles in MILEDI project will be carried out in a chemical laboratory recently set up with the support of the Department of Fusion and Technology for Nuclear Safety. Within this lab the optical characterisation of the produced materials is carried out. Further optical and structural characterisations are developed in collaboration with the Photonics Micro and Nanostructures Laboratory. The dissemination and coordination of the project activity will be done together with the Department of Fusion and Technology for Nuclear Safety.

N° Contratto:

MITIMPACT

Previsione e valutazione dell'impatto del cambiamento climatico e dell'inquinamento fotochimico dell'aria sulla vegetazione transfrontaliera - strategia di mitigazione

Coordinatore IPLA ISTITUTO PER LE PIANTE DA LEGNO E L'AMBIENTE

Italia

n. partner: 5

Abstract

The areas covered by the project are territories where the intensity of future climate variation risk to be extremes. These areas have also a high rate of biodiversity and touristic frequentation, mostly due to environment attractivity. In order to protect this biodiversity, MITIMPACT would to implement mitigation actions to allow nature protection, and protect the tourism linked to this. Furthermore, these areas would like to join UNESCO's patrimony as "Patrimony of Humanity". MITIMPACT wants, also, increase real ozone impact knowledges on forest, to prevent the evolution and adopt efficient countermeasures.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg Alcotra
Data inizio	06-apr-18
Data scadenza	05-dic-19
Contributo totale	€ 1.228.824
Costo eleggibile totale	€ 1.228.824
Contributo a ENEA	€ 40.000
Costo eleggibile ENEA	€ 40.000
Doc. approvazione	5/2018/SSPT-MET
Codice atto	CS2AAN
Resp.scientifico ENEA	DE MARCO ALESSANDRA
Unità	SSPT-MET-INAT

Attività ENEA:

L'ENEA implementerà le seguente azioni:
1) modellizzazione dei flussi stomatici di ozono sulla vegetazione attraverso il modello DO3SE, come indicato nell'azione 4.3;
2) valutazione di nuove soglie di protezione per le foreste dai danni causati dall'ozono troposferico secondo quanto indicato nell'azione 4.3 del progetto;
3) partecipazione alle riunioni progettuali, alla conferenza internazionale su Ozono ed ecosistemi vegetali,

N° Contratto: 662177

MODERN2020

Development and Demonstration of monitoring strategies and technologies for geological disposal

Coordinatore ANDRA - AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS

Francia

n. partner: 28

Abstract

The Modern2020 project aims at providing the means for developing and implementing an effective and efficient repository operational monitoring programme, taking into account the requirements of specific national programmes. The work allows advanced national radioactive waste disposal programmes to design monitoring systems suitable for deployment when repositories start operating in the next decade and supports less developed programmes and other stakeholders by illustrating how the national context can be taken into account in designing dedicated monitoring programmes tailored to their national needs. The work is established to understand what should be monitored within the frame of the wider safety cases and to provide methodology on how monitoring information can be used to support decision making and to plan for responding to monitoring results. Research and development work aims to improve and develop innovative repository monitoring techniques (wireless data transmission, alternative power supply sources, new sensors, geophysical methods) from the proof of feasibility stage to the technology development and demonstration phase. Innovative technical solutions facilitate the integration and flexibility of required monitoring components to ease the final implementation and adaptation of the monitoring system. Full-scale in-situ demonstrations of innovative monitoring techniques will further enhance the knowledge on the operational implementation of specific disposal monitoring and will demonstrate the performance of the state-of-the-art, the innovative techniques and their comparison with conventional ones.
Finally, Modern2020 has the ambition to effectively engage local citizen stakeholders in the R&D monitoring activity by involving them at an early stage in a repository development programme in order to integrate their concerns and expectations into monitoring programmes.

Anno di stipula	2015
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-giu-15
Data scadenza	31-mag-19
Contributo totale	€ 5.997.143
Costo eleggibile totale	€ 9.658.846
Contributo a ENEA	€ 88.594
Costo eleggibile ENEA	€ 88.594
Doc. approvazione	56/2015/FSN
Codice atto	PF2AAA
Resp.scientifico ENEA	CAPPELLI MAURO
Unità	FSN-FUSPHY-SCM

Attività ENEA:

L'attività di ricerca e sviluppo prevista dal progetto mira a sviluppare e migliorare tecniche innovative per il monitoraggio del repository (trasmissione wireless dei dati, sorgenti di alimentazione alternative, nuovi sensori) a partire dalla fase di fattibilità fino alla fase di dimostrazione, attraverso il coinvolgimento di tutti gli stakeholder coinvolti.
ENEA ha un ruolo attivo nei vari workpackages del progetto, in particolare nella definizione dei requisiti dei sistemi di monitoraggio in termini dei parametri che devono essere monitorati e nell'ottimizzazione dei programmi di monitoraggio dal punto di vista della sicurezza; nello sviluppo di nuove tecniche e sensori innovativi per la misurazione senza contatto del displacement di contenitori di rifiuti radioattivi in deposito, nella definizione dei diversi livelli di accesso ai dati per gli strumenti di comunicazione previsti dal progetto e nel coinvolgimento degli stakeholder.
ENEA prenderà inoltre parte all'organizzazione di workshops tematici orientati al coinvolgimento di tutti gli stakeholders volti alla divulgazione dei risultati del progetto, di una scuola di formazione nel campo della sicurezza dei rifiuti radioattivi e di una conferenza internazionale per la discussione dei risultati del progetto estesa a tutta la comunità scientifica.

N° Contratto: LIFE 15 ENV/IT/00183

MOTTLES

MOnitoring ozone injury for seTTing new critical LEvelS

Coordinatore CNR - CONSIGLIO NAZIONALE DELLE RICERCHE

n. partner: 6

Italia

Abstract

The LIFE MOTTLES project aims to define scientifically-based thresholds and critical levels for the protection of forests from O3 in the changing climate scenario. To do this, an innovative integrated monitoring station system for the continuous measurement of parameters affecting European forest ecosystems sustainability will be set up and tested across three European countries. This will support the elaboration of recommendations and adaptive management strategies for sustainable forest management and stimulate the development of usable legislative standards for protecting forests against O3.
The project will address the 2015 EU policy priorities (2020 Biodiversity Strategy and 2013 Forest Strategy), by anticipating the adverse effects of climate change and taking appropriate measures to prevent associated damage. Furthermore, as there is a demand for tools supporting the assessment of impacts of policies both at EU and national level, LIFE MOTTLES will facilitate the development of science-based strategies for policy-makers and managers to enable the protection of forests against O3 and climate change. This will serve as a decision-support tool for national and EU authorities.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi LIFE (2014-2020)
Data inizio	28-ott-16
Data scadenza	27-ott-19
Contributo totale	€ 1.079.093
Costo eleggibile totale	€ 1.838.406
Contributo a ENEA	€ 40.000
Costo eleggibile ENEA	€ 40.000
Doc. approvazione	149/2016/SSPT-MET
Codice atto	CS2AAE
Resp.scientifico ENEA	DE MARCO ALESSANDRA
Unità	SSPT-MET-INAT

Attività ENEA:

L'ENEA svolge attività che prevedono la fornitura di dati di simulazione con il modello WRF-CHIMERE; la gestione delle attività di previsione di scenari climatici; la partecipazione ai convegni IUFRO e UNECE riguardanti le tematiche relative al progetto MOTTLES.

N° Contratto: 15HLT06

MRTDosimetry

Metrology for clinical implementation of dosimetry in molecular radiotherapy

Coordinatore NPL MANAGEMENT LIMITED *n. partner:* 19

Regno Unito

Abstract

The overall aim of this project is to provide the metrology for the clinical implementation of absorbed dose calculations in Molecular Radiotherapy (MRT). The project builds on the results and outputs from the preceding EMRP JRP HLT11 MetroMRT, which took the first steps towards providing data, methods, protocols and guidance for MRT dosimetry in collaboration with many European MRT clinics as well as radiopharmaceutical companies and camera manufacturers. The focus of this follow-on project is “clinical implementation” and it is strongly directed by the involvement of leading MRT clinics across Europe as well as building on metrology expertise.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi EMPIR
Data inizio	01-giu-16
Data scadenza	31-mag-19
Contributo totale	
Costo eleggibile totale	€ 2.044.986
Contributo a ENEA	€ 119.700
Costo eleggibile ENEA	€ 119.700
Doc. approvazione	72/2016/FSN
Codice atto	PF5AAB
Resp.scientifico ENEA	D'ARIENZO MARCO
Unità	FSN-INMRI

Attività ENEA:

L'ENEA partecipa a tutti i Workpackage.

N° Contratto: 847441

MUSA

MANAGEMENT AND UNCERTAINTIES OF SEVERE ACCIDENTS

Coordinatore CIEMAT
Spagna

n. partner: 28

Abstract

In the current state of maturity of severe accident codes in terms of phenomena addressed and extensive validation conducted, the time has come to foster BEPU, Best Estimate Plus Uncertainties, application in the severe accident (SA) domain, and accident management (AM). The advantages with respect to deterministic analysis are known: avoid adopting conservative assumptions in the model and allow identifying safety margins, quantify likelihood of reaching specific values and, through the distribution variance provide insights into dominating uncertain parameters.The overall objective of the Management and Uncertainties of Severe Accident (MUSA) project is to assess the capability of SA codes when modelling reactor and SFP (Spent Fuel Pool) accident scenarios of Gen II and III. To do so UQ (Uncertainty Quantification) methods are to be used, with emphasis on the effect of already-set and innovative accident management measures on accident unfolding, particularly those related to ST (Source Term) mitigation. Therefore, ST related Figures Of Merit (FOM) are to be used in the UQ application. The MUSA project proposes an innovative research agenda in order to move forward the predictive capability of SA analysis codes by combining them with the best available/improved UQ tools and embedding accident management as an intrinsic aspect of SA analyses.MUSA develops through key activities which also describe the main outcomes foreseen from the project: identification and quantification of uncertainty sources in SA analyses; review and adaptation of UQ methods; and testing such methods against reactor and SFP accident analyses, including AM. Given the focus of FOM on source term, the project will identify variables governing ST uncertainties that would be worth investigating further. All the ingredients necessary to conduct the project are already available: analytical tools, experimental data, postulated reactor and SFP scenarios and, technical and scientific competences.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-giu-19
Data scadenza	31-mag-23
Contributo totale	€ 3.186.503
Costo eleggibile totale	€ 5.768.453
Contributo a ENEA	€ 176.863
Costo eleggibile ENEA	€ 232.550
Doc. approvazione	087/2019/FSN
Codice atto	PF6AAJ
Resp.scientifico ENEA	MASCARI FULVIO
Unità	FSN-SICNUC-SIN

Attività ENEA:

L'ENEA è coinvolto in proporzioni diverse in tutti i workpackage. In particolare contribuirà:
. Nel WP2 all'identificazione e quantificaione delle sorgenti di incertezza oer GEN II/III/III+;
. Nel WP3 alla revisione delle metodologie per quantificare le incertezze;
. Nel WP4 all'applicazione delle metodologie di incertezza per il calcolo di esperimenti condotti nell'impianto sperimentale, di tipo integrale, PHEBUS e coordinerà queste attività;
. Nel WP5 all'applicazione di metodologie di incertezza per il calcolo di scenari incidentali in generico PWR-900;
. Nel WP6 alla simulazione di scenari incidentali in SFP e eventuali analisi di sensibilità o incertezza.

N° Contratto: 662186

MYRTE

MYRRHA Research and Transmutation Endeavour

Coordinatore SCK CEN - CENTRE D'ETUDE DE L'ENERGIE NUCLEAIRE

n. partner: 27

Belgio

Abstract

The Strategic Research Agenda of the EU Sustainable Nuclear Energy Technical platform requires new large infrastructures for its successful deployment. MYRRHA has been identified as a long term supporting research facility for all ESNII systems and as such put in the high-priority list of ESFRI. The goal of MYRTE is to perform the necessary research in order to demonstrate the feasibility of transmutation of high-level waste at industrial scale through the development of the MYRRHA research facility. Within MYRRHA as a large research facility, the demonstration of the technological performance of transmutation will be combined with the use for the production of radio-isotopes and as a material testing for nuclear fission and fusion applications. Numerical studies and experimental facilities are foreseen to reach this goal. Besides coordination, international collaboration and dissemination activities, the MYRTE proposal contains 5 technical work packages. The first and largest work-package is devoted to the realisation of the injector part of the MYRRHA accelerator to demonstrate the feasibility and required reliability of this non-semi-conducting part of the accelerator. The second work-package addresses the main outstanding technical issues in thermal hydraulics by numerical simulations and experimental validation. Pool thermal hydraulics and thermal hydraulics of the fuel assembly will be the focus of this WP. In the WP on LBE Chemistry, the evaporation from LBE, capture and deposition of Po and fission products will be studied in detail to complement the safety report. A small dedicated WP on experimental reactor physics is also foreseen to allow carrying out the necessary supplementary experiments at the GUINEVERE-facility to address the questions of the safety authorities. In a last WP, advanced studies on Americium-bearing oxide fuel are carried out to demonstrate the capability of developing minor actinide fuel for transmutation.

Anno di stipula	2015
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-apr-15
Data scadenza	31-mar-19
Contributo totale	€ 8.995.962
Costo eleggibile totale	€ 11.994.610
Contributo a ENEA	€ 232.734
Costo eleggibile ENEA	€ 310.313
Doc. approvazione	45/2015/FSN
Codice atto	PF4AAB
Resp.scientifico ENEA	TARANTINO MARIANO
Unità	FSN-ING

Attività ENEA:

ENEA is member of the European Sustainable Nuclear Energy Technology Platform. ENEA has been also participating in several International Committees and Working Groups of EURATOM, NEA and IAEA in charge to develop strategies and to carry out studies, in particular in the field of innovative fast reactors and advanced nuclear fuel cycles.
With the specific reference to the topics of the project, ENEA is present with its research infrastructures in the Nuclear Gen.IV research at a EUROPEAN level since the beginning. ENEA provided fundamental contributions in the DEMETRA-EUROTRANS, ELSY, LEADER, THINS, SEARCH, MAXSIMA, MATTER, GETMAT and many other European projects.

N° Contratto: 797951

NanoPyromat

ZnS Wurtzite Nanotextured Ceramic Materials for Pyroelectric Energy Harvesting

Coordinatore ENEA
Italia

n. partner: 1

Abstract

Pyrolectric materials could harvest energy from naturally occurring temperature changes such as changes in ambient temperature, and artificial temperature changes due to exhaust gases, convection or solar energy. These materials can operate with a high thermodynamic efficiency and, showing an advantage over thermoelectric materials, they do not require bulky heat sinks to maintain the required heat difference. Hence, “pyroelectric energy harvesting” could be the right methodology to rescue some of the enormous amount of energy wasted as heat by converting the thermal fluctuations into electrical energy (e.g. more than 50% of the energy generated in the U.S. is lost that way each year). Reusing the wasted energy and increasing the share of renewable energy in final energy consumption are important EU targets, expressed in the Europe 2020 Strategy. Enhancing energy efficiency solutions would help citizens both in economic (lower electricity bills) and ecological (clean, green energy) terms. This project examines the development of pyroelectric nanotextured ceramics, for use in future ambient energy harvesting. An original combination of an inexpensive mechano-chemical synthesis for the production of hexagonal ZnS (wurtzite) nanopowder, and the subsequent fabrication of nanotextured ceramics applying a high-pressure-low-temperature sintering, will be used, an approach we have explored previously to suppress grain growth. Neither the fabrication methods, nor the existence of nanotextured pyroelectric ceramics of wurtzite have yet been reported in the literature. In particular the project will explore the potential of the wurtzite nanotextured ceramics as new functional anisotropic bulk materials for pyroelectric energy harvesting. We expect the pyroelectric properties to improve with the introduction of nanostructures and texturing within the anisotropic material like wurtzite, which should ultimately lead to more efficient pyroelectric devices for energy harvesting.

Anno di stipula	2018
Tipo di progetto	MSCA IF - Individual Fellowships
Programma UE	HORIZON 2020 MSCA Marie Skl. Curie Actions
Data inizio	01-ott-18
Data scadenza	30-set-20
Contributo totale	€ 180.277
Costo eleggibile totale	€ 180.277
Contributo a ENEA	€ 180.277
Costo eleggibile ENEA	€ 180.277
Doc. approvazione	106/2018/PRES
Codice atto	PS3ABA
Resp.scientifico ENEA	MONTONE AMELIA
Unità	SSPT-PROMAS

Attività ENEA:

L'ENEA ospita presso i laboratori di Casaccia e Faenza un ricercatore di talento straniero per lo svolgimento della ricerca oggetto del contratto. In particolare è utilizzata la tecnica dell'alligamento meccanico per la produzione delle polveri presso la Casaccia mentre il processo di sinstesi in pressione a diverse temperature sarà effettuato presso il laboratorio di Faenza; verrà inoltre effettuata una dettagliata caratterizzazione fisico-chimica, morfologica e funzionale dei laboratori presso i laboratori di Casaccia e Faenza. E' previsto anche un breve periodo presso UPMC, Laboratoire Chimie de la Matiere Condensee de Paris per sviluppare una nuova metodologia di sintering.

N° Contratto: CA15119

NANOUPTAKE

Overcoming Barriers to Nanofluids Market Uptake

Coordinatore UNIV. JAUME
Spagna

n. partner: 2

Abstract

Nanofluids are defined as fluids that contain nanometre-sized particles with enhanced heat transfer properties. Since 1995, active research on this topic has been conducted (more than 1,700 papers in the last 3 years). Nanofluids improve the efficiency of heat exchange and thermal energy storage systems and they are specifically mentioned in the Strategic Energy Technology Plan and the Materials Roadmap to enable Low-Carbon Technologies as potential elements to improve the efficiency of heat exchange and thermal energy storage systems. Consequently, nanofluids address the European Horizon 2020 Energy and Climate objectives (Societal Challenges 3: Secure, efficient and clean energy; and 6: Climate action, environment, resource efficiency and raw materials). In addition, nanofluids fall within one of the Key Enabling Technologies (KET) supported by the European Commission. Although some nanofluid commercial applications currently exist, most of the current nanofluids are at Technological Readiness Levels (TRL) 1 to 3. Most of the nanofluids research in COST countries has been conducted by Research, Development and Innovation (R+D+i) centres through national funding. Additional coordinated research and development efforts are required to develop nanofluids up to higher TRL levels and to overcome commercial application barriers. If these barriers are overcome, nanofluids will be an important player in the Value Added Materials (VAM) for the energy sector.The objective of the NANOUPTAKE COST Action is to create a Europe-wide network of leading R+D+i institutions, and of key industries, to develop and foster the use of nanofluids as advanced heat transfer/thermal storage materials to increase the efficiency of heat exchange and storage systems.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 COST
Data inizio	19-apr-16
Data scadenza	18-apr-20
Contributo totale	€ 0
Costo eleggibile totale	€ 0
Contributo a ENEA	€ 0
Costo eleggibile ENEA	€ 0
Doc. approvazione	
Codice atto	
Resp.scientifico ENEA	FALCONIERI MAURO
Unità	FSN-TECFIS

Attività ENEA:

N/D

N° Contratto: 755439

NARSIS

New Approach to Reactor Safety ImprovementS

Coordinatore CEA

Francia

n. partner: 18

Abstract

Probabilistic Safety Assessment (PSA) procedures allow to better understand and estimate the likelihood of the most causes prone to initiate nuclear accidents and to identify the most critical elements of the systems. However, despite of the remarkable reliability of current procedures, the 2011 Fukushima Daiichi accident highlighted a number of challenging issues with respect to their application and validity of their results. From this nuclear disaster the upgrading of the current methodological framework appeared to be necessary in areas such as cascading/conjunct events characterization, fragility analyses and uncertainties treatment. New developments in those areas would even enable the extension of their use in accident management. Based on recent theoretical progresses, the NARSIS project aims at making significant scientific updates of some elements required for the PSA, focusing on external natural events (earthquake, tsunami, flooding, high speed winds...). These improvements mainly concern:
• Natural hazards characterization, considering concomitant external (simultaneous-yet-independent or cascading) events, and the correlation in intra-event intensity parameters;
• Fragility and functionality assessment of main critical NPPs' elements, accounting for conjunct effects (including ageing effects) and interdependencies under single or multiple external aggressions;
• Risk integration combined with uncertainty characterization and quantification, to allow efficient risks comparison and account for all possible interactions and cascade effects;
• Better processing/integration of expert-based information within PSA, through modern uncertainty theories both to represent in flexible manner experts' judgments and to aggregate them to be used in a comprehensive manner.
The proposed improvements will be tested and validated on simplified and real NPP case studies. Demonstration supporting tools for operational & severe accident management will be also provided.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-17
Data scadenza	31-ago-21
Contributo totale	€ 4.965.472
Costo eleggibile totale	€ 5.470.829
Contributo a ENEA	€ 94.500
Costo eleggibile ENEA	€ 94.500
Doc. approvazione	88/2017/FSN
Codice atto	PF6AAG
Resp.scientifico ENEA	BURGAZZI LUCIANO
Unità	FSN-SICNUC-SIN

Attività ENEA:

L'ENEA è coinvolta principalmente nei WP1-2-3-5-6.
In particolare si occupa di:
. Definizione di una metodologia per l'analisi dei rischi esterni;
. Analisi di vulnerabilità e resilienza di sistemi e componenti;
. Analisi di sicurezza e rischio di impianti a fronte sia di rischi interni che esterni;
. Costruzione di un modello per la definizione delle linee guida al fine dell'Accident Management;
. Disseminazione dei risultati

N° Contratto: 692259

NESTER

Networking for Excellence in Solar Thermal Energy Research

Coordinatore THE CYPRUS INSTITUTE LIMITED

Cipro

n. partner: 5

Abstract

The NESTER proposal aims in upgrading the scientific and innovation performance of the Cyprus Institute (CyI) in the field of Solar-Thermal Energy (STE). The upgrade will be achieved by embedding the Institute's activities in a network of excellence, which will provide access to the latest know-how and facilities, train CyI's scientific and technical personnel and link it with the European Industry. The substantial investments made/planned by CyI in infrastructure and personnel will thus become more efficient and competitive allowing claim to international excellence. The geopolitical placement of Cyprus offers excellent opportunities for cultivating a research and innovation niche in Solar Technologies. At the same time the remoteness of the corresponding centres of Excellence of EU is a major impediment. The NESTER proposal strives to enhance the advantages and ameliorate the disadvantages of this geographical placement.

The NESTER network comprises of three leading institutions in the field of solar energy research (CIEMAT, ENEA, PROMES/CNRS and RWTH – Aachen). They possess a formidable know how in this field and operate some of the most important facilities, worldwide. The resulting enhanced capabilities and status of CyI would in turn reflect positively on developing the knowledge economy of Cyprus. It will also enhance the positioning of Cyprus as an important player in applied scientific research at the interface of the European and Middle East/North Africa regions.

A number of activities are proposed in a detailed program which includes training and knowhow transfer, seminars and networking events with European and EMME partners, summer school activities, and public outreach and awareness and networking events. It is designed to ensure sustainability, evolution and continuation of the activities including the cooperation among the partners well beyond the expiration of the three-year funding period.

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Spreading Excellence and Widening Par
Data inizio	01-gen-16
Data scadenza	31-dic-19
Contributo totale	€ 1.060.798
Costo eleggibile totale	€ 1.060.798
Contributo a ENEA	€ 195.187
Costo eleggibile ENEA	€ 195.187
Doc. approvazione	19/E/2015/DTE
Codice atto	PT6AAA
Resp.scientifico ENEA	TURCHETTI LUCA
Unità	DTE-STT-ITES

Attività ENEA:

Le attività ENEA riguardano: coordinamento e partecipazione della attività di training del progetto, in particolare alle summer/winter school annuali previste; partecipazione e organizzazione di workshop; accoglimento e supervisione di ricercatori del Cyprus Institute Limited presso il centro ricerche Casaccia per periodi di diciotto/ventotto giorni per affiancamento in attività di ricerca; partecipazione ad exchange visit presso le strutture del Cyprus Institute Limited.

N° Contratto: 754016

Net-UBIEP

Network for Using BIM to Increase the Energy Performance

Coordinatore ENEA

Italia

n. partner: 13

Abstract

The building sector is the largest consumer of energy in Europe, accounting for nearly 40% of the total consumption (EPBD 2010/31/EU). Furthermore the 2030 European Energy [COM(2014)16Final] and Energy Roadmap 2050 [COM(2011) 885 final], strongly requires more focus on the energy efficiency on housing sector.
Finally, the Directive 2014/24/EU of the European Parliament and of the Council on public procurement, requires that all member states introduce electronic means to exchange information and communication in procurement procedures.
For these reasons we believe that the integrated approach of the Net-UBIEP project, based on Building information Modelling, integrated with energy performance requirements, will be key to solve all the problems in a more effective and efficient manner.
The project proposes BIM Qualification Models integrated with energy competences, to widespread a better comprehension of energy issues along all the value chain of building industry so that both existing and new building will have better energy performances. Public Administrations, Professionals (Engineers / Architects), Technicians (Installers / Maintainers) and Tenants will be therefore involved in the Net-UBIEP activities.
The definition of the BIM Qualification Models will pass through the identification of specific energy BIM competences for each of the above target needed to implement BIM models during the whole building life cycle. During the project the "integrated" BIM Qualification Models will be validated by stakeholders thanks to the delivering of different training activities (Seminars / Classrooms Courses / E-Learning Courses) addressed to at least six BIM Professional Profiles: BIM Manager, BIM Evaluator, BIM Coordinator, BIM Expert, BIM facility manager, BIM user. Once the schemes will be validated, they will be proposed for standardization to find a broader acceptance at European and international level through regulatory organizations (CEN / ISO).

Anno di stipula	2017
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	03-lug-17
Data scadenza	02-gen-20
Contributo totale	€ 995.023
Costo eleggibile totale	€ 995.023
Contributo a ENEA	€ 146.700
Costo eleggibile ENEA	€ 146.700
Doc. approvazione	112/2017/PRES
Codice atto	PE5AAE
Resp.scientifico ENEA	MORENO ANNA
Unità	DUEE-SIST-CENTRO

Attività ENEA:

L'ENEA coordina il progetto e partecipa a tutti i workpackage e in particolare a quelli relativi a capitalizzazione e disseminazione oltre, ovviamente, al project management.

N° Contratto: 10047692

NETWAP

NETwork of small in situ Waste Prevention and management initiatives

Coordinatore COMUNE DI ZARA
Croazia

n. partner: 7

Abstract

NETWAP project's objective is to address potential environmental damage and improve the quality of the marine environment in selected territories of the cooperation area, by increasing the awareness, ability, know-how and decision-making activities of local communities towards a sustainable waste management methodology and a system based on innovative technologies and procedures.
The project involves the development, verification and validation of a sustainable municipal strategy and a waste management model that promote the adoption of a cross-border approach based on effective cooperation and in harmony with the EU waste hierarchy and with the principles of circular economy. The problem of increasing tourist pressure on fragile cultural and natural sites, with particular attention to small and / or isolated communities, far from well-established collection and treatment services is addressed by the project. The project will address the challenges taking into account the governmental, technical, financial and environmental aspects of developing a cross-border waste management strategy and methodologies, training needs of technical staff and information needs on the political side. The approach is innovative as it aims to overcome the existing practice in the management of organic and plastic waste already in place, both in the Italian and Croatian coastal areas, supporting local authorities and economic operators in the design of an effective methodology for small communities, tourists and citizens in gathering the required knowledge.
The creation of an Italian-Croatian shared methodology requires an approach that capitalizes on established methods with the best waste management practices and innovative aspects related to the involvement, awareness and authorization of all the interested parties in the project areas.
The NETWAP project will focus on human capital skills and skills development, involving all communities targeted in the management of organic waste and disadvantaged local groups in capacity building activities and daily work with a participatory approach.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg Italy-Croatia
Data inizio	01-gen-19
Data scadenza	31-dic-20
Contributo totale	€ 1.258.130
Costo eleggibile totale	€ 1.480.153
Contributo a ENEA	€ 262.233
Costo eleggibile ENEA	€ 308.510
Doc. approvazione	83/2019/SSPT-USER
Codice atto	PS6ACF
Resp.scientifico ENEA	CAFIERO LORENZO MARIA
Unità	SSPT-USER-T4RM

Attività ENEA:

L'ENEA è leader del workpackage 5 'Pilot actions and sustainability evaluations'.
Le attività ENEA prevedono l'esecuzione di un'azione di supporto alla realizzazione di un sistema di gestione sostenibile di rifiuti in due aree territoriali della costa adriatica e sono relative a:
. predisposizione di un modello di gestione rifiuti per l'isola costiera di Ist (Zara) e del comune di Campomarino (Campobasso);
. Supporto tecnico alla realizzazione di due esperienze pilota per la riduzione del consumo di plastica e valorizzazione della frazione organica tramite compostaggio su piccola scala;
. Elaborazione di uno studio basato sull'approccio del Life Cycle Thinking (Life Cycle Assessment (LCA), Life Cycle Costing e Social-LCA) per valutare la realtà delle due realtà sopramenzionate;
. Redazione di documenti di policy per implementare nella normativa regionale i risultati delle sperimentazioni pilota.

N° Contratto: 760331

NEWCOTIANA

Developing Multipurpose Nicotiana Crops for Molecular Farming using New Plant Breeding Techniques

Coordinatore CSIC SPANISH NATIONAL RESEARCH COUNCIL

n. partner: 19

Spagna

Abstract

A group of New Plant Breeding Techniques (NPBT) has opened unprecedented opportunities in agriculture. Those NPBTs are at least as efficient and often more precise than previous traditional and GM techniques, while circumventing the introduction of heritable transgenes from distant species in the plant genome. Properly communicated, NPBTs are expected to gain wide acceptance, especially when applied to breeding objectives which are seen as beneficial for the society. A well-perceived objective is Molecular Farming, which refers to the use of plants for the production of valuable biomolecules (e. g. biopharmaceuticals). Cultivated tobacco (Nicotiana tabacum) and its close Australian relative Nicotiana benthamiana, are preferred species in Molecular Farming due to their favourable features: non-food crops, easy tissue regeneration, high productivity, rich secondary metabolism and availability of genetic tools. In sharp contrast, traditional tobacco cultivation is in serious decline in the EU, causing serious social problems in many rural areas. NEWCOTIANA aims to revitalize those areas by breeding efficient Nicotiana biofactories of high-value non-smoking products as alternatives for traditional tobacco crops. NEWCOTIANA will develop the most advanced tobacco NPBTs toolbox, easily transferable to other plants. This will position EU in the avant-garde of breeding innovation. This toolbox will be used to create elite multipurpose Nicotiana varieties improved in product-specific traits (bioproduct quality, stability and yield), next to more general traits as biomass, resilience and biosafety. The “Newcotiana” varieties will be carefully tested in relevant pre-industrial environments for the production of end-value chemicals, namely proteins and metabolites for health and nutriceutical use. Ethical, social and legal aspects will be closely monitored and public and stakeholder engagement will be assured using innovative science communication methodologies.

Anno di stipula	2018
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 NMBP Nanotechn., Adv Materials, Adv
Data inizio	01-gen-18
Data scadenza	30-giu-22
Contributo totale	€ 7.199.560
Costo eleggibile totale	€ 7.363.310
Contributo a ENEA	€ 465.000
Costo eleggibile ENEA	€ 465.000
Doc. approvazione	319/2017/PRES
Codice atto	PS1AAJ
Resp.scientifico ENEA	GIULIANO GIOVANNI
Unità	SSPT-STS

Attività ENEA:

L'ENEA partecipa ai workpackage:
. WP1 Nicotiana biofactory NPBT toolbox: completamento della sequenza genomica di Nicotiana al fine di ottimizzare l'applicazione di NPBT;
. WP3 Breeding and evaluation of metabolite biofactory lines: ottimizzazione, tramite NPBT, della produzione di carotenoidi antiossidanti e alcaloidi anti-Alzheimer in foglie di tabacco;
. WP4 Validation and evaluation of NEWCOTIANA biofactories in industrially-relevant settings: verifica dei livelli di produzione di tali sostanze in pieno campo.

N° Contratto: 721045

NEXTOWER

Advanced Materials solution for next generation high efficiency concentrated solar power (CSP) tower systems

Coordinatore ENEA
Italia

n. partner: 1

Abstract

NEXTOWER shall introduce a set of innovative materials to boost the performance of atmospheric air-based concentrated solar power (CSP) systems to make them commercially viable. In particular, tower systems are appealing for the great environmental compatibility and offer tremendous potential for efficient (electrical and thermal) power generation. Yet, their industrial exploitation has been so far hindered by limitations in the materials used both for the central receiver - the core component - and for thermal storage. Such limitations dictate maximum working temperature and in-service overall durability (mainly driven by failure from thermal cycling and thermal shocks). Improving the efficiency of a tower system entails necessarily improving the central receiver upstream and possibly re-engineering the whole systems downstream to work longer and at much higher temperature, especially in the thermal storage compartment. NEXTOWER will address this need by taking a comprehensive conceptual and manufacturing approach that will optimize bulk and joining materials for durability at the component level to achieve 25 years of maintenance-free continued service of the receiver and maximum thermodynamic efficiency at the system level. This is made possible through a unique combination of excellence in materials design and manufacturing, CSP full-scale testing facilities brought together in the Consortium, supporting the making of a new full scale demo SOLEAD (in Turkey) within the project. The successful achievement of a new generation of materials allowing for virtually maintenance free operations and increased working temperature shall result in the next-generation of air-coolant CSP highly competitive over other CSP alternatives and sustainable power supply options.

Anno di stipula	2017
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 NMBP Nanotechn., Adv Materials, Adv
Data inizio	01-gen-17
Data scadenza	31-dic-21
Contributo totale	€ 4.999.879
Costo eleggibile totale	€ 6.307.951
Contributo a ENEA	€ 732.250
Costo eleggibile ENEA	€ 732.250
Doc. approvazione	144/2016/PRES
Codice atto	PS3AAL
Resp.scientifico ENEA	RINALDI ANTONIO
Unità	SSPT-PROMAS-MATPRO

Attività ENEA:

L'ENEA coordina il progetto.
L'ENEA avrà inoltre il compito di dirigere lo sviluppo tecnologico di un dimostratore in piena scala per un impianto CSP di nuova concezione che si chiamerà SOLEAD al fine di studiare la possibilità di integrazione della nuova tecnologia a piombo liquido di ENEA tra i leader mondiali del settore e compiere una operazione di trasferimento di competenze e tecnologie dal settore nucleare della fissione a quello del solare a concentrazione.

N° Contratto: 723810

NIMBLE

Collaboration Network for Industry, Manufacturing, Business and Logistics in Europe

Coordinatore SALZBURG RESEARCH
Austria

n. partner: 17

Abstract

NIMBLE: collaboration Network for Industry, Manufacturing, Business and Logistics in Europe will develop the infrastructure for a cloud-based, Industrie 4.0, Internet-of-things-enabled B2B platform on which European manufacturing firms can register, publish machine-readable catalogs for products and services, search for suitable supply chain partners, negotiate contracts and supply logistics, and develop private and secure B2B and M2M information exchange channels to optimise business work flows. The infrastructure will be developed as open source software under an Apache-type, permissive license. The governance model is a federation of platforms for multi-sided trade, with mandatory interoperation functions and optional added-value business functions that can be provided by third parties. This will foster the growth of a net-centric business ecosystem for sustainable innovation and fair competition as envisaged by the Digital Agenda 2020. Prospective NIMBLE providers can take the open source infrastructure and bundle it with sectoral, regional or functional added value services and launch a new platform in the federation.
Internet platforms need fast adoption rates and the work plan reflects this: we start attracting early adopters from day one and develop the initial, working platform in year one. Added-value business functions follow in year two and final validation at large scale, involving hundreds of external firms, will happen in year three. Our adoption plan is designed to enable two or more platform providers at the end of the project, and to have 1000 to 2000 enterprises connected to the overall ecosystem at that point. NIMBLE has 17 partners grouped around 3 main activities: developing the infrastructure, running a platform adoption programme, and validating the platform with 4 supply chains (white goods, wooden houses, fashion fabrics, and child care furniture). NIMBLE will give manufacturing SMEs in Europe a stable and sustainable digital ecosystem.

Anno di stipula	2016
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 ICT
Data inizio	01-ott-16
Data scadenza	30-set-19
Contributo totale	€ 7.994.750
Costo eleggibile totale	€ 7.994.750
Contributo a ENEA	€ 260.500
Costo eleggibile ENEA	€ 260.500
Doc. approvazione	20/E/2016/DTE
Codice atto	PT5AAH
Resp.scientifico ENEA	D'AGOSTA GIANLUCA
Unità	DTE-SEN-CROSS

Attività ENEA:

Nell'ambito del progetto l'ENEA è coinvolta principalmente nelle attività di:
. Raccolta delle esigenze e definizione delle priorità dell'industria pilota sulla catena produttiva tessile;
. Valutazione dell'esperienza di utilizzo della piattaforma da parte degli utenti finali;
. Validazione e disseminazione dei risultati progettuali.

N° Contratto: 840651

OCEANSET

Support to the Realisation of the Ocean Energy Implementation Plan of the SET-Plan

Coordinatore SEAI - SUSTAINABLE ENERGY AUTHORITY IRELAND

Irlanda

n. partner: 9

Abstract

he SET Implementation Plan for Ocean Energy (IP) was adopted by the SET-Plan Steering Committee on the 21st of March 2018. The IP was prepared by a Temporary Working Group, with representatives from the European Commission, Member States and other stakeholders. For the execution of the IP, the TWG has evolved to assume the role of the Implementation Working Group (IWG).
Support for the OE sector to date has focused on the development of research and roadmaps which have set out the aspirations of wave and tidal sector. The principle of the IP is to transform those aspirations into operational actions. The actions listed within the IP are primarily based upon the Ocean Energy Strategic Roadmap, which has been agreed by the EC, MS, Regions, stakeholders and the wider ocean energy sector.
The ambition of the IP is to outline a structured approach that will enable wave and tidal technologies to follow a credible development path, with the ultimate destination of a commercially viable products and industry. The target timescale presented in the IP is 2025 for tidal technologies and 2030 for wave technologies.
OceanSET will assist the IWG to continue their work to deliver on the targets set in the IP. In particular OceanSET will focus on assessing the progress of the ocean energy sector and will monitor the National and EU funded projects in delivering successful supports. Relevant data will be collected annually and will be used to inform MS and EU Commission on progress of the sector, it will also be used to review what works and what doesn't and to assess how to maximise the benefit of the funding streams provided across the MS, Regions and the EC.
The partners on this project include representatives from Ireland (SEAI), UK (WES, University of Edinburgh), France (FEM), Portugal (DGEG), Spain (EVE, PLOCAN), Italy (ENEA) and from the industry (OEE). The Sustainable Energy Authority of Ireland (SEAI) will be lead partner on the project.

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	16-mar-19
Data scadenza	15-mar-22
Contributo totale	€ 992.029
Costo eleggibile totale	€ 1.043.745
Contributo a ENEA	€ 41.828
Costo eleggibile ENEA	€ 41.828
Doc. approvazione	28/2019/SSPT-MET
Codice atto	PS2ABD
Resp.scientifico ENEA	PISACANE GIOVANNA
Unità	SSPT-MET-CLIM

Attività ENEA:

Le attività ENEA riguardano l'adozione di metriche appropriate ed efficaci per monitorare e valutare i progressi tecnologici e applicativi nel campo dell'energia del mare. ENEA contribuisce inoltre alla diffusione di competenze tra gli stakeolder del settore e partecipa alle attività di trasferimento tecnologico del progetto, per stimolare lo sviluppo in ambiti specifici riconosciuti come prioritri

N° Contratto: 847082

ODYSSEE-MURE

Monitoring EU energy efficiency first principle and policy implementation

Coordinatore ADEME
Francia

n. partner: 35

Abstract

The ODYSSEE-MURE project aims to support policy makers in EU Member States to fulfill their obligations in the framework of the EU Energy Efficiency Directive (EED). In particular, it provides user-friendly databases and web-tools for monitoring and evaluating the impact of energy efficiency policies. The ODYSSEE database and facilities contain and analyse latest available energy consumption and energy efficiency indicators by sector, end-use in households and services, by mode in transport. The MURE database and facilities contain and analyse energy efficiency policies and measures by sector. These tools have been conceived in the past and will be extended under this project by an experienced team comprising national energy efficiency agencies from 28 EU Member States (plus Norway, Switzerland and Serbia), and a strong technical coordination. Future inclusion of Balkan countries will be prepared under this project. We enhance, update and modernise these tools for support to the Member States through regional and national training events as well as dissemination products such as country/sector profiles, newsletters, policy briefs and webinars. In addition, we focus on operationalising the Energy Efficiency First Principle (EE1-P) for the MS, which is a key requirement in the EU Energy Union Governance Regulation . We will develop an indicator-based approach to EE1, considering wider aspects such as (1) New Societal Trends (e.g. the Shared Economy) which may increase or reduce energy demand, (2) Energy poverty, (3) the multiple benefits of energy efficiency. We will disseminate the analysis developed in this project to national bodies, inter alia by dissmeinating the outputs at key conferences (such as the eceee conferences).

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-giu-19
Data scadenza	30-nov-21
Contributo totale	€ 1.737.592
Costo eleggibile totale	€ 1.780.358
Contributo a ENEA	€ 30.419
Costo eleggibile ENEA	€ 30.419
Doc. approvazione	24/2019/DUEE-SPS
Codice atto	PW3AAI
Resp.scientifico ENEA	IORIO GIULIA
Unità	DUEE-SPS-MPE

Attività ENEA:

Le attività progettuali a carico di ENEA prevedono principalmente:
. Il monitoraggio dei progressi in materia di efficienza energetica (database e strumenti in ODYSSEE) attraverso l'elaborazione di indicatori di efficienza energetica aggiornati e il miglioramento degli strumenti per valutare il progresso dell'efficienza energetica, in particolare l'EED;
. La valutazione delle misure di politica di efficienza energetica (database e strumenti in MURE) attraverso l'analisi delle misure di politica nazionale di efficienza energetica e delle dinamiche di attuazione delle misure, inserite nei piani di azione nazionali per l'efficienza energetica (PAEE) e nei Piani Energia Clima (PNIEC).

N° Contratto: INEA/CEF/ICT/A2018

OpenIACS

Open LOD platform based on HPC capabilities for Integrated Administration and Control System of Common Agrarian Policy

Coordinatore UNIV. CARLOS III MADRID
Spagna

n. partner: 10

Abstract

The overall objective of the Action is to foster data use and reuse in the context of the European Common Agricultural Policy (CAP), and to improve its accessibility and usability by farmers, policy makers and third parties such as SMEs.
The main technical goal of the Action is to enrich HPC European capabilities through the creation of a common infrastructure for agri-environmental governance of the CAP. In doing so, the action will provide an open community platform for sharing solutions in the Integrated Administration and Control System (IACS) domain for the CAP through the Linked Open Data paradigm. This will include generic services to facilitate end-user access to HPC capabilities by managing different HPC providers via a technological architecture that processes service level agreements to seamlessly assign jobs to the different providers involved in Open IACS infrastructure.
More specifically, the Action will:
1. Design a network of interoperable Linked Open Data (LOD) End-points considering information for Agri-environmental management of IACS policies.
2. Implement the common agri-environmental LOD infrastructure for IACS policy management by means of increasing HPC capabilities.
3. Demonstrate the usefulness of this infrastructure through its application in different scenarios.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi CEF (Connecting Europe Facility) - TEL
Data inizio	01-set-19
Data scadenza	31-ago-22
Contributo totale	€ 3.360.731
Costo eleggibile totale	€ 4.480.973
Contributo a ENEA	€ 392.679
Costo eleggibile ENEA	€ 523.572
Doc. approvazione	56/E/2019/DTE
Codice atto	PT3AAH
Resp.scientifico ENEA	AMBROSINO FIORENZO
Unità	DTE-ICT-HPC

Attività ENEA:

L'ENEA opera nell'ambito dell'area tecnico-scientifica dell'High performance Computing con particolare riguardo alla gestione di una gran mole di dati e loro fruizione (OpenData). In particolare si dovranno:
. Progettazione e sviluppare soluzioni software che vanno dall'armonizzazione dei dati mediante modelli concettuali, fino alla progettazione e implementazione di modelli fisici basati su database;
. Soluzioni per l'integrazione di modelli di simulazione sulla piattaforma HPC CRESCO e integrazione con le architetture HPC implementate dagli altri partner HPC.

N° Contratto: 657690

ORC-PLUS

Organic Rankine Cycle - Prototype Link to Unit Storage

Coordinatore ENEA
Italia

n. partner: 7

Abstract

In line with the call H2020- LCE-03-2014, ORC-PLUS focuses on increasing the technological performance of renewable energy systems, reducing costs and improving dispatchability. The aim is to develop an optimized combination of innovative Thermal Energy Storage-TES (specialized for CSP scale 1-5 MWe) and engineering solutions to improve the number of production hours of an existing small CSP plant, located in a desert area and coupled with an ORC system. With an optimized TES solution, it is possible to extend periods of energy production of a CSP plant (also during non-solar radiation), eliminating or minimizing the need to burn fossil or renewable fuels in hybrid or back-up systems. Nowadays, efforts are being devoted to R&D on TES for large-scale plants, though large potential for small/medium-scale CSP installations exists. ORC-PLUS is in the spectrum of "large scale prototype to pre-commercial scale demonstration". The technology proposed is based on a solar field, using a thermal oil as Heat Transfer Fluid and ORC power unit coupled with an innovative TES. Experimental demonstration of two different industrial prototypes of TES systems will be performed in relevant environment (TRL 6). For each prototype, a simulation model of the pilot processes will be developed, with prototypes of TES systems. The models will be optimized on the basis of the characteristics of the site and power load, to determine conditions and relevant parameters of the real scenarios for each application and to select the TES technology best fitting the needs of the targeted sector. Final result will be an industrial pilot plant used to validate the technology in a real operational environment and to demonstrate its feasibility (TLR7). Validation includes an analysis of the techno-economic viability and environmental impact, and of the replicability of the pilot plant final design. This proposal is supported by three support letters of ESTELA, ANEST and Green Energy Park (Morocco).

Anno di stipula	2015
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 Energy
Data inizio	01-mag-15
Data scadenza	31-ott-19
Contributo totale	€ 6.339.316
Costo eleggibile totale	€ 7.297.149
Contributo a ENEA	€ 1.258.125
Costo eleggibile ENEA	€ 1.258.125
Doc. approvazione	185/2015/COMM
Codice atto	0ST47
Resp.scientifico ENEA	GAGGIOLI WALTER
Unità	DTE-STT-ITES

Attività ENEA:

L'ENEA coordina il progetto e si occuperà dello sviluppo di un prototipo del sistema di accumulo e della formazione dei tecnici e ricercatori locali. Inoltre, contribuirà alla progettazione e alla realizzazione del nuovo sistema di accumulo di energia termica ad alta temperatura, che permetterà all'impianto di produrre energia elettrica fino a 4 ore in assenza di radiazione solare.
Il progetto si inserisce nel quadro delle collaborazioni tra ENEA e Paesi della sponda sud del Mediterraneo e riguarda, nello specifico, l'impianto solare del Green Energy Park di Ben Guerir, situato in una zona desertica del Marocco.

N° Contratto: 1MED15_1.1_M2_080

PEFMED

Uptake of the Product Environmental Footprint across the MED agrofood regional productive systems to enhance innovation and market value

Coordinatore ENEA

Italia

n. partner: 10

Abstract

The overall objective of the PEFMED project is to test the applicability of the new EU Product Environmental Footprint method (PEF) for some specific product groups in 9 Mediterranean agrofood regional systems (clusters & supply chains), with the final aim to fostertargeted systemic ecoinnovation interventions to green the agrofood sector, raise the market value of PEF-compliant productions and galvanize the regional Smart Specialization Strategies (RIS3) goals related to innovation in agrofood and industrial production.
PEFMED represents the 1st verification in Europe of the environmental PEF standards within given territorial domains: it strengths connection and cooperation between LCA research, ecoinnovation experts and agrofood business organization from 6 Mediterranean Countries (Italy, Spain, France, Portugal, Greece and Slovenia) by providing a set of technology, organizative and market intelligence drivers to drive a mind-change in traditional agrofood productions model towards PEF-compliant measures.
The "PEFMED method" takes into account the environmental impacts of a product throughout its life cycle, from cultivation of raw materials, through processing, transport and use, to disposal and recycling. Indicators are combined with a set of socio-economic indicators referred to a specific territorial background, to enhance the paradigm of regional denomination quality and sustainability (good and green).
A series of PEF case-studies to verify the performance of the agrofood clusters towards PEF requirements are implemented in in nine product chains and clusters located in different Mediterranean regions over the following product groups: dairy, meat, olive oil, wine, feed, packaged water.
The novelty of the approach will be then transferred to further agrofood supply chain across the Mediterranean regions, to widen the PEFMED Communities of Practices to new users and to foster interaction schemes among policy and business key-players and then increase the PEFMED legitimization at European level.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg MED
Data inizio	01-nov-16
Data scadenza	31-lug-19
Contributo totale	€ 2.072.606
Costo eleggibile totale	€ 2.438.360
Contributo a ENEA	€ 324.923
Costo eleggibile ENEA	€ 382.262
Doc. approvazione	6/2017/SSPT-USER
Codice atto	PS6AAU
Resp.scientifico ENEA	RINALDI CATERINA
Unità	SSPT-USER-RISE

Attività ENEA:

ENEA coordinates the project. PEFMED will apply experimentally the "Product Environmental Footprint" methodology, drawn up by the European Commission, integrating it with territorial and socio-economic indicators, in order to measure the environmental impact (climate change, reduction of the ozone layer, depletion of water resources, land use, eco-toxicity) of a sample of about 100 companies located in nine European territorial districts.

N° Contratto: 1373

PELAGOS

Promoting innovative nEtworks and cLusters for mArine renewable energy synerGies in mediterranean cOasts and iSlands

Coordinatore CRES - CENTER FOR RENEWABLE ENERGY SOURCES AND SAVING

Grecia

n. partner: 16

Abstract

The sea represents a huge resource for renewable energy (Blue Energy, BE) such as waves, tides, and marine currents. Harnessing the economic potential of this energy in a sustainable manner has been highlighted in the Commission's Blue Growth Strategy as one of key areas, where in order to build the necessary capacity and critical mass, it is necessary to involve a wide range of stakeholders. The project aims to increase the innovation capacities and cooperation of BE actors in MED through promoting a transnational cluster, bringing them together in order to develop a shared understanding of the challenges and collectively devise workable solutions. PELAGOS will establish a Cluster in Blue Energy that will promote novel technologies and provide a mix of support activities to beneficiaries such as technology providers, enterprises, financial operators, authorities, NGOs end citizens. The project will enhance internationalization of the Cluster members through a range of activities that will jointly identify opportunities of BE in Mediterranean insular and coastal regions. This will be achieved through fine-tuning of existing know-how, development of skills, identification of common business opportunities and facilitation of growth by bridging providers and users in targeted maritime industries. The development of this emerging sector can become an important part of the blue economy, fuelling economic growth in coastal regions and create new, high-quality jobs.

Anno di stipula	2016
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg MED
Data inizio	01-nov-16
Data scadenza	31-lug-19
Contributo totale	€ 2.036.688
Costo eleggibile totale	€ 2.396.104
Contributo a ENEA	€ 201.403
Costo eleggibile ENEA	€ 236.945
Doc. approvazione	3/2017/SSPT-MET
Codice atto	PS2AAE
Resp.scientifico ENEA	SANNINO GIANMARIA
Unità	SSPT-MET-CLIM

Attività ENEA:

ENEA will lead WP2 - Project communication.
ENEA will be involved in the following workpackages:
WP3 - Studying
WP4 - Testing
WP5 - Transferring
WP6 - Capitalising

N° Contratto: 847715

PIACE

Passive IsolAtion CondEnser

Coordinatore ENEA
Italia

n. partner: *11*

Abstract

PIACE has the main objective to support the technology transfer from the research to industry in the area of safety of nuclear installations. An Innovative Decay Heat Removal System for nuclear reactors, presently under technology validation in relevant environment (SIRIO facility), will be scaled-up to achieve a system prototype demonstration in operational environment, relevant for LFRs/ADSs and LWRs.

Anno di stipula	2019
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-giu-19
Data scadenza	31-mag-22
Contributo totale	€ 2.247.230
Costo eleggibile totale	€ 3.210.440
Contributo a ENEA	€ 415.643
Costo eleggibile ENEA	€ 593.775
Doc. approvazione	073/2019/FSN
Codice atto	PF4AAI
Resp.scientifico ENEA	NITTI FRANCESCO SAVERIO
Unità	FSN-ING-PAN

Attività ENEA:

L'ENEA coordina il progetto e partecipa ai seguenti Workpackage:
. WP2 - Task 2.1 Test Matrix definition for LFR reference reactor;
. WP3 - Task 3.1 Experimental run for LFR reference reactor; Task 3.2 Identification of two reference cases: Task 3.3-3.4 SIRIO facility upgraded for the first/second reference case and experimental run
. WP4 - Task 4.1 Numerical analysis and code validation:
. WP5 - Task 5.2 Nurturing Knowledge and Competence through E&T
. WP6 - Task 6.1 Consortium Management

N° Contratto: LIFE17 ENV/IT/00033

POREM

Poultry manure based bioactivator for better soil management through bioremediation

Coordinatore FATTORIA SOLDANO
Italia

n. partner: 6

Abstract

LIFE POREM will address both issues by showing how treated poultry manure can restore the organic matter content of soils on semi-arid and over-exploited land.
This will involve creating experimental plots in Murcia (Spain), Apulia (Italy) and the Czech Republic. To guarantee transferability and replicability of its soil restoration methods, the project will provide tools for identifying and implementing best available techniques and accompanying technical training. It will also provide public administrations that are responsible for soil with tools to assess soil restoration policies and agricultural management strategies.
By involving all relevant stakeholders, the impact of manure on water bodies will be
integrated into social, environmental and economic planning.
This project, if it manages to efficiently recycle nutrients as planned, will be an example of industrial symbiosis and will contribute to the implementation of the EU's circular economy action plan.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi LIFE (2014-2020)
Data inizio	01-ott-18
Data scadenza	30-set-21
Contributo totale	€ 770.233
Costo eleggibile totale	€ 1.389.446
Contributo a ENEA	€ 127.278
Costo eleggibile ENEA	€ 235.700
Doc. approvazione	263/2018/PRES
Codice atto	PS3ABC
Resp.scientifico ENEA	DALL'ARA ALICE
Unità	SSPT-PROMAS-TEMAF

Attività ENEA:

L'ENEA svolge attività sperimentali dimostrative relative alla produzioned uso di nuovi materiali (bio-attivatori organici di suoli degradati e impoveriti di sostanza organica, anche in zone semi-aride) nonché di approfondimento di fattibilità tecnico economica.

N° Contratto: 16ENV04

PREPAREDNESS

Metrology for mobile detection of ionising radiation following a nuclear or radiological incident

Coordinatore PTB PHYSIKALISCH TECHNISCHE BUNDESANSTALT

n. partner: 17

Germania

Abstract

New radioactivity measurements will support fast, effective protection of the environment following nuclear events
After a nuclear or radiological event, radiation protection authorities and other decision makers need quick and credible information, based on reliable radiological data, on the areas affected. However, the potentially large areas affected and risks to people in the vicinity pose difficult measurement challenges.
This project will develop new measurement techniques and traceable calibration methods for determining ground surface activity concentrations using data collected by unmanned aerial vehicles, and for radioactivity in air measurements using transportable air-sampling systems. This will support timely, effective action that protects the public and environment against the effects of ionising radiation in the aftermath of nuclear and radiological emergencies. The project will also ensure the new instrumentation and procedures are taken up by nuclear regulatory bodies, environmental agencies and international standards organisations.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi EMPIR
Data inizio	01-ago-17
Data scadenza	31-lug-20
Contributo totale	€ 2.840.000
Costo eleggibile totale	€ 2.840.000
Contributo a ENEA	€ 72.750
Costo eleggibile ENEA	€ 72.750
Doc. approvazione	146/2017/PRES
Codice atto	PI0AAA
Resp.scientifico ENEA	IURLARO GIORGIA
Unità	IRP

Attività ENEA:

L'ENEA parteciperà ai seguenti workprogramme:
WP3 - reti non governative di monitoraggio ambientale di radiazioni ionizzanti.). L'ENEA eseguirà uno studio delle reti non governative per il monitoraggio ambientale delle radiazioni ionizzanti, verificando i dati disponibili e la conformità alle grandezze radioprotezionistiche in uso.
WP4 - dosimetri passiva. L'ENEA sarà coinvolta nella armonizzazione dei metodi di monitoraggio ambientale con dosimetria passiva con lo specifico obiettivo di verificare l'utilizzo di tali sistemi dosimetrici anche in situazioni di emergenza.
L'ENEA sarà inoltre coinvolta nella diffusione dell'informazione e nella gestione del progetto.

N° Contratto: 18NRM02

PRISM-eBT

Primary standards and traceable measurement methods for X-ray emitting electronic brachytherapy devices

Coordinatore PTB PHYSIKALISCH TECHNISCHE BUNDESANSTALT

Germania

n. partner: 8

Abstract

Electronic brachytherapy (eBT) targets tumours using X-rays from close range and has potential advantages over conventional radiotherapies. However, the systems available tend to have unique calibration methods; mostly indirect and with uncertainties larger than clinically acceptable. This means that treatment plans aren't easily adapted from one system to another, impeding progress other therapy in clinical practice.
This project will deliver harmonised, simplified and traceable dosimetry for eBT detectors and measurement devices, by determining 3D dose distributions in water models. Four primary standards will be developed for absorbed doses from internal radiotherapy devices, new measurement methods will be developed, and guidance produced. The outcome will be a harmonised calibration service, capable of promotion to the profession, plus calibration standards for independent and traceable verification of dosimetry, for both novel systems and for quality assurance of existing equipment. Comparability, backed by the first ever standards, will improve clinical confidence and, since treatment costs are lower than for conventional radiotherapies, increased uptake could reduce costs for Europe's health systems.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi EMPIR
Data inizio	01-lug-19
Data scadenza	30-giu-22
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 72.348
Costo eleggibile ENEA	€ 72.348
Doc. approvazione	108/2019/FSN
Codice atto	PF5AAE
Resp.scientifico ENEA	PINTO MASSIMO
Unità	FSN-INMRI

Attività ENEA:

L'ENEA partecipa, coordinandolo, a uno dei quattro workpackages tecnici previsti, il WP1.

N° Contratto: 695923

PUBLENEF

Supporting PUBLic Authorities for Implementing Energy Efficiency Policies

Coordinatore JIN - STICHTING JOINT IMPLEMENTATION NETWORK

n. partner: 13

Paesi Bassi

Abstract

PUBLENEF's overarching goal is to assist Member States in implementing effective and efficient sustainable energy policies (with the focus on energy efficiency) and empower them to make use of the best practices and policy processes implemented in other MS at the national, regional and/or local level. The specific objectives of the project are to a) Assess and learn from existing Energy Efficiency policy implementation practices in EU member states, regions and cities, b) Strengthen networking opportunities for public agencies on the national, regional and local level, and c) Develop and adjust tools for public agencies to help them implement Energy Efficiency policies. The target audience of PUBLENEF consists of the following groups: National, regional and local authorities, Policy implementation bodies, networks of local and regional authorities, and Market actors and bodies participating in EE policies. The overall approach of the project in order to fulfill these objectives is to: a) Identify the needs from national, regional and local authorities for the implementation of EE policies, b) Collect the best practices and tools for overcoming these needs and replicate them to various MS, regions and municipal authorities, c) develop roadmaps and enhance the process of successful implementation of policies, and d) build and strengthen existing networks of policy makers enabling the knowledge exchange from national to regional to local level in EE policy. As PUBLENEF is a highly policy participatory project, it has ensured the involvement of key players in all energy efficiency policy making field throughout the EU. PUBLENEF has ensured a fine mix of energy agencies (and associations of cities and regions) involved in the formulation of energy efficiency policies on the national, regional and local level and building capacity.

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-feb-16
Data scadenza	31-gen-19
Contributo totale	€ 1.983.013
Costo eleggibile totale	€ 1.983.013
Contributo a ENEA	€ 183.528
Costo eleggibile ENEA	€ 183.528
Doc. approvazione	21/2016/COMM
Codice atto	PE4AAB
Resp.scientifico ENEA	FEDERICI ALESSANDRO
Unità	DUEE-SPS-MPE

Attività ENEA:

L'ENEA è coinvolto in tutti i workpackage. In particolare:
WP1 - Management: collaborazione con il coordinatore, sviluppo delle attività amministrative, partecipazione ai meeting progettuali.
WP2 - Assessement of good practices and needs for energy efficiency policies at national, regional and local level
WP3 - Development and implementation of Energy Efficiency roadmaps
WP4 - Planning and organisation of supporting events
WP5 - Tools and resources
WP6 - Dissemination and communication

N° Contratto: 863227

PULSE-COM

Photo-Piezo-ActUators based on Light SEnsitive COMposite

Coordinatore CNR - CONSIGLIO NAZIONALE DELLE RICERCHE

n. partner: 8

Italia

Abstract

PULSE-COM aims to explore technological breakthroughs developing and integrating a new class of Photo-Piezo-Actuators to open a radical new future technology. Our vision is based on the use of low cost photo-mobile polymer (PMP) films and a leadfree piezo-composite (PZL) to target their use in innovative new fields never before considered. Starting from phenomenological and modelling aspects of the composite materials, we will fabricate and experimentally characterize Photo-Piezo-Actuators (PMP-PZL) proof of concept devices. The project will address through an ambitious interdisciplinary research to the employment of proper materials and the appropriate optical strategies to increase and tune the absorption of the light and finally to increase the PMP devices efficiency. With the same target electromechanical models and innovative growth processes will guide the optimization of the piezocomposite to improve its performance, and thus its sensitivity when coupled with the PMP. The PMP-PZL device will be integrated into more complex opto-electronic systems through high-risk incremental research to achieve pioneering industrial implementation. Specifically, we target the realization of cutting-edge applications based on photo-activated Meso-scale machines as opto-switches and opto-microvalves, Reconfigurable Optics and Photoenergy Harvesting Systems. Our study can open a new window on the future development of light-driven nanomotors and their potential applications in different areas such as biomedical, environmental and nanoengineering fields.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Future and Emerging Technologies (FE
Data inizio	01-dic-19
Data scadenza	30-nov-22
Contributo totale	€ 2.980.015
Costo eleggibile totale	€ 2.980.015
Contributo a ENEA	€ 511.250
Costo eleggibile ENEA	€ 511.250
Doc. approvazione	220/2019/SSPT-PROMAS
Codice atto	PS3ACB
Resp.scientifico ENEA	NENNA GIUSEPPE
Unità	SSPT-PROMAS-NANO

Attività ENEA:

L'ENEA è coinvolta nei seguenti workpackage:
WP1: ENEA partecipa alla ottimizzazione dei materiali polimerici fotomobili, alla realizzazione degli elettrodi;
WP2: ENEA è il leader di questo WP focalizzato alla ottimizzazione dei dispositivi fotomobili (PMP) e piezo (PZL) e ne completa inoltre la caratterizzazione sia ottica che elettrica;
WP3: ENEA ha la responsabilità di ideare un set up sperimentale dedicato alla caratterizzazione del dispositivo PNP-PZL in risposta alle diverse lunghezze d'onda di luce incidente;
WP4: ENEA fornice il supporto per le formulazioni e le caratterizzazioni necessarie alla realizzazione delle varie applicazioni;
WP5: ENEA partecipa alla diffusione e promozione dei risultati delle attività progettuali

N° Contratto: 735160

qSOFC

Automated mass-manufacturing and quality assurance of Solid Oxide Fuel Cell stacks

Coordinatore VTT TECHNICAL RESEARCH CENTRE OF FINLAND

Finlandia

n. partner: 8

Abstract

qSOFC project combines leading European companies and research centres in stack manufacturing value-chain with two companies specialized in production automation and quality assurance to optimize the current stack manufacturing processes for mass production. Currently the state-of-the-art SOFC system capital expenditure (capex) is 7000…8000 €/kW of which stack is the single most expensive component. This proposal focuses on SOFC stack cost reduction and quality improvement by replacing manual labour in all key parts of the stack manufacturing process with automated manufacturing and quality control. This will lead to stack cost of 1000 €/kW and create a further cost reduction potential down to 500 €/kW at mass production (2000 MW/year). During the qSOFC project, key steps in cell and interconnect manufacturing and quality assurance will be optimized to enable mass-manufacturing. This will include development and validation of high-speed cell-manufacturing process, automated 3D machine vision inspection method to detect defects in cell manufacturing and automated leak-tightness detection of laser-welded/brazed interconnect-assemblies. The project is based on the products of its' industrial partners in stack-manufacturing value-chain (ElringKlinger, Elcogen AS, Elcogen Oy, Sandvik) and motivated by their interest to further ready their products into mass-manufacturing market. Two companies specialized in production automation and quality control (Müko, HaikuTech) provide their expertise to the project. The two research centres (VTT, ENEA) support these companies with their scientific background and validate the produced cells, interconnects and stacks.
Effective exploitation and dissemination of resulting improved products, services, and know-how is a natural purpose of each partner and these actions are boosted by this project. This makes project results available also for other parties and increases competitiveness of the European fuel cell industry.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 JTI - Hydrogen
Data inizio	01-feb-17
Data scadenza	31-gen-20
Contributo totale	€ 2.110.015
Costo eleggibile totale	€ 2.110.015
Contributo a ENEA	€ 239.750
Costo eleggibile ENEA	€ 239.750
Doc. approvazione	44/E/2016/DTE
Codice atto	PT4AAH
Resp.scientifico ENEA	MC PHAIL STEPHEN JOHN
Unità	DTE-PCU-SPCT

Attività ENEA:

L'ENEA è coinvolta nelle seguenti attività:
. Testing delle celle prodotte da uno dei partner del consorzio e relativa validazione;
. Supporto alle analisi di impatto economico dei processi produttivi ottimizzati;
. Disseminazione e valorizzazione del know how, diffusione dei mercati e promozione del prodotto stesso facendo leva sulle piattaforme dedicate europee.

N° Contratto: 847656

R2CA

Reduction of Radiological Consequences of design basis and design extension Accidents

Coordinatore IRSN INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE

n. partner: 17

Francia

Abstract

The Reduction of Radiological Consequences of design basis and extension Accidents (R2CA) project targets the development of harmonized methodologies and innovative management approach and safety devices for the evaluation and for the reduction of the consequences of DBA and DEC-A accidents in operating and foreseen nuclear power plants in Europe. For both purposes development of methodologies will be conducted with the goal of reassessing the safety margins using less conservative approaches and considering the new risks that rose from the original design or design extension phases. This will reinforce the confidence on these safety margins for conditions up to the extended design domain, will allow the identification of new accident management measures and devices and will support the optimization of the potential associated emergency population protection measures.
Improvement of evaluations tools will be supported by the reassessment of the existing experimental and analytical databases. The efficiency of the approach will be demonstrated by comparing at start and then at the end of the project the results of the evaluation of a series of reactor cases selected by a senior expert group among two main categories: loss of coolant accidents and steam generator tube rupture accidents.
Detailed analyzes of these reactor cases simulations will suggest the development of harmonized evaluation methodologies.
The project will include also innovative actions to estimate the pros and cons of potential new accident management measures and devices, to explore the potential switch of prognosis evaluation tools to the diagnosis of on-going fuel cladding failure and to explore the potentiality for these accidental situations of advanced technological fuels.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-19
Data scadenza	31-ago-23
Contributo totale	€ 3.184.941
Costo eleggibile totale	€ 4.156.896
Contributo a ENEA	€ 215.178
Costo eleggibile ENEA	€ 215.178
Doc. approvazione	07172019/FSN
Codice atto	PF6AAL
Resp.scientifico ENEA	MASCARI FULVIO
Unità	FSN-SICNUC-SIN

Attività ENEA:

L'ENEA è coinvolta nei workpackage 1, 3 e 6. In particolare contribuisce:
. Alla revisione degli strumenti computazioni che sono utilizzati nelle analisi (ASTEC, DRACCAR) dei dati sperimentali (e eventuali dati di impianto);
. All'analisi dei transitori dovuti a eventi tipo LOCA con ASTEC e DRACCAR per un generico PWR;
. Alla revisione dei dati sperimentali disponibili e i modelli matematici esistenti al fine di un ulteriore sviluppo degli strumenti in relazione alla valutazione delle conseguenze radiologiche dovute a un LOCA;
. Alla disseminazione dei risultati del progetto, in particolare coordinando il WP6 relativo alle attività di disseminazione dei risultati del progetto.

N° Contratto: CE946

REEF 2W

Increased renewable energy and energy efficiency by integrating, combining and empowering urban wastewater and organic waste management systems

Coordinatore ENEA
Italia

n. partner: 11

Abstract

The REEF 2W tackles the challenge of developing and implementing solutions for increasing energy efficiency and renewable energy production in public infrastructures. This will be addressed by combining and integrating the relevant public infrastructures of the municipal solid waste chain with the waste water treatment plants (WWTP), and by upgrading their input mix and their energy outputs. As a result the upstream supply chain will be compatible with a wide biomass mix from agriculture, agro-food and public green. REEF 2W will also improve internal processes for maximizing energy efficiency and renewable energy outputs to be locally consumed at the WWTP or fed into public/private grids or used in public mobility. Different REEF 2W models will show how new solutions lead to an abatement of energy needs and to a significant increase of renewable energy production. Pilot actions will be key enablers for WWTPs energy self-sustainable, or even 'renewable energy positive', ideal for providing green energy to future smart-cities.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg Central Europe
Data inizio	01-giu-17
Data scadenza	31-mag-20
Contributo totale	€ 1.878.305
Costo eleggibile totale	€ 2.300.299
Contributo a ENEA	€ 235.448
Costo eleggibile ENEA	€ 294.310
Doc. approvazione	36/E/2017/DTE
Codice atto	PT0AAB
Resp.scientifico ENEA	FARINA ROBERTO
Unità	DTE-BBC-BBE

Attività ENEA:

L'ENEA coordina il progetto e svolge inoltre attività nei seguenti WP:
- Establishing a shared sound knowledge base
- Creating the conditions for REEF 2W pilot implementation
- Demonstration testing of the sustainability assessment procedure
- Transferring assessment/analysis tools for enhancing replicability of REEF 2W solutions

N° Contratto:

REEHUB

Regional Energy Efficiency HUB

Coordinatore MINISTRY OF INFRASTRUCTURES AND ENERGY

Albania

n. partner: 6

Abstract

The Interreg IPA CBC project REEHUB wants to increase energy efficiency in public buildings of the cross-border-area between hubs, where building managers are trained on energy-efficiency measures. REEHUB aims to give a strategic contribution in improving energy efficiency through innovative techniques and best practices, creating regional Hubs, connected as a network, located in public buildings in each region, where capacity building actions will take place. It aims to guarantee a suitable and effective communication to consumers and a real awareness-raising at all society levels.

The Project objectives are:
• To create a network of Hubs, in each regions involved, where will be organized capacity building actions and training materials for energy efficiency audit in the building sector.
• To implement a methodology of audit, according to EU standard, fitted to building renovation that pave the way for new solutions for passive houses in Mediterranean climes.
• To shift from old buildings to low-energy or zero-energy buildings, and to do it best practices report and technical workshop for public administration.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg-IPA-CBC Italy-Albania-Monten
Data inizio	15-mar-18
Data scadenza	14-mar-20
Contributo totale	€ 980.000
Costo eleggibile totale	€ 980.000
Contributo a ENEA	€ 161.500
Costo eleggibile ENEA	€ 190.000
Doc. approvazione	35/2018/SSPT-PROMAS
Codice atto	PS3AAB
Resp.scientifico ENEA	LUPRANO VINCENZA ANNA MARI
Unità	SSPT-PROMAS-MATAS

Attività ENEA:

Il centro ricerche ENEA di Brindisi è coinvolta principalmente nella fase di audit strumentale dei quattro Hub e nella fase di capacity building. Mentre ENEA Bari sarà presente nella fase di audit attraverso simulazioni dei 4 Hub e nella fase di capacity building. Insieme si sperimenterà un modulo per l'aumento della consapevolezza pubblica sui temi dell'efficienza energetica in una scuola pugliese.

N° Contratto: 861704

RESIST

REsilience Support for critical Infrastructures through Standardized Training on CBRN

Coordinatore ASSOCIAZIONE ETHIC SAFE

Italia

n. partner: 7

Abstract

RESIST aims at creating a standardized CBRNe joint training programme for the establishment of "CBRNe Intervention Groups" within public and privately owned Critical Infrastructures. The objective is that of creating pools of CI personnel trained and equipped to operate in a contaminated environment with the necessary basic equipment to mitigate the impacts of disruptive events and long-term incremental changes, thus guaranteeing the continued provision of its basic functions.
Following the training and the execution of real life exercises, the Intervention Group should be able to:
a) intervene, if and as far as possible, eliminating or reducing the immediate effects of a CBRNe event, pending the arrival of the Fire Brigade and/or, in emergency cases, of the Armed Forces;
b) guarantee the provision of minimum services and/or contribute to the maintenance of security and safety of the facilities (if relevant authorities do not request the closure/shut down).

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi ISFP - Internal Security Fund Police
Data inizio	01-ott-19
Data scadenza	30-set-21
Contributo totale	€ 990.958
Costo eleggibile totale	€ 990.958
Contributo a ENEA	€ 68.975
Costo eleggibile ENEA	€ 76.639
Doc. approvazione	159/2019/FSN
Codice atto	PF7AAU
Resp.scientifico ENEA	DE DOMINICIS LUIGI
Unità	FSN-TECFIS-DIM

Attività ENEA:

L'ENEA contribuisce al progetto in tuitti i work packages con le attività del personale dei servizi FSN-TECFIS-DIM, FSN-FISS-RNR, FSN-SICNUC-SIN e ISER-CAS. E' inoltre responsabile del WP 6 'Proposal for CBRNe Resilience Label'.

N° Contratto: 642067

RESLAG

Turning waste from steel industry into a valuable low cost feedstock for energy intensive industry

Coordinatore CENTRO DE INVESTIGACION COOPERATIVADE ENERGIAS ALTERNATIVAS FUNDACION

Spagna

n. partner: 19

Abstract

The RESLAG project proposal is aligned with the challenges outlined in the call WASTE-1-2014: Moving towards a circular economy through industrial symbiosis.
In 2010, the European steel industry generated, as waste, about 21.8 Mt of steel slag. The 76 % of the slag was recycled in applications such as aggregates for construction or road materials, but these sectors were unable to absorb the total amount of produced slag. The remaining 24 % was landfilled (2.9 Mt) or self-stored (2.3 Mt). The landfilled slag represents a severe environmental problem.
The main aim of RESLAG is to prove that there are industrial sectors able to make an effective use of the 2.9 Mt/y of landfilled slag, if properly supported by the right technologies. In making this prof, the RESLAG project will also prove that there are other very important environmental benefits coming from an “active” use of the slag in industrial processes, as CO2 saving (up to 970 kt/y from CSP applications, at least 71 kg/ton of produced steel from heat recovery applications), and elimination of negative impacts associated with mining (from the recovery of valuable metals and from the production of ceramic materials).
To achieve this ambitious goal four large-scale demonstrations to recycle steel slag are considered: Extraction of non-ferrous high added metals; TES for heat recovery applications; TES to increase dispatchability of the CSP plant electricity; Production of innovative refractory ceramic compounds.
Overall, the RESLAG project aims at an innovative organizational steel by-products management model able to reach high levels of resource and energy efficiency, which considers a cascade of upgrading processes and a life cycle perspective.
All these demonstrations will be lead by the industries involved in the RESLAG consortium. The RESLAG project is supported by the main organizations representing energy-intensive industries, CSP sector, energy platforms, governments, etc.

Anno di stipula	2015
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-set-15
Data scadenza	31-dic-19
Contributo totale	€ 8.022.007
Costo eleggibile totale	€ 9.721.242
Contributo a ENEA	€ 1.078.125
Costo eleggibile ENEA	€ 1.078.125
Doc. approvazione	267/2015/COMM
Codice atto	0ST49
Resp.scientifico ENEA	GAGGIOLI WALTER
Unità	DTE-STT-ITES

Attività ENEA:

L'ENEA è coinvolta in tutti i Workpackages del progetto. In modo particolare nel WP5 'Design and construction of prototypes' e WP 6 'Test and validation of prototypes' che prevedono la progettazione, la costruzione e le successive campagne sperimentali per le prove e la validazionedi un prototipo in scala pilota di un serbatoio di accumulo termico per impianti solari che usano Sali fusi come fluido termovettore.

N° Contratto: 814247

RETRACE

Realising the Transition to the Circular Economy: Models, Methods and Applications

Coordinatore UNIV. SHEFFIELD
Regno Unito

n. partner: 10

Abstract

This network brings together an exceptionally strong team of world-leading experts from a wide set of beneficiaries and partners in order to achieve breakthroughs in understanding how the transition towards a Circular Economy (CE) can be realised in a successful way in the European context, both within existing organisations and industries as well as through innovative and sustainable business models. The proposed approach is inherently multi-disciplinary, drawing upon research that will advance significantly the state-of-the-art in terms of the current understanding of the applicability of the CE paradigm from Economic, Environmental and Social points of view, providing policy insights and implications for practice. The consortium of 10 beneficiaries (including 7 academic and 3 non-academic groups) will design and deliver world class multidisciplinary training to 15 Early Stage Researchers (ESRs), offering them an extended and valuable program of international exchanges and secondments through the wide network of partner organisations involved in the proposal. The network builds on the success of previous projects in which beneficiaries have successfully delivered high impact research and knowledge exchange. ReTraCE is specifically designed to train a cohort of new thought leaders capable of driving the transition towards a more sustainable mode of production and consumption in Europe in the next decades, who will directly facilitate the implementation of the recently adopted ambitious Circular Economy strategy of the European Commission, which is closely linked to Sustainable Development Goals (SDGs). Indeed, it is envisaged that ESRs will be employable not only by research institutions, but also by public sector bodies and within a wide range of manufacturing and service industries which will require new professional profiles for realising the transition towards the CE.

Anno di stipula	2018
Tipo di progetto	MSCA-ITN-ETN
Programma UE	HORIZON 2020 MSCA Marie Skl. Curie Actions
Data inizio	01-nov-18
Data scadenza	31-ott-22
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 0
Costo eleggibile ENEA	€ 0
Doc. approvazione	
Codice atto	
Resp.scientifico ENEA	GRADITI GIORGIO
Unità	DTE-FSN-FOSG

Attività ENEA:

ENEA is part of the ReTraCE consortium as expert institution in the development and the implementation of policies in the field of resource, energy efficiency and waste management.
As a partner, ENEA is involved in the research training provision and will deliver the highest standard of training in terms of research methodologies.

N° Contratto: 730944

RINGO

Readiness of ICOS for Necessities of integrated Global Observations

Coordinatore INTEGRATED CARBON OBSERVATION SYSTEM EUROPEAN RESEARCH INFRASTRUCTURE CONSORTIUM

Finlandia

n. partner: 28

Abstract

The proposed project "Readiness of ICOS for Necessities of integrated Global Observations" (RINGO) aims to further development of ICOS RI and ICOS ERIC and foster its sustainability. The challenges are to further develop the readiness of ICOS RI along five principal objectives:
1. Scientific readiness. To support the further consolidation of the observational networks and enhance their quality. This objective is mainly science-guided and will increase the readiness of ICOS RI to be the European pillar in a global observation system on greenhouse gases.
2. Geographical readiness. To enhance ICOS membership and sustainability by supporting interested countries to build a national consortium, to promote ICOS towards the national stakeholders, to receive consultancy e.g. on possibilities to use EU structural fund to build the infrastructure for ICOS observations and also to receive training to improve the readiness of the scientists to work inside ICOS.
3. Technological readiness. To further develop and standardize technologies for greenhouse gas observations necessary to foster new knowledge demands and to account for and contribute to technological advances.
4. Data readiness. To improve data streams towards different user groups, adapting to the developing and dynamic (web) standards.
5. Political and administrative readiness. To deepen the global cooperation of observational infrastructures and with that the common societal impact.
Impact is expected on the further development and sustainability of ICOS via scientific, technical and managerial progress and by deepening the integration into global observation and data integration systems.

Anno di stipula	2017
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-gen-17
Data scadenza	31-dic-21
Contributo totale	€ 4.719.680
Costo eleggibile totale	€ 4.719.680
Contributo a ENEA	€ 9.431
Costo eleggibile ENEA	€ 9.431
Doc. approvazione	191/2017/SSPT-PROTER
Codice atto	PS4AAQ
Resp.scientifico ENEA	BOMMARITO CARLO
Unità	SSPT-PROTER-OAC

Attività ENEA:

L'ENEA è coinvolta in qualità di linked third party dell'Università della Tuscia e svolge un ruolo di ricerca nell'ambito del WP1- Increasing the impact of ICOS, in particolare azioni tese ad aumentare la capacità di ICOS RI di fornire informazioni sui flussi di gas ad effetto serra e sullo scambio di carbonio tra ecosistemi, fiumi, estuari ed oceano, con lo scopo di migliorare l'integrazione dei dati dei budget dei vari flussi di carbonio per meglio verificarne l'influenza sui livelli di CO2 atmosferica.

N° Contratto: 16NRM03

RTNORM

kQ factors in modern external beam radiotherapy applications to update IAEA TRS-398

Coordinatore ENEA

Italia

n. partner: 9

Abstract

Half of the 3.4 million Europeans diagnosed with cancer every year are treated with ionizing radiation. To ensure safety, radiation beams need to be calibrated. Correcting for differences between beam quality at the calibration laboratory and the hospital, a factor called kQ,Q0, is an important aspect of calibration. The International Atomic Energy Agency's protocol TRS-398, which governs radiotherapy dosimetry, uses kQ,Q0 values calculated in the 1990s. A major revision is underway to reflect advances in technology, new primary standards, and improved metrology and modelling.
This project will measure kQ,Q0 values using the latest ionization radiation technologies ensuring traceability to the SI, and also calculate kQ,Q0 using Monte Carlo modelling. The datasets will be compared to understand potential differences between measured and computed values. Validated values will be incorporated in the upcoming TRS-398 revision. Through the revised protocol, European hospitals will have reliable correction factors for the latest ionizing radiation technologies, ensuring beams which treat 1.7 million citizens annually are accurately calibrated.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi EMPIR
Data inizio	01-mag-17
Data scadenza	30-ott-19
Contributo totale	€ 794.732
Costo eleggibile totale	€ 794.732
Contributo a ENEA	€ 68.009
Costo eleggibile ENEA	€ 68.009
Doc. approvazione	65/2017/FSN
Codice atto	PF5AAC
Resp.scientifico ENEA	PINTO MASSIMO
Unità	FSN-INMRI

Attività ENEA:

L'ENEA coordina il progetto, con i relativi oneri gestionali e di comunicazione dei risultati.
Parteciperà inoltre a due dei tre workpackage tecnici:
WP1: misure e calcoli dei fattori correttiv kq per rivelatori di radiazioni ionizzanti per la dosimetria in radioterapia con raggi X di medie energie.
WP2: calcoli dei fattori correttivi kq per rivelatori di radiazioni ionizzanti per la dosimetria in radioterapia con fotoni di alte energie.

N° Contratto: 776787

S2S4E

Sub-seasonal to Seasonal climate forecasting for Energy

Coordinatore BARCELONA SUPERCOMPUTING CENTER - CENTRO NACIONAL DE SUPERCOMPUTACION

Spagna

n. partner: 12

Abstract

Large scale deployment of renewable energy (RE) is key to comply with the GHG emissions reduction set by the COP21 agreement. Despite cost competitive in many settings, RE diffusion remains limited largely due to its variability. This works as a major barrier to RE's integration in electricity networks as knowledge of power output and demand forecasting beyond a few days remains poor. To help solve this problem, S2S4E will offer an innovative service to improve RE variability management by developing new research methods exploring the frontiers of weather conditions for future weeks and months. The main output of S2S4E will be a user co-designed Decision Support Tool (DST) that for the first time integrates sub-seasonal to seasonal (S2S) climate predictions with RE production and electricity demand. To support the dissemination of climate services, a pilot of the DST will be developed in two steps. The first will draw on historical case studies pointed as relevant by energy companies - e.g. periods with an unusual climate behaviour affecting the energy market. The second step will improve probabilistic S2S real-time forecasts built up into the DST and assess their performances in real life decision-making in these companies. This process will be co-designed with consortium's partners which represent different needs and interests in terms of regions, RE sources (wind, solar and hydro) and electricity demand. Besides the partners, S2S4E will engage other users from the energy sector as well as other business areas and research communities to further explore DST application and impact. As a result, DST will enable RE producers and providers, electricity network managers and policy makers to design better informed S2S strategies able to improve RE integration, business profitability, electricity system management, and GHG emissions' reduction. The long-term objective is to make the European energy sector more resilient to climate variability and extreme events.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-dic-17
Data scadenza	30-nov-20
Contributo totale	€ 4.771.289
Costo eleggibile totale	€ 4.771.289
Contributo a ENEA	€ 291.880
Costo eleggibile ENEA	€ 291.880
Doc. approvazione	205/2017/SSPT-MET
Codice atto	PS2AAN
Resp.scientifico ENEA	DE FELICE MATTEO
Unità	SSPT-MET-CLIM

Attività ENEA:

L'ENEA svolge attività di ricerca e innovazione contribuend alle attività di diversi workpackage (WP2, WP3, WP4, WP6 e WP7)

N° Contratto: 847552

SANDA

Supplying Accurate Nuclear Data for energy and non-energy Applications

Coordinatore CIEMAT
Spagna

n. partner: 35

Abstract

The project will include experimental measurements of new or improved quality data, evaluation, validation and dissemination of the data to produce libraries that can be used by safety authorities, research institutions, the nuclear energy industry, health organizations, other non-energy applications and the EU society at large. The project will also include in smaller fraction support to detector development, facility setups and samples fabrication to prepare important measurements and validations that are not possible in the time framework of the present proposal but that will be required in near future for the safe and efficient use of nuclear technologies.
The selection of topics, isotopes, reactions, measurements, experiments and evaluation has been made taking into account the relevance, expected impact and priorities of the resulting data according to the NEA/OECD and IAEA high priority lists and committees as well as the experience of the participants and of previous EU proposals with large participation of the partners for the present proposal (CHANDA, ANDES,…). The impact has been evaluated from the perspective of a safe, efficient and competitive use of nuclear technologies.
In comparison with previous projects, the present proposal proposes to concentrate more efforts on delivering actual results than in the preparation for the future, by enhancing the support to evaluations, validations and actual measurements. Also special attention has been paid to make sure that the topics included cover the non-energy application requiring nuclear data as well as it will cover the needs of the nuclear energy sector.
Respecting those principles, the proposal has also tried to be as inclusive to the different EU research groups and countries as possible maintaining the manageability of the project, its efficiency and the maximum quality and relevance of the action and involved partners.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-19
Data scadenza	31-ago-23
Contributo totale	€ 3.499.948
Costo eleggibile totale	€ 4.666.600
Contributo a ENEA	€ 105.000
Costo eleggibile ENEA	€ 105.000
Doc. approvazione	691/2019/FSN
Codice atto	PF6AAI
Resp.scientifico ENEA	MENGONI ALBERTO
Unità	FSN-SICNUC-PSSN

Attività ENEA:

L'ENEA è coinvolta nei workpackage 2 e 5.
Nel WP2 'New nuclear data measurmenets for energy and non-energy applications - coordinerà le misure di cattura neutronica.
Nel WP5 'Nuclear data validation and integral experiments' saranno effettuate misure integrali su attinidi minori presso l'impianto TAPIRO in Casaccia.

N° Contratto: 695985

SCOoPE

Saving COOPerative Energy

Coordinatore COOPERATIVAS AGRO-ALIMENTARIAS DE ESPANA

Spagna

n. partner: 10

Abstract

SCOoPE project will work directly with energy-intense agro-food industries to implement cross-cutting and collaborative energy management systems addressed to reduce their energy consumption, and will further spread this knowledge within technicians, businesses managers, and energy and agro-food institutions.
The project SCOoPE aims at achieving the challenges of the topic EE 16-2014/2015. Regarding the use of cost-effective energy solutions, the project objective is to reduce energy consumption at a short term in a range between 10% and 15% directly in 81 businesses belonging to the agro-food target sectors of the project (namely crop drying, meat and poultry, dairy, and fruit and vegetables transformation). This reduction must be achieved without any decrease in the production capacity of the companies and maintaining correct socioeconomic and environmental conditions. In order to do that, the project will work with the uptake of specific and cross-cutting innovative technologies and techniques, which efficacy has been proven in other industrial sectors, different from agro-food sector, but that are not yet familiar to project's target sectors.
On the other hand, the project pursues larger savings in the medium term with new affordable energy solutions, specifically by developing the concept of "Collaborative Energy Management Systems". It will take advantage of complementarities and synergies between analysed industrial sites with similar characteristics and will use them for the improvement of their joint energy efficiency. For this purpose, 6 pilot industrial clusters will be run in order to prove the improvements of total energy consumptions and its associated costs, achieved by using common procedures based on ISO 50.001 and supported by an specific software (Dashboard) developed by the project. All these experiences will be promoted to encourage target groups to reduce their energy consumption, following the example of the directly involved companies.

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-apr-16
Data scadenza	31-mar-19
Contributo totale	€ 1.796.004
Costo eleggibile totale	€ 1.796.004
Contributo a ENEA	€ 148.063
Costo eleggibile ENEA	€ 148.063
Doc. approvazione	15/2016/COMM
Codice atto	PE0AAB
Resp.scientifico ENEA	CAMPIOTTI CARLO ALBERTO
Unità	DUEE-SIST-NORD

Attività ENEA:

L'ENEA è leader del workpackage 4 - Collaborative energy management; è inoltre coinvolto nei workpackage:
1 - Management
2 - Energy benchmarking in SMEs
3 - Energy efficiency integration with sectorial processes
4 - Collaborative energy management
6 - Dissemination and communication

N° Contratto: 730227

SCRREEN

Solutions for CRitical Raw materials - a European Expert Network

Coordinatore CEA

Francia

n. partner: 30

Abstract

Since the publication of the first list of Critical Raw Materials (CRM) in 2010 by the Ad-hoc Working Group on CRM, numerous European projects have addressed (part of) the CRMs value and several initiatives have contributed to gather (part of) the related community into clusters and associations. This led to the production of important knowledge, unfortunately disseminated. Numerous databases have also been developed, sometimes as duplicates.
For the first time in the history, SCRREEN aims at gathering European initiatives, associations, clusters, and projects working on CRMs into along lasting Expert Network on Critical Raw Materials, including the stakeholders, public authorities and civil society representatives.
SCRREEN will contribute to improve the CRM strategy in Europe by (i) mapping primary and secondary resources as well as substitutes of CRMs, (ii) estimating the expected demand of various CRMs in the future and identifying major trends, (iii) providing policy and technology recommendations for actions improving the production and the potential substitution of CRM, (iv) addressing specifically WEEE and other EOL products issues related to their mapping and treatment standardization and (vi) identifying the knowledge gained over the last years and easing the access to these data beyond the project.
The project consortium also acknowledges the challenges posed by the disruptions required to devlop new CRM strategies, which is why stakeholder dialogue is at the core of SCRREEN: policy, society, R&D and industrial decision-makers are involved to facilitate strategic knowledge-based decisions making to be carried out by these groups. A specific attention will also be brought on informing the general public on our strong dependence on imported raw materials, on the need to replace rare materials with substitutes and on the need to set up innovative and clean actions for exploration, extraction, processing and recycling.

Anno di stipula	2016
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-nov-16
Data scadenza	31-dic-19
Contributo totale	€ 2.999.500
Costo eleggibile totale	€ 2.999.500
Contributo a ENEA	€ 97.500
Costo eleggibile ENEA	€ 97.500
Doc. approvazione	86/2016/SSPT-PROMAS
Codice atto	PS3AAK
Resp.scientifico ENEA	DI GIROLAMO GIOVANNI
Unità	SSPT-PROMAS-MATPRO

Attività ENEA:

L'ENEA è responsabile del Workpackage 1 che riguarda la creazione, il coordinamento e il management di un network sulle materie prime critiche.
L'ENEA ha un ruolo chiave anche negli studi tecnici riguardanti l'analisi delle barriere tecnologiche relative al ciclo di vita dei prodotti e al loro riciclo, l'economia circolare e la sostituzione di materie prime critiche.

N° Contratto: 730960

SeaDataCloud

SeaDataCloud - Further developing the pan-European infrastructure for marine and ocean data management

Coordinatore IFREMER INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER

Francia

n. partner: 56

Abstract

The SeaDataNet pan-European infrastructure has been developed by NODCs and major research institutes from 34 countries. Over 100 marine data centres are connected and provide discovery and access to data resources for all European researchers. Moreover, SeaDataNet is a key infrastructure driving several portals of the European Marine Observation and Data network (EMODnet), initiated by EU DG-MARE for Marine Knowledge, MSFD, and Blue Growth. SeaDataNet complements the Copernicus Marine Environmental Monitoring Service (CMEMS), coordinated by EU DG-GROW. However, more effective and convenient access is needed to better support European researchers. The standards, tools and services developed must be reviewed and upgraded to keep pace with demand, such as developments of new sensors, and international and IT standards. Also EMODnet and Copernicus pose extra challenges to boost performance and foster INSPIRE compliance. More data from more data providers must be made available, from European and international research projects and observing programmes.
SeaDataCloud aims at considerably advancing SeaDataNet services and increasing their usage, adopting cloud and HPC technology for better performance. More users will be engaged and for longer sessions by including advanced services in a Virtual Research Environment. Researchers will be empowered with a collection of services and tools, tailored to their specific needs, supporting marine research and enabling generation of added-value products. Data concern the wide range of in situ observations and remote sensing data. To have access to the latest cloud technology and facilities, SeaDataNet will cooperate with EUDAT, a network of computing infrastructures that develop and operate a common framework for managing scientific data across Europe. SeaDataCloud will improve services to users and data providers, optimise connecting data centres and streams, and interoperate with other European and international networks.

Anno di stipula	2016
Tipo di progetto	RIA - Research and Innov Action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-nov-16
Data scadenza	31-ott-20
Contributo totale	€ 9.999.738
Costo eleggibile totale	€ 9.999.738
Contributo a ENEA	€ 215.875
Costo eleggibile ENEA	€ 215.875
Doc. approvazione	206/2016/SSPT-PROTER
Codice atto	PS4AAI
Resp.scientifico ENEA	PECCI LEDA
Unità	SSPT-PROTER-BES

Attività ENEA:

L'ENEA è responsabile dei workpackage: 4 - disseminazione a livello nazionale ed europeo e 9 - realizzazione di una virtual appliance dedicata, preconfigurata e pre-costruita, pronta per l'uso, ad uso dei centri di dati gestiti in ambienti virtuali.
Parteciperà inoltre ai workpackage:
2 - rete interna dei partner;
5 - popolamento con nuovi dati marini dell'infrastruttura SeaDataCloud
8 - nuovi sviluppi atti a migliorare ed arricchire i servizi di directory
9 - corsi di formazione
10 - sviluppo di un 'Virtual Research Environment'
11 - sviluppo, aggiornamento e pubblicazione dei prodotti basati sui dati oceanografici europei.

N° Contratto: 776868

SECLI-FIRM

The Added Value of Seasonal Climate Forecasts for Integrated Risk Management Decisions

Coordinatore UNIV. EAST ANGLIA
Regno Unito

n. partner: 9

Abstract

The central objective of SECLI-FIRM is to demonstrate how the use of improved climate forecasts, out to several months ahead, can add practical and economic value to decision-making processes and outcomes, primarily in the energy sector, but also in the water sector. Specifically for the energy sector, SECLI-CLIM will assess the impact on operational planning and portfolio management, such as hedging and asset optimization, thus enabling quantification of the value-add provided by seasonal forecasts which have been calibrated, evaluated and tailored for each specific application. Improvements in management decisions will ultimately lead to an improved supply-demand balance and therefore to a more efficient energy system, particularly with respect to renewable energy, with corresponding benefits for climate change mitigation.
A simple, but effective, methodology will be used to assess value added. A control case will only utilise climatological conditions based on historical averaged values – currently the most common approach – while a test case will also consider individually optimised and tailored state-of-the-art probabilistic seasonal forecasts. This will be done for nine case studies for Europe and South America: recent seasons with anomalous/extreme climate conditions leading to problematic and quantifiable impacts for the energy and/or water industry. Crucially for success, the case studies will be co-designed by industrial and research partners.
These case studies will provide the basis for developing pilot climate services for a number of specific applications, allowing evaluation of the added value of near real-time information for decision making. Thus SECLI-FIRM will promote research advances in the optimization of seasonal forecasts for specific applications (e.g. by evaluating both local processes and large-scale teleconnections), as well as promoting the uptake of seasonal forecasts by industry and hence expansion of the climate services market.

Anno di stipula	2018
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-feb-18
Data scadenza	31-lug-21
Contributo totale	€ 4.638.500
Costo eleggibile totale	€ 4.638.500
Contributo a ENEA	€ 238.325
Costo eleggibile ENEA	€ 240.250
Doc. approvazione	201/2017/SSPT-MET
Codice atto	PS2AAL
Resp.scientifico ENEA	PETITTA MARCELLO
Unità	SSPT-MET-CLIM

Attività ENEA:

L'ENEA si occupa delle tecniche di downscaling statistico per i casi di studio e dell'individuazione di eventi estremi.

N° Contratto: 004/2017

SEPARATE

Systemic Effects of Partial-body Exposure to Low Radiation Doses (CONCERT European Joint Programme)

Coordinatore ENEA
Italia

n. partner: 4

Abstract

SEPARATE aims to address the relevance of out of-target effects, from those observed after controlled radiation exposure in the laboratory to the dynamic exposure experienced by humans in typical radiation-exposure scenarios, and deliver a detailed mechanistic understanding of the processes governing the associated risks. By focusing on the mechanisms of risk posed by low-dose PBI, the research programme of SEPARATE specifically addresses several important challenges and long-term goals of the CONCERT low-dose radiation research and radiation protection programme.
The work plan is particularly aligned with the MELODI and EURADOS strategic research agendas.
The complementary expertise of the team members will allow an integrated approach by targeting the key cellular and molecular mechanisms involved in out-of-target effects relevant for cancer and non-cancer diseases at low and intermediate radiation doses and in various mammalian systems, bringing progress well beyond the current state-of-the-art.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 Euratom radioprotezione
Data inizio	01-ott-17
Data scadenza	01-feb-20
Contributo totale	€ 703.203
Costo eleggibile totale	€ 1.019.135
Contributo a ENEA	€ 551.098
Costo eleggibile ENEA	€ 598.000
Doc. approvazione	396/2017/PRES
Codice atto	PS5AAI
Resp.scientifico ENEA	SARAN ANNA
Unità	SSPT-TECS-TEB

Attività ENEA:

L'ENEA coordina il progetto (Workpackage 4); guiderà inoltre il WP5 'Dissemination, training and exploitation' in collaborazione con gli altri partner del progetto.

N° Contratto: 654935

SESAME.

thermal hydraulics Simulations and Experiments for the Safety Assessment of MEtal cooled reactors

Coordinatore ENEA
Italia

n. partner: 23

Abstract

The thermal-hydraulics Simulations and Experiments for the Safety Assessment of Metal cooled reactor (SESAME) project supports the development of European liquid metal cooled reactors (ASTRID, ALFRED, MYRRHA, SEALER). The project focusses on pre-normative, fundamental, safety-related, challenges for these reactors with the following objectives:
• Development and validation of advanced numerical approaches for the design and safety evaluation of advanced reactors;
• Achievement of a new or extended validation base by creation of new reference data;
• Establishment of best practice guidelines, Verification & Validation methodologies, and uncertainty quantification methods for liquid metal fast reactor thermal hydraulics.
The SESAME project will improve the safety of liquid metal fast reactors by making available new safety related experimental results and improved numerical approaches. These will allow system designers to improve the safety relevant equipment leading to enhanced safety standards and culture.
Due to the fundamental and generic nature of SESAME, developments will be of relevance also for the safety assessment of contemporary light water reactors. By extending the knowledge basis, SESAME will allow the EU member states to develop robust safety policies. At the same time, SESAME will maintain and further develop the European experimental facilities and numerical tools.
The consortium of 25 partners provides American-European-wide scientific and technological excellence in liquid metal thermal hydraulics, as well as full alignment with ESNII and with NUGENIA where of interest. A close interaction with the European liquid metal cooled reactor design teams is foreseen involving them in the Senior Advisory Committee. They will actively advise on the content of the project and will be the prime end-users, ensuring their innovative reactor designs will reach highest safety standards using frontier scientific developments.

Anno di stipula	2015
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-apr-15
Data scadenza	01-apr-19
Contributo totale	€ 5.200.000
Costo eleggibile totale	€ 6.643.280
Contributo a ENEA	€ 843.500
Costo eleggibile ENEA	€ 1.042.250
Doc. approvazione	42/2015/FSN
Codice atto	PF4AAA
Resp.scientifico ENEA	TARANTINO MARIANO
Unità	FSN-ING

Attività ENEA:

ENEA contribuisce, mediante importanti campagne sperimentali da condurre sui propri impianti CIRCE e NACIE, ai seguenti obiettivi del progetto:
1) sviluppo e validazione di approcci numerici avanzati per la progettazione e le verifiche di sicurezza dei reattori di quarta generazione;
2) creazione di nuovi database estesi come riferimenti per la validazione dei codici.
Partecipa inoltre alla messa a punto dei codici mediante benchmark basati su dati sperimentali,

N° Contratto: 823802

SFERA III

Solar Facilities for the European Research Area - Third Phase

Coordinatore CIEMAT
Spagna

n. partner: 15

Abstract

The overall objective of this project is to carry on with the work done during the past 8 years for the sustainability of the activities of the European advance solar laboratories involved in SFERA and SFERA 2nd phase, and extend these activities to the new solar laboratories which will bring added value to this European Research Infrastructure for Concentrating Solar Power. The specific goal is to contribute to ensure the long-term sustainability of these European advance solar laboratories, supporting Europe as a global leader in solar research infrastructures.
Those activities will include (i) networking activities to further develop the cooperation between the research infrastructures, the scientific community, industries and other stakeholders; (ii) transnational access activities aiming at providing access to all European researchers from both academia and industry to singular scientific and technological solar research infrastructures; and (iii) joint research activities whose sole purpose is to improve the integrated services provided by the infrastructure.
All this would contribute to achieve the scientific excellence of these research infrastructures (RIs), strength the interaction between the Concentrating Solar Thermal (CST) industry and these RIs, strength innovation further, develop new activities, and also drive the productivity and competitiveness of the European economy contributing to the creation of new jobs in the CST sector. Furthermore, these activities will contribute to the development of new common standards that will support the CST industry in the development of new components and systems and in the building of new commercial installations. At the same time, these standards will also support the European Commission in the development of the European policy for the CST sector.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-gen-19
Data scadenza	31-dic-22
Contributo totale	€ 9.102.631
Costo eleggibile totale	€ 9.102.631
Contributo a ENEA	€ 849.997
Costo eleggibile ENEA	€ 849.997
Doc. approvazione	67/E/2018/DTE
Codice atto	PT6AAH
Resp.scientifico ENEA	GAGGIOLI WALTER
Unità	DTE-STT-ITES

Attività ENEA:

ENEA in SFERA III offre l'accesso agli impianti dimostratori CSP presenti presso il C.R. Casaccia, secondo quanto previsto nel Workpackage 5.
Inoltre i principali contributi forniti da ENEA riguardano:
1) lo sviluppo di un controllo dinamico e la diagnostica di sistemi integrati per la produzione di combustibili solari;
2) supporto alla definizione delle azioni necessarie per lo sviluppo di un'infrastruttura elettronica europea sulle tecnologie CST;
3) contributo alla definizione delle metodologie per calibrazioni e tecniche di sensori per la determinazione accurata dei parametri di prestazione dei prototipi installati nelle infrastrutture di ricerca incluse nel 'Transnational Access' (TA) del progetto;
4) sviluppo e messa a punto di procedure di test per materiali e componenti di sistemi di stoccaggio termico;
5) sviluppo di tecniche di benchmarking e strategie di ottimizzazione per i reattori a combustibile solare;
6) individuazione di protocolli per la creazione di e-infrastrutture al fine di consentire l'accesso remoto ai centri europei di R&S dedicati alle tecnologie CST;
7) supporto alla trasformazione del consorzio in un istituto di riferimento per CST e alle attività esterne orientate a configurare i Centri di Ricerca operanti sul CST come una struttura legale (EU-SOLARIS ESFRI).

N° Contratto: 814464

Si-DRIVE

Silicon Alloying Anodes for High Energy Density Batteries comprising Lithium Rich Cathodes and Safe Ionic Liquid based Electrolytes for Enhanced High VoltagE Performance

Coordinatore UNIV. LIMERICK
Irlanda

n. partner: 16

Abstract

Si-DRIVE will develop the next generation of rechargeable Li-ion batteries, allowing for cost competitive mass market EVs by transformative materials and cell chemistry innovations, delivering enhanced safety with superior energy density, cycle life and fast charging capability using sustainable and recyclable components.The technology encompasses amorphous Si coated onto a conductive copper silicide network as the anode with polymer/ionic liquid electrolytes and Li-rich high voltage (Co-free) cathodes via processes that are scalable and demonstrably manufacturable within Europe.The components have been demonstrated at TRL3 through preliminary lab-scale analysis, with a clear component improvement strategy to arrive at a TRL5 prototype demonstration by the end of Si-DRIVE. Comprehensive theoretical and experimental studies will probe and control interfacial processes that have heretofore limited Li-ion technologies to incremental gains, guiding materials design and eliminating capacity fade mechanisms.The Si-DRIVE technology will exceed the stringent demands of EV batteries where safety is paramount, by dramatically improving each component within the accepted Li-ion platform and achieving this in a market competitive process with whole of life considerations. The technology will also demonstrate suitability for 2nd life applications at reduced energy density beyond the primary EV lifetime, prior to cost effective materials recycling, consistent with a circular economy.The Si-DRIVE consortium boasts the required academic and industrial partner expertise to deliver this technology and spans material design and synthesis, electrochemical testing, prototype formation and production method validation, life cycle assessment and recycling process development.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 NMBP Nanotechn., Adv Materials, Adv
Data inizio	01-gen-19
Data scadenza	31-gen-23
Contributo totale	€ 7.999.493
Costo eleggibile totale	€ 7.999.493
Contributo a ENEA	€ 509.748
Costo eleggibile ENEA	€ 509.748
Doc. approvazione	124/2018/SSPT-PROMAS
Codice atto	PS3ABI
Resp.scientifico ENEA	APPETECCHI GIOVANNI BATTISTA
Unità	SSPT-PROMAS-MATPRO

Attività ENEA:

ENEA riveste un ruolo centrale nello sviluppo degli elettroliti ed è leader del WP 2 interamente dedicato ai materiali elettrolitici. In particolare, le attività dell'ENEA nell'ambito del progetto prevedono: i) progettazione, sintesi e purificazione di nuovi liquidi ionici per sistemi al silicio; ii) caratterizzazione chimico-fisica ed elettrochimica dei liquidi ionici preparati; iii) preparazione di elettroliti costituiti dai liquidi ionici più promettenti; iv) caratterizzazione chimico-fisica ed elettrochimica degli elettroliti; v) ottimizzazione della formulazione degli elettroliti; vi) selezione degli elettroliti da utilizzare nello sviluppo di membrane polimeriche iono-conduttrici.

N° Contratto: 818431

SIMBA

Sustainable innovation of microbiome applications in food system

Coordinatore LUKE - NATURAL RESOURCES INSTITUTE FINLAND

Finlandia

n. partner: 23

Abstract

As the world population is continuously increasing, the supply of food with equal accessibility has become a major issue and future challenge. Microbes are unexploited tool to increase food productivity and quality. The objective of SIMBA project is to harness complex soil and marine microbial communities (microbiomes) for the sustainable production of food. SIMBA will focus on two interconnected food chains, i.e. crop production, aquaculture. SIMBA will first launch an in silico phase in order to analyze the further pre-existing microbiome databases and earlier studies, to identify the best microbiome layout capable of supporting food chain quality and productivity. Microbiome-tailored interventions will be specifically developed including soil, plant, fish, aquaculture and food/feed processing towards optimal layout as defined in the modelling step, as follows:
i) Identified optimal microbiome consortia will be designed and tested in lab, pot and field trials to improve plant productivity and health;
ii) Marine microbiomes will be applied to facilitate sustainable aqua and agriculture;
iii) Optimal microbe/microbe consortia will be used to convert raw-materials and residuals to high quality food, feed or finally to energy.
In a final intervention step, these interactions will be monitored and tested in field, aqua-culturing, fish feeding and human studies, measuring the impact on microbiome consortia, interactions in association with factors evaluating their efficacy in terms of improving food security, productivity, quality, safety, sustainability, nutritional and health aspects. "Near to market" microbiome applications for sustainable food systems will be provided thanks to the interdisciplinary and cross-sectional nature of the proposal and the active role of small and medium sized enterprises (SMEs).

Anno di stipula	2018
Tipo di progetto	IA - Innovation Action
Programma UE	HORIZON 2020 Food Security, Sustainable Agriculture
Data inizio	01-nov-18
Data scadenza	31-ott-22
Contributo totale	€ 10.000.000
Costo eleggibile totale	€ 10.530.862
Contributo a ENEA	€ 730.000
Costo eleggibile ENEA	€ 730.000
Doc. approvazione	98/2018/SSPT-BIOAG
Codice atto	PS1AAQ
Resp.scientifico ENEA	BEVIVINO ANNAMARIA
Unità	SSPT-BIOAG-SOQUAS

Attività ENEA:

L'ENEA è responsabile del Work Package 2 e collabora a sette dei nove WP del progetto per l'esecuzione di attività di ricerca, di scaling-up industriale, disseminazione e management. In particolare, nel WP 2 l'ENEA si occupa del coordinamento delle attività delle prove in serra e in campo; analisi dell'effetto di consorzi microbici promotori della crescita delle piante sul microbioma del suolo in relazione a diversi fattori biotici e abiotici.

N° Contratto: 776661

SOCLIMPACT

DownScaling CLImate imPACTs and decarbonisation pathways in EU islands, and enhancing socioeconomic and non-market evaluation of Climate Change for Europe, for 2050 and beyond.

Coordinatore UNIV. DE LAS PALMAS DE GRAN CANARIA

Spagna

n. partner: 24

Abstract

The warming of the climate system is unequivocal and continued emission of greenhouse gases will cause further warming and changes. Islands are particularly vulnerable to Climate Change (CC) consequences but the coarse spatial resolution of available projections makes it difficult to derive valid statements for islands. Moreover, science-based information about the economic impacts of CC in marine and maritime sectors is scarce, and current economic models lack of solid non-market assesment. Policy makers must have accurate information about likely impact chains and about the costs and benefits of possible strategies to implement efficient measures. SOCLIMPACT aims at modelling downscaled CC effects and their socioeconomic impacts in European islands for 2030–2100, in the context of the EU Blue Economy sectors, and assess corresponding decarbonisation and adaptation pathways, complementing current available projections for Europe, and nourishing actual economic models with non-market assessment, by:
• Developing a thorough understanding on how CC will impact the EU islands located in different regions of the world.
• Contributing to the improvement of the economic valuation of climate impacts by adopting revealed and stated preference methods.
• Increasing the effectiveness of the economic modelling of climate impact chains, through the implementation of an integrated methodological framework (GINFORS, GEM-E3 and non-market indicators).
• Facilitating climate-related policy decision making for Blue Growth, by ranking and mapping the more appropriate mitigation and adaptation strategies.
• Delivering accurate information to policy makers, practitioners and other relevant stakeholders.
SOCLIMPACT addresses completely this Work Programme providing advances in the economic valuation of climate-induced impacts, and in climate and economic models, allowing downscaled projections of complex impact chains, and facilitating the resilience capacity of these vulnerable lands.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-dic-17
Data scadenza	30-nov-20
Contributo totale	€ 4.481.340
Costo eleggibile totale	€ 4.481.340
Contributo a ENEA	€ 253.313
Costo eleggibile ENEA	€ 253.313
Doc. approvazione	202/2017/SSPT-MET
Codice atto	PS2AAM
Resp.scientifico ENEA	SANNINO GIANMARIA
Unità	SSPT-MET-CLIM

Attività ENEA:

L'ENEA coordina le attività del Workpackage 3 'Modelling Climate impacts in 11 EU islands case studies for 2030-2100. In particolare, coordina le attivita' di modellistica climatica e contribuisce alla definizione di indicatori ambientali innovativi utili a favorire lo sviluppo sostenibile delle isole.

N° Contratto: C3S_511_ENEA7SC1

SQUARE4ECVs

Scientific Quality Assessment and Reports 4 Essential Climate Variables

Coordinatore CNR - CONSIGLIO NAZIONALE DELLE RICERCHE

Italia

n. partner: 10

Abstract

Analysis (assesment) of multivariate time series of ECV (Essential climate variables): subsurface and surface temperature, subsurface Salinity, Ocean Heat fluxes, subsurface currents.
The mathematical methods to be used and developed are tentatively: Dynamical models of time series, embedding and attractor reconstruction; estimation of trend, seasonal component and noise; multi-channel singular spectral analysis, multi-scale resolution and wavelets.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Copernicus
Data inizio	01-nov-17
Data scadenza	31-ott-20
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 66.466
Costo eleggibile ENEA	€ 66.466
Doc. approvazione	214/2017/SSPT-MET
Codice atto	CS2AAM
Resp.scientifico ENEA	MARULLO SALVATORE
Unità	SSPT-MET-CLIM

Attività ENEA:

L'ENEA è responsabile del workpackage 7 (Thematic Assessments) e collabora alle attività dei seguenti workpackage:
WP5 - Ocean ECVs
WP4 - Atmospheric ECVs
WP8 - External Communication

N° Contratto:

STRATUS

Environmental STRATegies for sustainable ToUriSm

Coordinatore UNIV. CAGLIARI
Italia

n. partner: 7

Abstract

The marine and coastal environment cannot be constrained by administrative borders. This is even more true for the Tyrrhenian sea, the glue that holds together the cooperation area. This determines the presence of a strong inter-dependence between the cross-border territories. The environmental quality (and the economic development to which it is connected) of a coastal territory is closely linked to the environmental quality and the sustainability of other areas within the Programme. On this basis the Project intends to strengthen the competitiveness of the marine-bathing tourism sector, by supporting its sustainable development according to the assumption that a greater environmental quality and a lower human strain on natural resources may be translated into an increase in quantity and quality, in terms of environmental consciousness and spending capacity, of tourists throughout the cooperation area. In order to pursue this objective the project intends to strengthen the involvement of local stakeholders (companies, local authorities, NGOs) in order to define shared governance plans that are the result of a participatory logic in the view of co-designing the project outputs. In the same way it intends to create an eco-tourism brand defined and managed by local entities and organisations, favouring its appropriation in the common sense of the population. The innovativeness of the project is provided by: - the involvement of stakeholders through the establishment of an Advisory Board, which enables the stakeholders to participate in the Project's decisions; - the use of an innovative method for involving stakeholders such as Appreciative Inquiry, previously successfully trialled in important contexts at the global level; - the use of data related to climate variations (seasonal forecasts and climate change scenarios) in order to define a sustainable development structure that anticipates these changes and may also be applicable in the medium-long term.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg Maritime IT-FR
Data inizio	09-gen-17
Data scadenza	30-apr-19
Contributo totale	€ 1.104.124
Costo eleggibile totale	€ 1.298.969
Contributo a ENEA	€ 179.627
Costo eleggibile ENEA	€ 211.326
Doc. approvazione	117/2017/PRES
Codice atto	PS2AAH
Resp.scientifico ENEA	DE FELICE MATTEO
Unità	SSPT-MET-CLIM

Attività ENEA:

L'ENEA svolgerà le seguenti attività:
. Coinvolgimento degli stakeholder nel settore turistico in Sardegna e PACA;
. Disseminazione e comunicazione delle attività del progetto e delle opportunità
. Attività di analisi (tramite interviste e questionari) sulla competitività e sostenibilità delle imprese turistiche
. Organizzazione di fiere della sostenibilità

N° Contratto: 737164

SUMCASTEC

Semiconductor-based Ultrawideband Micromanipulation of Cancer STEm Cells

Coordinatore UNIV. LIMOGES
Francia

n. partner: 6

Abstract

SUMCASTEC explores radically new approach for cancer stem cells (CSCs) real time isolation (i.e. within minutes vs current 40 days) and neutralization. A novel micro-optofluidic lab-on-chip (LOC) platform will be developed through a joint and iterative effort by biologists, clinicians and engineers. For the first time, a single LOC will be capable of delivering ultra-wide broadband radiation to compare cell spectral signatures, image subcellular features, and hence modulate CSCs microenvironment conditions with unprecedented space and time resolution. It will be driven to isolate CSCs from heterogeneous differentiated and stem cell populations, and force CSCs differentiation, ultimately inducing sensitivity to anticancer treatments. Extensive in vitro and in vivo testing along with biophysical modelling will validate the approach and establish the proof-of-principle within the project life-time, while laying the groundwork for further development of future electrosurgical tools that will be capable CSCs neutralization in tissue.
This will not only establish a new line of treatment for brain cancers such as Glioblastoma Multiforme and Medulloblastoma, whose initiation and recurrence were linked to CSCs, and that claim tremendous human and economic tolls, worldwide; it will also push the current boundaries of microbiological analysis by enabling microenvironment characterization/manipulation and real-time ionic channels monitoring without cytotoxic patch-clamping or electron microscopy.
By investing in efforts such as SUMCASTEC's, Europe will stand at the forefront of global biomedical innovation and push through a similar miniaturization trend as the one that propelled mobile communications, yet with much deeper societal impact.
All the required competences are gathered within this consortium.

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Future and Emerging Technologies (FE
Data inizio	01-gen-17
Data scadenza	03-giu-20
Contributo totale	€ 3.978.518
Costo eleggibile totale	€ 3.978.518
Contributo a ENEA	€ 690.648
Costo eleggibile ENEA	€ 690.648
Doc. approvazione	202/2016/SSPT-TECS
Codice atto	PS5AAF
Resp.scientifico ENEA	MANCUSO MARIA TERESA
Unità	SSPT-TECS-TEB

Attività ENEA:

Nell'ambito del progetto l'ENEA si occuperà di definire i protocolli sperimentali da utilizzare per le analisi biologiche in vitro, di validare in vitro su linee cellulari di medulloblastoma e glioblastoma, l'efficacia del "LOC", di coordinare il wp 4 e di validare in vivo, mediante l'utilizzo di modelli animali, xenograft di medulloblastoma, glioblastoma l'efficacia del "LOC" in combinazione con l'esposizione a dosi di radiazioni ionizzanti che mimano sedute radioterapiche.

N° Contratto:

SUPREME

developing tools for SUstainable food PRoduction in mEditerranean area using MicrobEs

Coordinatore UNIV. CAGLIARI
Italia

n. partner: 8

Abstract

SUPREME is a project funded under the EU ERANET-MED program. It aims at favoring the set up of a sustainable agricultural production frame, addressing vulnerable communities living in semi-arid and arid areas in the Mediterranean. The project objective is to combat soil impoverishment and to reduce the use of water, fertilizers, and pesticides by means of microbiome potential to stabilize soil and promote plant growth under adverse conditions.
This project addresses local communities distributed over 6 different areas of the Mediterranean (Italy, Jordania, Cyprus, Greece, Tunisia, and Algeria) that have been increasingly challenged by water scarcity and by low agricultural productivity due to the scarce bio-geochemical functions of soils. Stakeholders have underlined that a change in soil management (e.g. in the direction of organic agriculture) needs to take place to ensure sustainability. Different soils and crops (tomatoes, sunflowers, onions, legumes such as faba beans and vetch, barely, wheat or high biomass leading grasses like sorghum, health crops and cereals as konjac, orchidaceae, amaranth and quinoa) will be considered in the test sites.
The project's scope will be achieved through integration of state-of-the-art biotechnologies and leading edge characterization, monitoring and modeling tools, accessed through an innovative, interactive web-based observation system.
The outreach strategy of SUPREME is to create a co-production frame between researchers, farmers and policy makers, which aims at bridging the gap between research, real needs and policy aims.

Anno di stipula	2019
Tipo di progetto	ERANET COFUND
Programma UE	Settimo Programma Quadro Euratom (2007-2013) ERA-NET
Data inizio	01-set-17
Data scadenza	31-ago-20
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 76.787
Costo eleggibile ENEA	€ 240.000
Doc. approvazione	79/2019/SSPT-PROTER
Codice atto	PS4ABS
Resp.scientifico ENEA	SPROCATI ANNA ROSA
Unità	SSPT-PROTER-BIOGEOC

Attività ENEA:

L'attività ENEA è relativa alla preparazione di formule microbiche 'su misura' da utilizzare come inoculanti per la promozione della crescita di specie botaniche agronomiche coltivate nei paesi partecipanti al progetto, con l'obiettivo della sostituzione dei fertilizzanti chimici e riduzione dell'utilizzo dell'acqua di irrigazione (Algeria, Giordania, Cipro e Italia).

N° Contratto: 1MED15_2.1_M23_190

TEESCHOOLS

Tools for Energy Efficiency to Mediterranean SCHOOLS

Coordinatore ENEA
Italia

n. partner: 14

Abstract

TEESCHOOLS provides for the definition of a strategy to reduce the complexity of the requalification process of public buildings through an integrated platform of user friendly tools, such as a software for the semplification of the energy audits, a computational system of the carbon footprint based on the information on the life cycle of the building, an innovative database of good practices for the renovation of school buildings, the definition of tailored financing models and the promotion of of high-quality training courses. Thanks to the pilot initiatives planned in the partner Countries, the tools will be adjusted to the single local situations, with the objective of encouraging the adoption within the local, regional and national energy plans.

Anno di stipula	2017
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi Interreg MED
Data inizio	01-feb-17
Data scadenza	31-gen-20
Contributo totale	€ 2.235.500
Costo eleggibile totale	€ 2.840.000
Contributo a ENEA	€ 331.500
Costo eleggibile ENEA	€ 390.000
Doc. approvazione	178/2017/PRES
Codice atto	PS6ABC
Resp.scientifico ENEA	TARANTINI MARIO
Unità	SSPT-USER-RISE

Attività ENEA:

L'ENEA è Lead Partner ed è responsabile del coordinamento tecnico-scientifico del progetto e della sua gestione amministrativa e finanziaria.

N° Contratto: 754586

TRANSAT

TRANSversal Actions for Tritium

Coordinatore CEA

Francia

n. partner: 18

Abstract

TRANSAT (TRANSversal Actions for Tritium) is a 4-year multidisciplinary project built to contribute to Research and Innovation on ""cross-cutting activities"" needed to ""improve knowledge on tritium management in fission and fusion facilities"". It proposes actions answering the following main challenges addressed by the call: i) tritium release mitigation strategies, ii) waste management improvement, iii) refinement of the knowledge in the field of radiotoxicity, radiobiology, and dosimetry. To evaluate the scientific tasks to be covered by TRANSAT, all the open issues of the tritium cycle that are not yet tackled by European research activities or former studies have been determined. This general picture has been constrained to crosscutting fusion and fission activities. Concerning release mechanism, tritium migration/permeation in massive samples are studied in dedicated rigs. Associated modelling takes place in the project in order to improve the level of confidence in predictive tools developed for tritium behavior in reactors. A special insight is also put in the release of tritium from tritiated particles coming from dismantling activities. Permeation barriers (active barriers and coating concepts) as well as treatment of the operational tritiated gases are assessed and their applicability to fusion and fission purposes is analyzed. Improvement in waste management is also covered by means of new concept studies for tritiated waste confining packages and by new accurate methodologies for tritium inventory assessment in metallic and soft house-keeping waste. Finally, a dedicated part of the project focuses on radiotoxicity, radioecology, radiobiology and dosimetry on tritiated particles produced during dismantling whose impacts have not yet been addressed. 18 Partners are participating in TRANSAT from all the European countries involved in tritium activities."

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 Euratom fissione
Data inizio	01-set-17
Data scadenza	31-ago-21
Contributo totale	€ 3.999.260
Costo eleggibile totale	€ 5.068.135
Contributo a ENEA	€ 464.889
Costo eleggibile ENEA	€ 618.451
Doc. approvazione	112/2017/FSN
Codice atto	PF3AAC
Resp.scientifico ENEA	TOSTI SILVANO
Unità	FSN-FUSTEC-TEN

Attività ENEA:

Le attività ENEA riguarderanno in particolare lo studio dei meccanismi di diffusione, assorbimento e rilascio del trizio nei materiali, lo sviluppo di barriere contro la permeazione del trizio e lo studio dei processi per il trattamento di correnti gassose triziate generate nei reattori a fissione e fusione.

N° Contratto: 5864

Urb-En Pact

Urban Energy Pact

Coordinatore CLERMONT AUVERGNE METROPOLE

Francia

n. partner: 9

Abstract

Local authorities embrace the ambitious goal to become a zero-net energy territory within the next 30 years. Thus, Urb-En Pact project's aim is to define the local action plans to become zero-net (ZNE) territory by producing and delivering local, renewable and regulated sources of energy by the implementation of an energy loop which gathers all the stakeholders of this circular economy, especially the consumers included in this fair trade business in and around the metropolitan area.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi URBACT III
Data inizio	01-set-19
Data scadenza	29-feb-20
Contributo totale	
Costo eleggibile totale	
Contributo a ENEA	€ 7.070
Costo eleggibile ENEA	€ 7.720
Doc. approvazione	54/2019/DUEE-SIST
Codice atto	PW4AAD
Resp.scientifico ENEA	LATINI ARIANNA
Unità	DUEE-SIST-NORD

Attività ENEA:

Le attività ENEA sono inquadrate nell workpackage 1 "Network Management" e nel workpackage 2 "Project development" che come obiettivo la produzione di un documento che presenti la situazione attuale del tema del progetto nelle città europee "target" con contributi provenienti da tutti i partner del progetto. ENEA lavora in contatto con la Regione Lazio e implementerà, in particolare, un Piano d'azione specifico per un Comune regionale "target".

N° Contratto: 745695

VALUEMAG

Valuable Products from Algae Using New Magnetic Cultivation and Extraction Techniques

Coordinatore UNIV. NATIONAL TECHNICAL ATENE NTUA

Grecia

n. partner: 11

Abstract

VALUEMAG project aims to provide groundbreaking solutions for microalgae production and harvesting as well as scaling up biomass transformation systems in order to provide new technologies for aquatic/marine biomass integrated bio-refineries. Production-cultivation and harvesting objectives are achieved by using magnetic nanotechnologies: superparamagnetic iron oxide nanoparticles (SPAN) are introduced into microalgae protoplasm in order to confer them magnetic properties. Magnetic microalgae (MAGMA) are immobilized onto a soft magnetic conical surface (SOMAC) and covered with a thin layer of continuously circulating water. A greenhouse hosts SOMAC system to exposure MAGMA to sunlight, minimize contamination and temperature-humidity uncertainties. Quantity of water is minimized and harvesting will be fast and inexpensive. These innovations permit optimum cultivation, enhance biomass productivity and dramatically lower costs of biomass production. Biomass is directly utilized by VALUEMAG multi-facilities bio-refinery for the production molecules for pharmaceutical, nutraceuticals, food additives and cosmetics. Using selected microalgae strains, natural products will be extracted by supercritical CO2 extraction, while a new selective magnetic separation method for precise selection of value-added products will be also developed. To reduce the amount of greenhouse gases realized in the environment and further lower costs of biomass, CO2 produced by transformation processes as well as water are recycled and used to enhance microalgae growth rate. All together VALUEMAG achievements will perfectly meet the demand of capturing the potential of aquatic biomass. The project outputs will bring to the market a broad variety of value-added products in sustainable way. Finally, competitiveness of the European industry will be improved since there are not pilot installations or state-of-the-art bio-refineries utilizing magnetic nanotechnology to cultivate microalgae.
Expand / Contract(-)
Coordinator

Anno di stipula	2017
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 JTI - Bio Based Industries
Data inizio	01-apr-17
Data scadenza	31-mar-20
Contributo totale	€ 4.789.000
Costo eleggibile totale	€ 4.789.000
Contributo a ENEA	€ 733.200
Costo eleggibile ENEA	€ 733.200
Doc. approvazione	55/2017/PRES
Codice atto	PS1AAH
Resp.scientifico ENEA	MOLINO ANTONIO
Unità	SSPT-BIOAG-PROBIO

Attività ENEA:

L'ENEA è coinvolta in tutti i workpackage; in particolare nei WP2 e WP3 per i quali sono previsti attività sperimentali quali la cattura della CO2, la fase estrattiva co2-SFE su scala banco e pilota, l'estrazione di molecole per fini antibatterici e antifungini, la caratterizzazione delle matrici nonché la parte ingegneristica di valutazione dell'impianto integrato.

N° Contratto: LIFE

VEG-GAP

Vegetation for Urban Green Air Quality Plans

Coordinatore ENEA

Italia

n. partner: 8

Abstract

VEG-GAP project aims to develop a strategy for providing new reliable information in support of designing urban Air Quality Plans (AQPs) considering the urban ecosystems/vegetation characteristics. Specifically, the new information will regard the assessment of 1) the contribution of vegetation ecosystems both as a source and sink of air pollution in urban areas; 2) the urban vegetation ecosystems' effects on air temperature (urban heating and cooling patterns) and 3) its impact on air quality for the most relevant pollutants. This information will allow a better understanding and evaluation of the possible risks and benefits for human health and ecosystems themselves associated with air pollution changes induced by vegetation/ecosystems changes.

Anno di stipula	2018
Tipo di progetto	N/A - Non applicabile
Programma UE	Altri programmi LIFE (2014-2020)
Data inizio	03-dic-18
Data scadenza	02-dic-21
Contributo totale	€ 1.000.000
Costo eleggibile totale	€ 1.673.668
Contributo a ENEA	€ 195.709
Costo eleggibile ENEA	€ 326.182
Doc. approvazione	406/2018/PRES
Codice atto	PS2ABB
Resp.scientifico ENEA	MIRCEA MIHAELA
Unità	SSPT-MET-INAT

Attività ENEA:

L'ENEA organizza, monitora e coordina tutte le attività del progetto.
Il Laboratorio SSPT-MET-INAT svolgerà attività modellistiche necessarie per produrre informazioni per vari stakeholder che renderenno più evidente la relazione tra la gevetazione l'inquinamento atmosferico, a diverse scale, in diverse condizioni metereologiche e climatiche e per diversi scenari delle emissioni antropiche. ENEA valuterà il loro impatto sulla salute umana e sulla vegetazione al fine di creare un quadro di riferimento per altri progetti nazionali ed internazionali nell'ambito delle iniziative SMART cities, Green infrastructures, Nature-based solutions in cities. ENEA collabora con il progetto LIFE PREPAIR che mira ad implementare le misure previste dai piani regionali e dall'Accordo di Bacino su scala maggiore e a rafforzarne la sostenibilità e la durabilità dei risultati. ENEA coordinerà con i partner anche le attività di comunicazione e disseminazione dei risultati del progetto.

N° Contratto: 826161

WASTE2GRIDS

Converting WASTE to offer flexible GRID balancing Services with highly-integrated, efficient solid-oxide plants

Coordinatore ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE

Svizzera

n. partner: 4

Abstract

The overall objective of the Waste2GridS (W2G) project is to identify the most promising industrial pathways of waste gasification and solid-oxide cell (SOC) integrated power-balancing plants (W2G plants in short). The project aims are to perform a preliminary investigation on the long-term techno-economic feasibility of W2G plants to meet different grid-balancing needs and to identify several promising business cases with necessary preconditions. To achieve such goals, an interdisciplinary team is formed by gathering leading research bodies and companies in Europe in the fields of solid-oxide reversible cells (SORC), waste identification, gasification and syngas cleaning, grid operation, and energy/process systems engineering. The results of the project will further enhance the knowledge exchange and interaction among different key players (manufacturers, investors, and research institutions), provide useful guidelines for technology development/deployment and market positioning, increase long-term competitiveness and leadership of relevant industries, and provide knowledge for policy support on W2G plants for a circular economy and for the decarbonisation of European energy systems.

Anno di stipula	2019
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 JTI - Hydrogen
Data inizio	01-gen-19
Data scadenza	30-giu-20
Contributo totale	€ 528.750
Costo eleggibile totale	€ 528.750
Contributo a ENEA	€ 92.500
Costo eleggibile ENEA	€ 92.500
Doc. approvazione	68/E/2018/DTE
Codice atto	PT7AAF
Resp.scientifico ENEA	AGOSTINI ALESSANDRO
Unità	DTE-PCU-STMA

Attività ENEA:

L'ENEA è coinvolta nell'identificazione e la caratterizzazione di aree geografiche ad elevata presenza di fonti rinnovabili elettriche e presenza di grandi quantità di residui gassificabili a basso costo, nell'identificazione dei potenziali residui disponibili alla gassificazione e nell'identificazione delle zone ottimali dove insediare gli impianti W2G.

N° Contratto: 826234

WASTE2WATTS

Unlocking unused bio-WASTE resources with loW cost cleAning and Thermal inTegration with Solid oxide fuel cells

Coordinatore ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE

Svizzera

n. partner: 10

Abstract

WASTE2WATTS (W2W) will design and engineer an integrated biogas-Solid Oxide Fuel Cell combined heat and power system with minimal gas pre-processing, focusing on low-cost biogas pollutant removal and optimal thermal system integration. Eleven partners from 4 leading biogas countries join efforts to these objectives: 2 biogas cleaning SMEs, 3 SOFC manufacturing SMEs, a biogas expert SME and 5 leading research and education centres in SOFC characterisation and modelling, and in biogas use as a fuel. Two cleaning approaches and hardware will be developed: one for small scale units (5-50 kWe), where a huge unutilised biogas potential resides (millions of farms, bio-wastes from municipalities) - here sulphur compounds (H2S and organic S) are removed by an appropriate solid sorbent matrix; one for medium-to-large scale units (≥500 kWe), which is the existing scale of landfill biogas and large bio-waste collection schemes - here sulphur compounds and siloxanes are removed among others by a novel cooling approach. For both cases the hardware will be built and installed on real biogas-sites treating different wastes. Gas analytics will validate the approaches. A 6 kWe SOFC system from a partner will run on a real agro-biogas site connected to the small scale sorbents cleaning unit. Cost projections for high volume production for both the cleaning and SOFC systems will be conducted. A detailed full system model will be implemented, considering the biogas feedstock, composition fluctuations (and dilution) and pollutant signatures, and optimizing thermal integration with biogas-inherent CO2 (for dry-dominant reforming) and digester heating, with the targets to maximise net electrical efficiency and minimise cost. An Advisory Board consisting of biogas producing SMEs will accompany the project to facilitate market access and support the post-project multiplication of the developed solutions.

Anno di stipula	2019
Tipo di progetto	N/A - Non applicabile
Programma UE	HORIZON 2020 JTI - Hydrogen
Data inizio	01-gen-19
Data scadenza	31-dic-20
Contributo totale	€ 1.681.603
Costo eleggibile totale	€ 1.681.603
Contributo a ENEA	€ 155.063
Costo eleggibile ENEA	€ 155.063
Doc. approvazione	71/E/2018/DTE
Codice atto	PT4AAV
Resp.scientifico ENEA	MC PHAIL STEPHEN JOHN
Unità	DTE-PCU-SPCT

Attività ENEA:

L'ENEA è coinvolta nei seguenti WP:
WP2 'Selezione e testing di materiali sorbenti per il clean up dei vari tipi di biogas';
WP3 'Selezione e analisi di catalizatori commerciali per il preforming del biogas purificato, con particolare attenzione alla reazione di dry reforming ed alla loro selettività, stabilità e resa rispetto a tale reazione. Testing di celle singole SOFC alimentate con biogas diretto e/o pre-reformato, valutando prestazioni, degrado e possibili effetti di contaminazione da residui di specie contaminanti attraverso il set-up dedicato per la misura di gradienti termini e chimici;
WP4 'Life Cycle assessment applicato al sistema biogas/clean-up/SOFC e confrontato con sistemi ICE);
WP5 'Gestione del piano di disseminazione e valorizzazione del know-how e del prodotto generato nel progetto, diffusione nei mercati e promozione del prodotto facendo leva sulle piattaforme dedicate europee, mediante l'organizzazione di workshop, la pubblicazione di articoli, la produzione di un filmato promozionale'.

N° Contratto: 641715

WaterWorks2014

Water Works 2014-2019 in Support of the Water JPI

Coordinatore MINISTERIO DE ECONOMIA Y COMPETITIVIDAD

n. partner: 23

Spagna

Abstract

Water is a critical resource for the European society. Beside its main life function, freshwater also provides many other functions essential to our economy. Water challenges cannot be successfully tackled through the isolated effort of individual national research and innovation programmes. This ERA-NET cofund proposal is submitted in the name of the Joint Programming Initiative "Water Challenges for a Changing World", and aims at contributing to tackle European water challenges through the development of transnational and trans-disciplinary research and innovation actions. WaterWorks2014 addresses the specific challenge of integrating the efforts and Strategic Agendas of many European Water Research and Innovation funding organizations. This ERA-NET cofund will implement a Call for proposals on "research and innovation developing technological solutions and services to support the implementation of EU water policy, in particular for water distribution and measurement, waste water treatment and reuse, desalination, floods and droughts etc." This Call for proposals will be funded by 18 organizations from 16 countries, and will have a total budget of 15.2 million Euro. This total budget includes a cofund from the European Commission amounting to 5.0 million Euro. WaterWorks2014 will also perform additional activities contributing to Water JPI Strategy and Implementation. Activities contributing to strategy include the development of new versions of the Water JPI Strategic Agenda and the Implementation Plan. Activities contributing to implementation include sharing good practices on Water research and innovation funding and management, exploratory workshops, alignment of on-going projects and the monitoring and final evaluation of Calls without cofunding. WaterWorks2014 will benefit researchers, policy-makers, water authorities, utility operators, industry, farmers, and citizens by developing new solutions to water challenges.

Anno di stipula	2015
Tipo di progetto	ERANET COFUND
Programma UE	HORIZON 2020 Climate Action, Environment, Resource
Data inizio	01-feb-15
Data scadenza	01-feb-20
Contributo totale	€ 6.062.000
Costo eleggibile totale	€ 18.369.000
Contributo a ENEA	€ 34.000
Costo eleggibile ENEA	€ 60.000
Doc. approvazione	236/2015/COMM
Codice atto	IO189
Resp.scientifico ENEA	FARINA ROBERTO
Unità	DTE-BBC-BBE

Attività ENEA:

L'ENEA parteciperà alla stesura di alcuni documenti e ai meeting di progetto.

N° Contratto: 764717

WINWIND

Winning social acceptance for wind energy in wind energy scarce regions

Coordinatore UNIV. FREIE BERLINO
Germania

n. partner: 12

Abstract

The overall objective of WinWind is to enhance the socially inclusive and environmentally sound market uptake of wind energy by increasing its social acceptance in 'wind energy scarce regions' (WESR). The specific objectives are: screening, analysing, discussing, replicating, testing & disseminating feasible solutions for increasing social acceptance and thereby the uptake of wind energy. The proposal considers from a multidisciplinary perspective the case of WESR in DE, ES, IT, LV, PL and NO. These selected countries represent a variety of realities ranging from large (but with WESR) to very scarce wind energy penetration. WinWind analyses regional and local communities´ specificities, socioeconomic, spatial & environmental characteristics and the reasons for slow market deployment in the selected target regions. Best practices to overcome the identified obstacles are assessed and – where feasible – transferred. The operational tasks are taken up by national/regional desks consisting of the project partners, market actors and stakeholders in each country.
The project´s objectives will be reached by: i) analysing the inhibiting and driving factors for acceptance, ii) developing a taxonomy of barriers to identify similarities and differences in development patterns , iii) carrying out stakeholder dialogues in all participating regions, iv) developing acceptance-promoting measures that are transferable to specific local, regional and national contexts, and v) transferring feasible best practice solutions via learning labs. WinWind develops concrete solutions. The activities focus on novel informal/voluntary procedural participation of communities, direct and indirect financial participation & benefit sharing. Finally, policy lessons with validity across Europe are drawn and recommendations proposed. Already 62 stakeholders and market actors provided letters of support showing their commitment in supporting the WindWind activities and in implementing useful results.

Anno di stipula	2017
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-ott-17
Data scadenza	31-mar-20
Contributo totale	€ 2.124.463
Costo eleggibile totale	€ 2.124.463
Contributo a ENEA	€ 161.188
Costo eleggibile ENEA	€ 161.188
Doc. approvazione	39/E/2017/DTE
Codice atto	PT0AAC
Resp.scientifico ENEA	GIUFFRIDA LAURA GAETANA
Unità	STAV-VALTEC

Attività ENEA:

L'ENEA svolge le seguenti attività:
•WP6-TASK 6.1: La Task analizzerà le norme e le linee guida, non dal punto di vista della tecnologia, esistenti nei paesi e nelle regioni di WinWind (ad esempio distanze minime dagli insediamenti, norme specifiche per l'altezza, norme di protezione del rumore, infrasuoni, ecc.). La Task includerà anche nuove iniziative di bottom-up, accordi volontari e iniziative di etichettatura emergenti in alcuni Stati membri dell'UE e nelle regioni del modello di WinWind. I risultati della Task verranno presentati in un rapporto di screening comparativo.
•WP7:Task 7.5: Progettazione di un portale web. Il portale web sarà il punto focale per le attività di disseminazione di WinWind e sarà progettato e implementato per diffondere materiale, annunciare eventi e riportare i risultati dei WPs. A tal fine, il portale web sarà caratterizzato da elementi partecipativi strettamente connessi a un blog che sarà mantenuto e aggiornato, informerà e promuoverà discussioni in merito ai risultati e alle opinioni sviluppate all'interno della comunità WinWind
ENEA sarà coinvolta anche nelle attività di altri WPs per promuovere e disseminare ii risultati del progetto WINWIND.

N° Contratto: 777431

XLS

CompactLight

Coordinatore SINCROTRONE TRIESTE
Italia

n. partner: 24

Abstract

During the past decades Synchrotron Radiation facilities have seen an impetuous growth as a fundamental tool for the study of materials in a wide spectrum of sciences, technologies, and applications. The latest generation of light sources, the Free Electron Lasers, capable of delivering high-intensity photon beams of unprecedented brilliance and quality, provide a substantially novel way to probe matter and have very high, largely unexplored, potential for science and innovation. Currently, the FELs operating in EU are three, FERMI, FLASH and FLASH II, operating in the soft X-ray range and two are under commissioning, SwissFEL and EuroXFEL, which will operate in the hard X-ray scale.
While most of the worldwide existing FELs use conventional normal conducting 3 GHz S-band linacs, others use newer designs based on 6 GHz C-band technology, increasing the accelerating gradient with an overall reduction of the linac length and cost.
With CompactLight we intend to design a hard X-ray FEL facility beyond today's state of the art, using the latest concepts for bright electron photo injectors, very high-gradient X-band structures at 12 GHz, and innovative compact short-period undulators. If compared to existing facilities, the proposed facility will benefit from a lower electron beam energy, due to the enhanced undulator performance, be significantly more compact, as a consequence both of the lower energy and of the high-gradient X-band structures, have a much lower electrical power demand and a smaller footprint.
CompactLight gathers the world-leading experts in these domains, united to achieve two objectives: disseminate X-band technology as a new standard for accelerator-based facilities and advance undulators to the next generation of compact photon sources, with the aim of facilitating the widespread development of X-ray FEL facilities across and beyond Europe by making them more affordable to build and to operate.

Anno di stipula	2018
Tipo di progetto	RIA - Research and Innovation Action
Programma UE	HORIZON 2020 European Research Infrastructures
Data inizio	01-gen-18
Data scadenza	31-dic-20
Contributo totale	€ 2.999.500
Costo eleggibile totale	€ 3.009.500
Contributo a ENEA	€ 200.000
Costo eleggibile ENEA	€ 200.000
Doc. approvazione	214/2017/FSN
Codice atto	PF2AAF
Resp.scientifico ENEA	NGUYEN FEDERICO
Unità	FSN-FUSPHY-TSM

Attività ENEA:

Le principali attività ENEA riguardano lo studio di una struttura di tipo innovativo per una sorgente laser a elettroni liberi (FEL) in grado di fornire raggi X utili allo studio di sostanze biologiche e di materiale mediante una strumentazione più compatta che utilizzi nuove tecnologie sugli ondulatori magnetici e che riduca al contempo il consumo di energia.

N° Contratto: 845958

X-tendo

eXTENDing the energy performance assessment and certification schmes via a mOdular approach

Coordinatore UNIV. TECHNICAL WIEN
Austria

n. partner: 13

Abstract

X-tendo will support public authorities to transition to next-generation energy performance certification (EPC) schemes,including improved compliance, reliability, usability and convergence. The key output of the project will be the X-tendotoolbox, a freely available online knowledge hub that will be continued also beyond the project duration. It will contain 10innovative EPC features ranging from a smartness and a comfort indicator to building logbooks and how to improve EPCdatabases. For each feature the toolbox will include: (1) solution concepts and good practice examples, (2) description ofmethodological approaches, (3) calculation tools, and (4) implementation guidelines and recommendations. A selection oftwenty-nine test projects in nine different member states will demonstrate the potential of each feature as part of morereliable next-generation EPC schemes across the EU.Intensive stakeholder engagement, experience exchange activities, continuous dissemination and an ambitious exploitationstrategy will maximize X-tendo's impact across the EU. Direct impact on (future) policy making will be achieved by (1)understanding end-users and their needs, (2) engaging with public bodies covering at least 75% of the EU building stock, (3)close collaboration between policy makers and technical, communication and financial experts, (4) outreach to EU-wideinitiatives such as the Concerted Action on the EPBD and the European Energy Network, and (5) assessing the viability ofpolicy implementation.Improved and next-generation EPC schemes and the innovative handling and use of EPC-related data will push the markettowards better performing buildings and facilitate the interaction between building owners, the construction industry and thefinance sector. The combination of the expertise of the project partners and the actions and outputs of the project will steerEPC schemes across Europe to the next-generation requirements

Anno di stipula	2019
Tipo di progetto	CSA - Coordination and support action
Programma UE	HORIZON 2020 Energy
Data inizio	01-set-19
Data scadenza	31-ago-22
Contributo totale	€ 2.057.278
Costo eleggibile totale	€ 2.057.278
Contributo a ENEA	€ 66.756
Costo eleggibile ENEA	€ 66.756
Doc. approvazione	18/2019/DUEE-SIST
Codice atto	PW4AAB
Resp.scientifico ENEA	ZANGHIRELLA FABIO
Unità	DUEE-SIST-NORD

Attività ENEA:

L'ENEA effettua nel progetto una serie di test case con l'obiettivo di dimostrare l'applicabilità delle caratteristiche EPC di prossima generazione. L'ENEA applica su edifici reali alcuni moduli del toolbox verificando l'applicabilità delle caratteristiche da sviluppare nell'ambito del progetto e l'utilità del toolbox che sarà messo a disposizione dei decisori politici.

www.enea.it