



Funded Projects under Horizon 2020

Secure, clean and efficient energy

Low-Carbon Energy Calls 2015

Source: European Union Open Data Portal

<https://open-data.europa.eu/en/data/dataset/cordis-h2020projects-under-horizon-2020-2014-2020>

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This document gives information on calls and funded projects of the EU Framework Programme for Research and Innovation Horizon 2020 for the Societal Challenge – Secure, clean and efficient energy for the year 2015.

The data used in this document was extracted from the tables available at the website of the European Union Open Data Portal. More data is available in those tables.

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Topic LCE- 02– Projects

Topic: LCE-02-2015	Acronym: CHEOPS
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Production technology to achieve low Cost and Highly Efficient photovoltaic Perovskite Solar cells	
Starting date: 01.02.2016	End date: 31.01.2019
Total Cost: 5,042,913.75 €	EU max. contribution: 3,299,095.00 €
Coordinator: CSEM CENTRE SUISSE D'ELECTRONIQUE ET DE MICROTECHNIQUE SA - RECHERCHE ET DEVELOPPEMENT	
Participants: <ul style="list-style-type: none"> ▪ ACCELOPMENT AG ▪ OXFORD PHOTOVOLTAICS LIMITED ▪ FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. ▪ UNIVERSITA DEGLI STUDI DI ROMA TORVERGATA ▪ UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK ▪ Merck KGaA ▪ DE WILD-SCHOLTEN MARISKA JACOBA ▪ THE UNIVERSITY OF SALFORD ▪ ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE ▪ INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS ▪ THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD 	
Countries: FR;CH;UK;IE;DE;NL;IT	
Objectives: <p>The aim of CHEOPS is to develop very low-cost but highly performing photovoltaic (PV) devices based on the emerging perovskite (PK) technology. At lab scale (<0.5cm²), PK energy conversion was rapidly advanced to efficiencies >20%. But only few attempts at upscaling have been made, yielding significantly reduced efficiencies <9% on aperture area. In addition, the very question about material stability and reliable measurement procedures are still debated.</p> <p>CHEOPS will now scale up the lab results to single junction modules manufactured in a pre-production environment while maintaining high efficiencies (>14% stable for aperture area in modules >15x15cm²). This will demonstrate the potential of PK as a very low-cost technology (target <0.3€/Wp) well suited for building-integrated PV.</p> <p>In parallel, CHEOPS will develop materials and processes to achieve very high efficiency (>29% on 2x2cm² cells) at low cost (target <0.4€/Wp) using a tandem configuration with a crystalline silicon heterojunction cell.</p> <p>CHEOPS will also perform a sustainability assessment from a life-cycle perspective to anticipate potential risks for the technology (including business, technological, environmental, social & political risks). CHEOPS will establish a quantified future development roadmap as well as protocols for stability testing and for reliable measurements.</p> <p>CHEOPS partners cover the whole value added chain: key PK researchers, groups with track records of scaling up high efficiency and tandem cell developments, specialised technology and service providers as well as SMEs and industry partners with already strong IP portfolios, ready to exploit the CHEOPS results. Transferring the results to other growing industry sectors such as lighting or organic large area electronics will additionally benefit European industry.</p> <p>In summary, CHEOPS will decisively advance the potentially game-changing PK technology towards the market and will thus help to face the energy challenge in Europe and beyond.</p>	

Topic: LCE-02-2015	Acronym: CHPM2030
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Combined Heat, Power and Metal extraction from ultra-deep ore bodies	
Starting date: 01.01.2016	End date: 30.06.2019
Total Cost: 4,235,567.50 €	EU max. contribution: 4,235,567.50 €
Coordinator: MISKOLCI EGYETEM	
Participants:	
<ul style="list-style-type: none"> ▪ INSTITUTUL GEOLOGIC AL ROMANIEI ▪ LA PALMA RESEARCH CENTRE FOR FUTURE STUDIES SL ▪ VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. ▪ ISLENSKAR ORKURANNSOKNIR ▪ SZEGEDI TUDOMANYEGYETEM 	<ul style="list-style-type: none"> ▪ SVERIGES GEOLOGISKA UNDERSOKNING ▪ GUENTER TIESS ▪ Laboratorio Nacional de Energia e Geologia I.P. ▪ NATURAL ENVIRONMENT RESEARCH COUNCIL ▪ FEDERATION EUROPEENNE DES GEOLOGUES ▪ KATHOLIEKE UNIVERSITEIT LEUVEN
Countries: ES;HU;AT;FR;IS;PT;RO;SE;BE;UK	
Objectives:	
<p>CHPM2030 aims to develop a novel and potentially disruptive technology solution that can help satisfy the European needs for energy and strategic metals in a single interlinked process. Working at the frontiers of geothermal resources development, minerals extraction and electro-metallurgy the project aims at converting ultra-deep metallic mineral formations into an “orebody-EGS” that will serve as a basis for the development of a new type of facility for “Combined Heat, Power and Metal extraction” (CHPM). In the technology envisioned the metal-bearing geological formation will be manipulated in a way that the co-production of energy and metals will be possible, and may be optimised according to the market demands at any given moment in the future. The workplan has been set up in a way to provide proof-of-concept for the following hypotheses:</p>	
<ol style="list-style-type: none"> 1. The composition and structure of orebodies have certain advantages that could be used to our advantage when developing an EGS; 2. Metals can be leached from the orebodies in high concentrations over a prolonged period of time and may substantially influence the economics of EGS; 3. The continuous leaching of metals will increase system’s performance over time in a controlled way and without having to use high-pressure reservoir stimulation, minimizing potential detrimental impacts of both heat and metal extraction. 	
<p>As a final outcome the project will deliver blueprints and detailed specifications of a new type of future facility that is designed and operated from the very beginning as a combined heat, power and metal extraction system.</p>	
<p>The horizontal aim is to provide new impetus to geothermal development in Europe by investigating previously unexplored pathways at low-TRL. This will be achieved by developing a Roadmap in support of the pilot implementation of such system before 2025, and full-scale commercial implementation before 2030.</p>	

Topic: LCE-02-2015	Acronym: FlexiFuel-CHX
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Development of a fuel flexible and highly efficient ultra low emission residential-scale boiler with coupled heat recuperation based on flue gas condensation	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 4,309,610.00 €	EU max. contribution: 3,514,397.50 €
Coordinator: WINDHAGER ZENTRALHEIZUNG TECHNIK GMBH	
Participants:	
<ul style="list-style-type: none"> ▪ WUPPERTAL INSTITUT FUR KLIMA, UMWELT, ENERGIE GMBH. ▪ EVOPLAN AG ▪ BIOS BIOENERGIESYSTEME GMBH 	<ul style="list-style-type: none"> ▪ UNIVERSITEIT UTRECHT ▪ CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT ▪ TECHNISCHE UNIVERSITAET MUENCHEN
Countries: CH;ES;DE;NL;AT	
Objectives:	
<p>The project aims at the development of a new fuel flexible and highly efficient residential biomass heating technology (20 - 130 kW). It is based on the successful UleWIN wood chip and pellet boiler concept consisting of a fixed-bed updraft gasifier directly coupled with a Low-NOx gas burner and a hot water boiler, which shall be further developed for fuel flexible operation (utilisation of forest residues, SRF, miscanthus, olive stones, nut shells and agro-pellets). Moreover, a compact flue gas condensation system with integrated condensate neutralisation, also capable to operate with highly acidic flue gases from agricultural fuel combustion, shall be developed to increase the efficiency of the whole system up to 110% (related to the fuel NCV). An advanced control system as well as measures for improved system integration shall additionally increase the annual utilisation rate up to 95%. It is expected to achieve at the end of the project a TRL of 5.</p> <p>These objectives are very relevant to the work programme since they focus on highly efficient and fuel flexible residential heat production at almost zero CO and OGC emissions, by 50% reduced NOx emissions (compared with conventional boilers) as well as ultra-low PM emissions below 13 mg/MJ (even when utilising K-rich fuels). Since this shall be reached by primary measures only, fuel flexible heat generation will be possible at reduced heat generation costs in comparison to present heating systems.</p> <p>To fulfil these goals an overall methodology shall be applied which is divided into a technology development part (based on process simulations, computer aided design of the single units, test plant construction, performance and evaluation of test runs) as well as a technology assessment part covering risk, techno-economic, environmental and overall impact assessments, market studies regarding the possible potentials for application of the new technology as well as dissemination activities.</p>	

Topic: LCE-02-2015	Acronym: GeoWell
Call: H2020-LCE-2015-1-two-stageH2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Innovative materials and designs for long-life high-temperature geothermal wells	
Starting date: 01.02.2016	End date: 31.01.2019
Total Cost: 4,704,913.75 €	EU max. contribution: 4,704,913.75 €
Coordinator: ISLENSKAR ORKURANNSOKNIR	
Participants:	
<ul style="list-style-type: none"> ▪ AKIET BV ▪ HS ORKA HF ▪ STATOIL PETROLEUM AS ▪ BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES ▪ INTERNATIONAL RESEARCH INSTITUTE OFSTAVANGER AS 	<ul style="list-style-type: none"> ▪ NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO ▪ HELMHOLTZ ZENTRUM POTSDAM DEUTSCHES GEOFORSCHUNGSZENTRUM
Countries: IS;FR;NL;NO;DE	
Objectives:	
<p>New concepts for high-temperature geothermal well technologies are strongly needed to accelerate the development of geothermal resources for power generation in Europe and worldwide in a cost effective and environmentally friendly way. The GeoWell project will address the major bottlenecks like high investment and maintenance costs by developing innovative materials and designs that are superior to the state of the art concepts. The lifetime of a well often determines the economic viability of a geothermal project. Therefore, keeping the geothermal system in operation for several decades is key to the economic success.</p> <p>The objective of GeoWell is to develop reliable, cost effective and environmentally safe well completion and monitoring technologies. This includes:</p> <ul style="list-style-type: none"> - Reducing down time by optimised well design involving corrosion resistant materials. - Optimisation of cementing procedures that require less time for curing. - Compensate thermal strains between the casing and the well. - Provide a comprehensive database with selective ranking of materials to prevent corrosion, based on environmental conditions for liners, casings and wellhead equipment, up to very high temperatures. - To develop methods to increase the lifetime of the well by analysing the wellbore integrity using novel distributed fiber optic monitoring techniques. - To develop advanced risk analysis tools and risk management procedures for geothermal wells. <p>The proposed work will significantly enhance the current technology position of constructing and operating a geothermal well. GeoWell aims to put Europe in the lead regarding development of deep geothermal energy.</p> <p>The consortium behind GeoWell constitutes a combination of experienced geothermal developers, leading academic institutions, major oil&gas research institutions and an SME. These have access to world-class research facilities including test wells for validation of innovative technologies and laboratories for material testing.</p>	

Topic: LCE-02-2015	Acronym: MinWaterCSP
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: MinWaterCSP - Minimized water consumption in CSP plants	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 5,861,371.75 €	EU max. contribution: 5,861,371.75 €
Coordinator: KELVION HOLDING GMBH	
Participants:	
<ul style="list-style-type: none"> ▪ INSTITUT DE RECHERCHES EN ENERGIE SOLAIRE ET ENERGIES NOUVELLES ▪ LATERIZI GAMBETTOLA SRL ▪ STELLENBOSCH UNIVERSITY ▪ UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA ▪ KELVION THERMAL SOLUTIONS (PTY) LTD 	<ul style="list-style-type: none"> ▪ WATERLEAU GROUP NV ▪ Steinbeis Innovation gGmbH ▪ ENEXIO GERMANY GMBH ▪ NOTUS FAN ENGINEERING ▪ ECILIMP TERMOSOLAR SL ▪ FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
Countries: DE;ZA;ES;BE;IT;MA	
Objectives:	
<p>MinWaterCSP addresses the challenge of significantly reducing the water consumption of CSP plants while maintaining their overall efficiency. Its objective is to reduce evaporation losses and mirror cleaning water usage for small- and large-scale CSP plants through a holistic combination of next generation technologies in the fields of i) hybrid dry/wet cooling systems ii) wire structure heat transfer surfaces iii) axial flow fans iv) mirror cleaning techniques and v) optimized water management. MinWaterCSP will reduce water evaporation losses by 75 to 95% compared to wet cooling systems. It aims to increase the net efficiency of the steam Rankine cycle by 2%, or alternatively reduce the capital cost of a dry-cooling system by 25%, while maintaining cycle efficiency. To complement this, mirror cleaning water consumption will be reduced by 25% through an improved mirror cleaning process for parabolic trough collectors, the development of a cleaning robot for linear Fresnel collectors and a reduced number of cleaning cycles enabled by an enhanced monitoring of the reflectance of the mirrors. Also, comprehensive water management plans for CSP plants in various locations will be developed and combined with plant performance simulations to maximize the impact of the achieved design improvements in a complete system context. Zero liquid discharge and the option of making use of solar energy or low grade waste heat for water treatment will be considered. MinWaterCSP will improve the cost-competitiveness of CSP. This will make CSP more attractive for investment purposes and drives growth in the CSP plant business as well as job creation at European companies which provide technologically advanced CSP plant components. In addition, by making CSP technology more attractive MinWaterCSP contributes to solve the global climate challenge by reducing carbon-dioxide emissions and increasing energy generation from renewable resources.</p>	

Topic: LCE-02-2015	Acronym: OPERA
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Open Sea Operating Experience to Reduce Wave Energy Cost	
Starting date: 01.02.2016	End date: 31.07.2019
Total Cost: 5,741,263.75 €	EU max. contribution: 5,741,263.75 €
Coordinator: FUNDACION TECNALIA RESEARCH & INNOVATION	
Participants:	
<ul style="list-style-type: none"> ▪ UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK ▪ KYMANER-TECNOLOGIAS ENERGETICAS LDA ▪ THE UNIVERSITY OF EDINBURGH ▪ Global Maritime Consultancy Ltd. ▪ ENTE VASCO DE LA ENERGIA 	<ul style="list-style-type: none"> ▪ INSTITUTO SUPERIOR TECNICO ▪ THE UNIVERSITY OF EXETER ▪ DNV GL UK LIMITED ▪ IBERDROLA ENGINEERING AND CONSTRUCTION UK LIMITED ▪ BISCAY MARINE ENERGY PLATFORM SA ▪ OCEANTEC ENERGIAS MARINAS SL
Countries: UK;IE;PT;ES	
Objectives:	
<p>Europe is endowed with abundant wave energy which could cover some 10% of its electricity needs with a clean, predictable and job-creating resource, which EU companies are at the forefront exploiting with little dependence on foreign suppliers.</p> <p>There remain important technical challenges to bring down costs to within investors' reach, as a top priority open-sea operating experience must be analysed to permit the focus of R&D efforts on identifying and solving problems uncovered in open-sea deployments. However, to this day, most wave energy R&D does not have access to open-sea operating data as they are not shared by the companies that sponsored open-sea tests.</p> <p>OPERA will remove this roadblock by collecting and sharing two years of open-sea operating data of a floating oscillating water column wave energy converter. In addition the project will be the first open-sea deployment for four cost-reducing innovations that will be advanced from TRL3-4 to TRL5. Together, these four innovations have a long-term cost reduction potential of over 50%. These are: a 50% more efficient turbine, latching and predictive control, a shared mooring system for wave energy similar to those that have reduced mooring costs 50% in aquaculture, and an elastomeric mooring tether that reduces peak loads at the hull-mooring connection 70% and thus addresses one of the most pressing challenges for structural survivability of wave energy devices.</p> <p>Documenting and sharing this open-sea experience will also induce a step-change in our knowledge of risk and uncertainties, costs and societal and environmental impacts of wave energy. The consortium brings together world leaders in wave energy research from four European countries and the IPR owner and most advanced teams to exploit each of these innovations.</p> <p>Last but not least, the project brings national in-cash co-financing of over €2 million to directly fund the open-sea testing.</p>	

Topic: LCE-02-2015	Acronym: PowerKite
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: PowerKite - Power Take-Off System for a Subsea Tidal Kite	
Starting date: 01.01.2016	End date: 30.06.2018
Total Cost: 5,074,363.65 €	EU max. contribution: 5,074,363.65 €
Coordinator: THE QUEEN'S UNIVERSITY OF BELFAST	
Participants: <ul style="list-style-type: none"> ▪ MOORLINK SOLUTIONS AB ▪ UW-ELAST AB ▪ SSPA SWEDEN AB. ▪ MINESTO AB ▪ MIDROC PROJECT MANAGEMENT AB ▪ APPLIED COMPUTING & ENGINEERING LIMITED ▪ CHALMERS TEKNISKA HOEGSKOLA AB ▪ BELGISCH LABORATORIUM VAN DE ELEKTRICITEITSINDUSTRIE 	
Countries: SE;UK;BE	
Objectives: <p>The PowerKite project will design, build and deploy a power take-off system (PTO) for novel tidal energy collector concept, the Deep Green subsea tidal kite. The overall objective of the PowerKite project is to gather experience in open sea conditions to enhance the structural and power performance of the PTO for a next generation tidal energy converter to ensure high survivability, reliability and performance, low environmental impact and competitive cost of energy in the (future) commercial phases. The core innovation of the project resides in the electro-mechanical design of the PTO, allowing the array to be deployed in sites with low velocity currents. The project will develop full-scale components of the turbine, generator, seabed power electronics, array transformer and subsea export cable. The project will also develop a new material for the mooring system (tether) combining the required buoyancy (to avoid the seafloor and the surface) with the appropriate modulus, strength and fatigue properties (to hold an oscillating load of 200 tons). Open sea trials will play a crucial role in the project as the deployment of the first full scale Deep Green prototype (funded via separate ERDF funding) will enable extensive offshore data collection for the PTO system. The Powerkite project has the potential to double the tidal power market potential, decrease the cost of energy with up to 60% and decrease the weight per installed MW at least 20 times compared to other tidal energy converters. The project has a budget of 5.1M Euros and gathers 9 partners from 3 countries. Over 30 months, the project will progress the state of the art in several fields: PTO modelling, electrical design, mechanical design, data acquisition, analysis and optimisation.</p>	

Topic: LCE-02-2015	Acronym: Residue2Heat
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Renewable residential heating with fast pyrolysis bio-oil	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 5,466,478.75 €	EU max. contribution: 5,465,728.00 €
Coordinator: RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN	
Participants:	
<ul style="list-style-type: none"> ▪ OWI Oel-Waerme Institut GmbH ▪ BTG BIOLIQUIDS B.V. ▪ MEKU ENERGIE SYSTEME GMBH & CO. KG ▪ B.T.G. BIOMASS TECHNOLOGY GROUP BV 	<ul style="list-style-type: none"> ▪ UNIVERSITAET INNSBRUCK ▪ POLITECNICO DI MILANO ▪ CONSIGLIO NAZIONALE DELLE RICERCHE ▪ Teknologian tutkimuskeskus VTT Oy
Countries: DE;NL;IT;AT;FI	
Objectives:	
<p>The overall objective of Residue2Heat is to enable the utilization of sustainable, ash rich biomass and residues in residential heating applications (20-200 kWth) to provide sustainable heat at a competitive price. In this concept, various 2nd generation agricultural, and forestry residue streams are converted into a liquid energy carrier near the biomass origin at an economic viable scale of 15-30 MWth using the fast pyrolysis process. Subsequently, the fast pyrolysis bio-oil (FPBO) is distributed to a large number of residential end-users. The FPBO should fulfill at least the draft CEN-specification for replacement of domestic heating oil and comply with REACH regulation. Additional quality control aspects for this application include the removal of extractives and solids from the FPBO. Ash is recovered from the fast pyrolysis process as a separate stream, and recycling and/or re-use will be evaluated in detail. Existing high efficient, condensing boilers are used as starting point in the project, as well as a proven, low emission blue-flame type burner. Within Residue2Heat technical development work is performed on the modification of such systems to enable FPBO as fuel. The emission control and energy efficiency of the heating systems are optimized by dedicated modeling of FPBO atomization and combustion kinetics, supported by single droplet combustion tests and spray characterization. This route benefits from the flexible nature of the fast pyrolysis process, allowing the use of various lignocellulosic biomass streams, but also by using modified residential heating systems for which manufacturing capabilities, market development and product distribution are already in place. Dedicated tasks are included to assess the environmental and social impacts, risks analysis and public acceptance. Additionally, business and market assessment activities are performed including specific issues on health and safety relevant to FPBO-fuelled residential boilers.</p>	

Topic: LCE-02-2015	Acronym: SOLPART
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: High Temperature Solar-Heated Reactors for Industrial Production of Reactive Particulates	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 4,558,687.50 €	EU max. contribution: 4,366,562.50 €
Coordinator: CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE	
Participants: <ul style="list-style-type: none"> ▪ NEW LIME DEVELOPMENT ▪ EUROPEAN POWDER AND PROCESS TECHNOLOGY BVBA ▪ ABENGOA RESEARCH SL ▪ CEMEX RESEARCH GROUP AG ▪ UNIVERSITE CADI AYYAD ▪ EURONOVIA ▪ COMESSA SA ▪ THE UNIVERSITY OF MANCHESTER ▪ DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV 	
Countries: DE;UK;MA;FR;CH;BE;ES	
Objectives: <p>The main objective of the SOLPART project is to develop, at pilot scale, a high temperature (950°C) 24h/day solar process suitable for particle treatment in energy intensive industries (e.g. cement or lime industries). The project aims at supplying totally or partially the thermal energy requirement for CaCO₃ calcination by high temperature solar heat thus reducing the life cycle environmental impacts of the process and increasing the attractiveness of renewable heating technologies in process industries.</p> <p>This will be achieved by the demonstration of a pilot scale solar reactor suitable for calcium carbonate decomposition (Calcination reaction: $\text{CaCO}_3 = \text{CaO} + \text{CO}_2$) and to simulate at prototype scale a 24h/day industrial process (TRL 4-5) thereby requiring a high-temperature transport and storage system. The system will operate at 950°C and will include a 30 kWth solar reactor producing 30 kg/h CaO and a 16h hot CaO storage. Life cycle environmental impacts of the solar-based solution in comparison with standard processes will be developed as well as economic evaluation.</p> <p>The project develops and merges three advanced technologies: high temperature solar reactor, transport of high-temperature solid materials and high temperature thermal storage. The synergy between these technologies lies in using the solar-treated particles as storage medium.</p> <p>The development of a such innovative technology for continuous particle processed by concentrated solar energy at about 950°C is unique in the world. Thanks to the solar unit integration in the industrial process (potentially combined with CO₂ capture), this should result in the considerable reduction of the carbon footprint of the CO₂ emitter industries and open a new market for renewable energies.</p>	

Topic: LCE-02-2015	Acronym: SURE
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Novel Productivity Enhancement Concept for a Sustainable Utilization of a Geothermal Resource	
Starting date: 01.03.2016	End date: 31.08.2019
Total Cost: 6,143,415.00 €	EU max. contribution: 5,892,165.00 €
Coordinator: Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum	
Participants:	
<ul style="list-style-type: none"> ▪ DANMARKS TEKNISKE UNIVERSITET ▪ Gamtos tyrimų centras ▪ GEOTERMA UAB ▪ WELLSERVICES BV ▪ ISLENSKAR ORKURANNSOKNIR ▪ TECHNISCHE UNIVERSITEIT DELFT 	<ul style="list-style-type: none"> ▪ IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE ▪ NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO ▪ HOCHSCHULE BOCHUM
Countries: NL;UK;DE;IS;LT;DK	
Objectives:	
<p>Within the project SURE (Novel Productivity Enhancement Concept for a Sustainable Utilization of a Geothermal Resource) the radial water jet drilling (RJD) technology will be investigated and tested as a method to increase inflow into insufficiently producing geothermal wells. Radial water jet drilling uses the power of a focused jet of fluids, applied to a rock through a coil inserted in an existing well. This technology is likely to provide much better control of the enhanced flow paths around a geothermal well and does not involve the amount of fluid as conventional hydraulic fracturing, reducing the risk of induced seismicity considerably. RJD shall be applied to access and connect high permeable zones within geothermal reservoirs to the main well with a higher degree of control compared to conventional stimulation technologies.</p> <p>A characterization of the parameters controlling the jet-ability of different rock formations, however, has not been performed for the equipment applied so far. SURE will investigate the technology for deep geothermal reservoir rocks at different geological settings such as deep sedimentary basins or magmatic regions at the micro-, meso- and macro-scale. Laboratory tests will include the determination of parameters such as elastic constants, permeability and cohesion of the rocks as well as jetting experiments into large samples in. Samples will be investigated in 3D with micro CT scanners and with standard microscopy approaches. In addition, advanced modelling will help understand the actual mechanism leading to the rock destruction at the tip of the water jet. Last but not least, experimental and modelling results will be validated by controlled experiments in a quarry (mesoscale) which allows precise monitoring of the process, and in two different geothermal wells. The consortium includes the only company in Europe offering the radial drilling service.</p>	

Topic: LCE-02-2015	Acronym: TELWIND
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: INTEGRATED TELESCOPIC TOWER AND EVOLVED SPAR FLOATING SUBSTRUCTURE FOR LOW-COST DEEP OFFSHORE WIND AND NEXT GENERATION OF 10MW+ TURBINES	
Starting date: 01.12.2015	End date: 31.05.2018
Total Cost: 3,498,530.00 €	EU max. contribution: 3,498,530.00 €
Coordinator: ESTEYCO SAP	
Participants: <ul style="list-style-type: none"> ▪ DYWIDAG SYSTEMS INTERNATIONAL GMDH ▪ COBRA INSTALACIONES Y SERVICIOS S.A ▪ UNIVERSIDAD DE CANTABRIA ▪ ALE HEAVYLIFT (R&D) BV ▪ TECHNISCHE UNIVERSITAET MUENCHEN ▪ CENTRO DE ESTUDIOS Y EXPERIMENTACION DE OBRAS PUBLICAS - CEDEX ▪ MECAL WIND TURBINE DESIGN BV 	
Countries: DE;NL;ES	
Objectives: <p>TELWIND unites a strong complimentary team of renowned European companies and research institutions, which join forces to develop a revolutionary integrated floating offshore system. The concept, which has already undergone trial tank testing with overly positive results, shall enable a radical cost reduction both in terms of material usage and required means and operations.</p> <p>The system has been conceived in a holistic approach to the overall substructure, tower and turbine, generating ground breaking synergies between the integrated elements to specifically address the particular requirements of offshore wind, focusing in the capacity for low-cost industrialization in the inshore construction and offshore installation processes.</p> <p>The Telwind concept integrates a novel floating substructure and a pioneer self-erecting telescopic tower. The former provides all the performance advantages of a spar-buoy substructure while allowing for qualitatively lower material usage, the latter enables a full onshore preassembly of the overall system and a highly beneficial reduction of offshore works and auxiliary means. Together they overcome the limitations imposed by the available inshore infrastructure and offshore heavylift vessels, and thus generate a fully scalable system, perfectly fitted for the effective integration of the next generation of extremely large (10MW+) offshore wind turbines which are key to enhance the reduction of the Levelised Cost of Energy (LCOE).</p> <p>The system will also profit from the proven structural efficiency and economy of precast concrete, a material particularly well suited for low-cost industrialized production of repetitive units. Robust, reliable and virtually maintenance-free marine constructions result, reducing OPEX costs, greatly increasing durability and fatigue tolerance, and setting the ground for extended service life of the infrastructure, which could further magnify the system's capacity for drastic reduction of the LCOE.</p>	

Topic: LCE-02-2015	Acronym: WASCOP
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Water Saving for Solar Concentrated Power	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 5,941,607.50 €	EU max. contribution: 5,941,607.50 €
Coordinator: COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	
Participants:	
<ul style="list-style-type: none"> ▪ ARCHIMEDE SOLAR ENERGY SRL ▪ RIOGLASS SOLAR SA ▪ MOROCCAN AGENCY FOR SOLAR ENERGY SA ▪ CRANFIELD UNIVERSITY ▪ DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV 	<ul style="list-style-type: none"> ▪ AMIRES SRO ▪ OMT SOLUTIONS BV ▪ FUNDACION TEKNIKER ▪ CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT ▪ HAMON D'HONDT
Countries: CZ;DE;ES;NL;MA;FR;IT;UK	
Objectives:	
<p>Concentrating Solar Power is one of the most promising and sustainable renewable energy and is positioned to play a massive role in the future global generation mix, alongside wind, hydro and solar photovoltaic technologies. Although there is definitely perspective for the technology for rapid grow, success of CSP will ultimately rely on the ability to overcome obstacles that prevent its mass adoption, especially the large financial demand and limited accessibility of water. Water saving is therefore one of the major issues to ensure a financially competitive position of CSP plants and their sustainable implementation.</p> <p>To overcome such challenges, WASCOP brings together leading EU and Moroccan Institutions, Universities, and commercial SMEs and industry. They join their forces to develop a revolutionary innovation in water management of CSP plants - flexible integrated solution comprising different innovative technologies and optimized strategies for the cooling of the power-block and the cleaning of the solar field optical surfaces.</p> <p>WASCOP main advantage consists in the ability to reflect and adapt to the specific conditions prevailing at individual CSP plants, unlike other competitive approaches proposing a single generic solution applicable only on some referenced cases. The WASCOP holistic solution provides an effective combination of technologies allowing a significant reduction in water consumption (up to 70% - 90%) and a significant improvement in the water management of CSP plants.</p> <p>To demonstrate the benefits (whether economic or environmental), the developed system will be tested and validated in real conditions of four testing sites in France, Spain and Morocco after preliminary demonstration in laboratory environment.</p>	

Topic LCE-03 – Projects

Topic: LCE-03-2015	Acronym: DEEPEGS
Call: H2020-LCE-2015-2	Type of Action: IA
Title: DEPLOYMENT OF DEEP ENHANCED GEOTHERMAL SYSTEMS FOR SUSTAINABLE ENERGY BUSINESS	
Starting date: 01.12.2015	End date: 30.11.2019
Total Cost: 44,057,258.66 €	EU max. contribution: 19,999,740.88 €
Coordinator: HS ORKA HF	
Participants: <ul style="list-style-type: none"> ▪ KARLSRUHER INSTITUT FUER TECHNOLOGIE ▪ ISLENSKAR ORKURANNSOKNIR ▪ LANDSVIRKJUN SAMEIGNARFELAG ▪ FONROCHE GEOTHERMIE SAS ▪ GEORG-RANNSOKNARKLASI I JARDHITA ▪ ENEL GREEN POWER ▪ Herrenknecht Vertical GmbH ▪ BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES ▪ STATOIL PETROLEUM AS 	
Countries: FR;IT;NO;IS;DE	
Objectives: <p>Our goal with the DEEPEGS project is to demonstrate the feasibility of enhanced geothermal systems (EGS) for delivering energy from renewable resources in Europe. Testing of stimulating technologies for EGS in deep wells in different geologies, will deliver new innovative solutions and models for wider deployments of EGS reservoirs with sufficient permeability for delivering significant amounts of geothermal power across Europe. DEEPEGS will demonstrate advanced technologies in three geothermal reservoir types that provide all unique condition for demonstrating the applicability of this “tool bag” on different geological conditions. We will demonstrate EGS for widespread exploitation of high enthalpy heat (i) beneath existing hydrothermal field at Reykjanes (volcanic environment) with temperature up to 550°C and (ii) very deep hydrothermal reservoirs at Valence (crystalline and sandstone) and Vistrenque (limestone) with temperatures up to 220°C. Our consortium is industry driven with five energy companies that are capable of implementing the project goal through cross-fertilisation and sharing of knowledge. The companies are all highly experienced in energy production, and three of them are already delivering power to national grids from geothermal resources. The focus on business cases will demonstrate significant advances in bringing EGS derived energy (TRL6-7) routinely to market exploitation, and has potential to mobilise project outcomes to full market scales following the end of DEEPEGS project. We seek to understand social concerns about EGS deployments, and will address those concerns in a proactive manner, where the environment, health and safety issues are prioritised and awareness raised for social acceptance. We will through risk analysis and hazard mitigation plans ensure that relevant understanding of the risks and how they can be minimised and will be implemented as part of the RTD approaches, and as a core part of the business case development.</p>	

Topic: LCE-03-2015	Acronym: DEMOGRAVI3
Call: H2020-LCE-2015-2	Type of Action: IA
Title: Demonstration of the GRAVI3 technology – innovative gravity foundation for offshore wind	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 26,523,602.50 €	EU max. contribution: 19,037,465.51 €
Coordinator: EDP RENEWABLES EUROPE SL	
Participants:	
<ul style="list-style-type: none"> ▪ FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. ▪ WAVEC/OFFSHORE RENEWABLES - CENTRO DE ENERGIA OFFSHORE ASSOCIACAO ▪ CNET - Centre for New Energy Technologies, S.A. 	<ul style="list-style-type: none"> ▪ Global Maritime AS ▪ GAVIN AND DOHERTY GEOSOLUTIONS LTD ▪ ACCIONA INFRAESTRUCTURAS S.A. ▪ UNIVERSIDAD POLITECNICA DE MADRID ▪ TECNICA Y PROYECTOS SA ▪ A. Silva Matos - Energia, SA
Countries: NO;PT;DE;ES;IE	
Objectives:	
<p>Offshore wind business competitiveness is strongly related to substructures and offshore logistics. DEMOGRAVI3 addresses these areas through a very promising solution called GRAVI3.</p> <p>GRAVI3 is an innovative hybrid steel-concrete offshore sub-structure for transitional water depths between 35 and 60m. It will sustainably reduce the levelized cost of energy by up to 15% by combining the following vectors:</p> <ul style="list-style-type: none"> - Using three concrete caissons, with water ballast, instead of more complex and costly steel solutions and anchoring systems - Using a smaller steel structure - Performing all construction and assembly onshore and towing the complete unit to the site where it is submerged with an innovative and robust method. - Preventing the use of heavy lift vessels and reducing the level of complexity and risk of offshore operations. <p>GRAVI3 has undergone the typical technology development process and is presently at TRL5. The logical next steps is the demonstration at full scale in real operational conditions. Thus, the project fits perfectly to the addressed Call for Proposals as the project will support technology development and bring the technology close to market readiness.</p> <p>The proposed project will design, engineer, build, assemble, transport, install and demonstrate a full scale foundation, equipped with a 2 MW offshore wind turbine, in a consented and grid connected demonstration site. Additionally, the project will undertake further technology development for improved design and perform an in depth evaluation of the technology's future industrialization, competitiveness and bankability.</p> <p>The core partners are committed to bring the GRAVI3 technology to market intending to 1) form a company with the objective to commercialize the GRAVI3 technology; 2) prepare themselves to take on important segments of the industrial value chain which will be put in place to move the GRAVI3 product forward; 3) foster the use of the technology, namely in the wind farms they are developing.</p>	

Topic: LCE-03-2015	Acronym: DESTRESS
Call: H2020-LCE-2015-2	Type of Action: IA
Title: Demonstration of soft stimulation treatments of geothermal reservoirs	
Starting date: 01.03.2016	End date: 29.02.2020
Total Cost: 25,072,511.25 €	EU max. contribution: 10,713,408.63 €
Coordinator: Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum	
Participants: <ul style="list-style-type: none"> ▪ KOREA INSTITUTE OF CIVIL ENGINEERING AND BUILDING TECHNOLOGY ▪ SEOUL NATIONAL UNIVERSITY ▪ NEXGEO INC ▪ UNIVERSITE DE STRASBOURG ▪ GEOTERMA UAB ▪ EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH ▪ GEO-ENERGIE SUISSE AG ▪ ENBW ENERGIE BADEN-WURTTEMBERG AG ▪ TRIAS WESTLAND BV ▪ ECW GEOMANAGEMENT BV ▪ TECHNISCHE UNIVERSITEIT DELFT ▪ GEOTHERMIE NEUBRANDENBURG GMBH ▪ NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO ▪ UNIVERSITY OF GLASGOW ▪ ES-GEOTHERMIE 	
Countries: NL;FR;UK;KR;CH;DE;LT	
Objectives: <p>DESTRESS is aimed at creating EGS (Enhanced geothermal systems) reservoirs with sufficient permeability, fracture orientation and spacing for economic use of underground heat. The concepts are based on experience in previous projects, on scientific progress and developments in other fields, mainly the oil & gas sector. Recently developed stimulation methods will be adapted to geothermal needs, applied to new geothermal sites and prepared for the market uptake. Understanding of risks in each area (whether technological, in business processes, for particular business cases, or otherwise), risk ownership, and possible risk mitigation will be the scope of specific work packages.</p> <p>The DESTRESS concept takes into account the common and specific issues of different sites, representative for large parts of Europe, and will provide a generally applicable workflow for productivity enhancement measures. The main focus will be on stimulation treatments with minimized environmental hazard (“soft stimulation”), to enhance the reservoir in several geological settings covering granites, sandstones, and other rock types. The business cases will be shown with cost and benefit estimations based on the proven changes of the system performance, and the environmental footprint of treatments and operation of the site will be controlled. In particular, the public debate related to “fracking” will be addressed by applying specific concepts for the mitigation of damaging seismic effects while constructing a productive reservoir and operating a long-term sustainable system.</p> <p>Industrial participation is particularly pronounced in DESTRESS, including large energy suppliers as well as SMEs in the process of developing their sites. The composition of the consortium involving major knowledge institutes as well as key industry will guarantee the increase in technology performance of EGS as well as an accelerated time to market.</p>	

Topic: LCE-03-2015	Acronym: ELICAN
Call: H2020-LCE-2015-2	Type of Action: IA
Title: SELF-INSTALLING TELESCOPIC SUBSTRUCTURE FOR LOW-COST CRANELESS INSTALLATION OF COMPLETE OFFSHORE WIND TURBINES. DEEP OFFSHORE 5MW PROTOTYPE	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 17,107,301.25 €	EU max. contribution: 11,181,986.88 €
Coordinator: ESTEYCO SAP	
Participants:	
<ul style="list-style-type: none"> ▪ DEWI GMBH - DEUTSCHES WINDENERGIE INSTITUT ▪ ADWEN OFFSHORE S.L. 	<ul style="list-style-type: none"> ▪ ALE HEAVYLIFT (R&D) BV
Countries: ES;NL;DE	
Objectives:	
<p>In ELICAN, a strong team of complementary European companies with worldwide leading presence in the Wind Energy industry join forces to provide the market with a disruptive high-capacity and cost-reducing integrated substructure system for deep offshore wind energy. The technology is exceptionally fitted to meet the technical and logistical challenges of the sector as it moves into deeper locations with larger turbines, while allowing for drastic cost reduction.</p> <p>This project will design, build, certify and fully demonstrate in operative environment a deep water substructure prototype supporting Adwen's 5MW offshore wind turbine, the be installed in the Southeast coast of Las Palmas (Canary Islands). It will become the first bottom-fixed offshore wind turbine in all of Southern Europe and the first one worldwide to be installed with no need of heavy-lift vessels.</p> <p>The revolutionary substructure consists in an integrated self-installing precast concrete telescopic tower and foundation that will allow for crane-free offshore installation of the complete substructure and wind turbine, thus overcoming the constraints imposed by the dependence on heavy-lift vessels. It will allow for a full inshore preassembly of the complete system, which is key to generate a highly industrialized low-cost manufacturing process with fast production rates and optimized risk control.</p> <p>The main benefits to be provided by this ground-breaking technology are:</p> <ul style="list-style-type: none"> • Significant cost reduction (>35%) compared with current solutions. • Direct scalability in terms of turbine size, water depth, infrastructure and installation means. • Complete independence of heavy-lift vessels • Excellently suited for fast industrialized construction. • Robust and durable concrete substructure for reduced OPEX costs and improved asset integrity. • Suitable for most soil conditions, including rocky seabeds. • Enhanced environmental friendliness regarding both impact on sea life and carbon footprint. 	

Topic: LCE-03-2015	Acronym: FloTEC
Call: H2020-LCE-2015-2	Type of Action: IA
Title: Floating Tidal Energy Commercialisation project (FloTEC)	
Starting date: 01.01.2016	End date: 30.06.2019
Total Cost: 13,711,731.50 €	EU max. contribution: 9,782,380.25 €
Coordinator: SCOTRENEWABLES TIDAL POWER LIMITED	
Participants: <ul style="list-style-type: none"> ▪ UNIVERSITY COLLEGE CORK - NATIONAL UNIVERSITY OF IRELAND, CORK ▪ EIRECOMPOSITES TEORANTA ▪ EUROPEAN MARINE ENERGY CENTRE LTD ▪ DP Energy Ireland Limited ▪ SKF GMBH ▪ TECHNOLOGY FROM IDEAS LIMITED ▪ ABB LIMITED ▪ HARLAND AND WOLFF HEAVY INDUSTRIES LIMITED 	
Countries: UK;DE;IE	
Objectives: <p>The FloTEC project will demonstrate the potential for floating tidal stream turbines to provide low-cost, high-value energy to the European grid mix. The FloTEC project has 5 core objectives:</p> <ol style="list-style-type: none"> 1. Demonstrate a full-scale prototype floating tidal energy generation system for optimised energy extraction in locally varying tidal resources; 2. Reduce the Levelised Cost of Energy of floating tidal energy from current estimated €250/MWh to €200/MWh, through both CAPEX and OPEX cost reductions in Scotrenewables Tidal Technology; 3. Develop potential of tidal energy generation towards flexible, baseload generation, through the integration of energy storage. 4. Demonstrate the potential for centralised MV power conversion to provide a generic, optimised low-cost solution for tidal arrays 5. Progress tidal energy towards maturity and standard project financing by reducing cost and risk, improving reliability, and developing an advanced financing plan for first arrays. <p>This will be realised through the construction of a M2-SR2000 2MW turbine - which will incorporate the following innovations:</p> <ul style="list-style-type: none"> 50% greater energy capture through enlarged rotors with a lower rated speed; Automated steel fabrication; Centralised MV power conversion Integrated Energy Storage Mooring load dampers Composite Blade Manufacturing <p>The SR2000-M2 will be deployed alongside the existing SR2000-M1 at EMEC to form a 4MW floating tidal array, serving as a demonstration platform for commercially viable tidal stream energy as a baseload supply.</p>	

Topic: LCE-03-2015	Acronym: PVSITES
Call: H2020-LCE-2015-2	Type of Action: IA
Title: Building-integrated photovoltaic technologies and systems for large-scale market deployment	
Starting date: 01.01.2016	End date: 30.06.2019
Total Cost: 8,490,472.50 €	EU max. contribution: 5,467,611.76 €
Coordinator: FUNDACION TECNALIA RESEARCH & INNOVATION	
Participants:	
<ul style="list-style-type: none"> ▪ WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG ▪ CADCAMATION KMR SA ▪ R2M SOLUTION SRL ▪ VILOGIA SA ▪ ACCIONA INFRAESTRUCTURAS S.A. ▪ CRISTALES CURVADOS SA ▪ CENTRO TECNOLOGICO DA CERAMICA E DO VIDRO 	<ul style="list-style-type: none"> ▪ BUREAU D'ARCHITECTES FORMAT D2 SPRL ▪ COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES ▪ FLISOM AG ▪ Film Optics Ltd ▪ BEAR HOLDING BV ▪ NOBATEK ▪ ONYX SOLAR ENERGY S.L
Countries: DE;ES;CH;NL;FR;BE;UK;IT;PT	
Objectives:	
<p>Building-integrated photovoltaics (BIPV) is currently an expansive market. Market analysts estimate a compound annual growth rate of 18,7% and a total of 5,4 GW installed worldwide between 2013 and 2019. One of the main drivers for BIPV market growth in the EU is the increasingly demanding legislation related to energy performance in buildings. The large potential for energy savings in buildings led the EU Commission to adopt the 2010/31/EU Directive on the energy performance of buildings with the objective that all new buildings are Nearly Zero Energy Buildings (NZEB) by 2020. Renewable energy technologies, and in particular the integration of photovoltaic systems in the building environment offer many possibilities to play a key role within the NZEB scenario.</p> <p>Despite this favorable framework for BIPV technology market uptake, initial estimations of BIPV market growth have been subsequently overestimated in the past few years. A series of demands from the stakeholders which have not been properly addressed by the BIPV value chain are the cause for this deviation. These key requirements are mainly related to the flexibility in design and aesthetics considerations, lack of tools integrating PV and building performance, demonstration of long-term reliability of the technology, compliance with legal regulations, smart interaction with the grid and cost effectiveness. Within this context:</p> <p>The objective of PVSITES project is to drive BIPV technology to a large market deployment by demonstrating an ambitious portfolio of building-integrated solar technologies and systems, giving a forceful, reliable answer to the market requirements identified by the industrial members of the consortium in their day-to-day activity. High impact demonstration and dissemination actions will be accomplished in terms of cost-effective renewable generation, reduction of energy demands and smart energy management.</p>	

Topic: LCE-03-2015	Acronym: UPWAVE
Call: H2020-LCE-2015-2	Type of Action: IA
Title: Demonstration of a 1-MW wave energy converter integrated in an offshore wind turbine farm	
Starting date: 01.02.2016	End date: 31.01.2021
Total Cost: 28,866,787.50 €	EU max. contribution: 20,722,489.88 €
Coordinator: WAVE STAR AS	
Participants: <ul style="list-style-type: none"> ▪ JAN DE NUL NV ▪ STX FRANCE SA ▪ UNIVERSIDAD DE CANTABRIA ▪ AALBORG UNIVERSITET ▪ DNV GL UK LIMITED ▪ IFP Energies nouvelles ▪ PARKWIND ▪ UNIVERSITEIT GENT 	
Countries: DK;BE;UK;ES;FR	
Objectives: <p>The aim is to develop and install a pre-commercial wave energy converter (WEC) of 1MW power, the WAVESTAR C6-1000 device, with main targets the device industrialization and the demonstration of wind and wave energy applications. The utility company Parkwind, which develops, builds and operates wind farms in the North Sea, is committed to the achievement of WAVESTAR's next development stage. Parkwind provides the installation site with grid connection for the first full-scale WAVESTAR WEC, located within a Belgian offshore wind farm. The UPWAVE project consortium has been developed through the establishment of strong synergies and partnerships, by bringing together key European industrial players and European universities represented by wave energy experts whose overall objectives focus on:</p> <ol style="list-style-type: none"> 1) Reduction of the device's cost by introducing new design, components and materials. Cost optimization is achieved through new methods on deployment, installation, operation and maintenance. 2) Improvement of the energy efficiency by developing a more advanced Power Take Off based on a second generation digital hydraulic system and innovative control strategy. 3) Integration of wave energy converters in wind farms by considering the interaction between wave and wind devices in terms of operation, cost reduction and maximization of environmental benefits. <p>Public research programs, industrial cooperation and technology transfer from the offshore industry (offshore wind, oil and gas) ensure the development of manufacturing processes, automation and optimisation of the WAVESTAR C6-1000 WEC. New certificates and standards will be made available for the wave energy industry. After the completion of the UPWAVE project, the cost of wave energy will be significantly reduced to a level in line with the cost of offshore wind energy (around 15 c€/kWh). The WAVESTAR C6-1000 demonstrator device will lead to a commercial WEC and a hybrid renewable energy device (wind and wave).</p>	

Topic LCE-04 – Projects

Topic: LCE-04-2015	Acronym: BestRES
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Best practices and implementation of innovative business models for Renewable Energy aggregatorS	
Starting date: 01.03.2016	End date: 28.02.2019
Total Cost: 1,994,812.50 €	EU max. contribution: 1,994,812.50 €
Coordinator: WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	
Participants: <ul style="list-style-type: none"> ▪ RE-PRO MANAGEMENT GMBH ▪ OEKOSTROM GMBH FUR VERTRIEB, PLANUNG UND ENERGIEDIENSTLEISTUNGEN ▪ NEXT KRAFTWERKE BELGIUM ▪ STIFTUNG UMWELTENERGIERECHT ▪ 3E N.V. ▪ YOURIS.COM ▪ CNET - Centre for New Energy Technologies, S.A. ▪ NEXT KRAFTWERKE GMBH ▪ GOOD ENERGY LIMITED ▪ TECHNISCHE UNIVERSITAET WIEN 	
Countries: AT;BE;PT;DE;UK	
Objectives: <p>Europe’s electricity sector is in the midst of major transformation moving from public monopolies to competitive private companies in liberalized markets. The liberalization is expected to increase competition and thus increase cost-efficiency in energy production, transmission and distribution with the result of decreasing electricity prices. The efforts of Member State governments to create a more competitive and sustainable electricity sector are currently clouded by a major economic downturn in Europe’s economic activity. Such economic hardship often triggers reluctance to change which is becoming visible in particular in the electricity sector, where measures to protect jobs and national industry start to compete with market liberalization. The affordability of sustainable electricity is questioned.</p> <p>There is a strong need for innovative business models for Renewable Energy Source (RES) electricity generation in the long and mid-term because support schemes will fade out in the long term pushing renewables on the market at no marginal costs which then in particular for strongly correlated generation as wind and PV leads to price deterioration during production hours. Already today many Member States have drastically reduced measures to further support the development of the RES sector, so that new investment is not possible without tapping new revenues with new business.</p> <p>The aim of the BestRES project is to identify best practices business models for renewable electricity generation in Europe and to improve these further taking into account new opportunities and synergies coming along with changing market designs in line with the EU target model. Business models investigated in this project shall make use of the aggregation of various renewable sources, storage and flexible demand. The improved business models will be implemented during the project in real-life environments, depending on the market conditions, to proof the soundness of the developed concept.</p>	

Topic: LCE-04-2015	Acronym: CoolHeating
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Market uptake of small modular renewable district heating and cooling grids for communities	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 1,644,340.00 €	EU max. contribution: 1,644,340.00 €
Coordinator: WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	
Participants: <ul style="list-style-type: none"> ▪ OPCINE VISOKO ▪ JAVNO PREDUZECE ELEKTROPRIVREDA BOSNE I HERCEGOVINE DD* ▪ ELEKTROTEHNICKI FAKULTET UNIVERZITET U BEOGRADU ▪ SVEUCILISTE U ZAGREBU, FAKULTET STROJARSTVA I BRODOGRADNJE ▪ PLANENERGI FOND ▪ OBCINA LJUTOMER ▪ GRAD SABAC ▪ MEDUNARODNI CENTAR ZA ODRZIVI RAZVOJ ENERGETIKE VODA I OKOLISA ▪ SKUPINA FABRIKA RAZISKAVE IN RAZVOJ DOO ▪ GUSSING ENERGY TECHNOLOGIES GMBH 	
Countries: RS;SI;DK;AT;HR;BA	
Objectives: <p>"The objective of CoolHeating is to support the implementation of "small modular renewable heating and cooling grids" for communities in South-Eastern Europe. This will be achieved through knowledge transfer and mutual activities of partners in countries where renewable district heating and cooling examples exist (Austria, Denmark, Germany) and in countries which have less development (Croatia, Slovenia, Macedonia, Serbia, Bosnia-Herzegovina). Core activities, besides techno-economical assessments, include measures to stimulate the interest of communities and citizens to set-up renewable district heating systems as well as the capacity building about financing and business models. The outcome will be the initiation of new small renewable district heating and cooling grids in 5 target communities up to the investment stage. These lighthouse projects will have a long-term impact on the development of "small modular renewable heating and cooling grids" at the national levels in the target countries."</p>	

Topic: LCE-04-2015	Acronym: SDHp2m
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Advanced policies and market support measures for mobilizing solar district heating investments in European target regions and countries	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 2,087,297.25 €	EU max. contribution: 1,919,297.75 €
Coordinator: Steinbeis Innovation gGmbH	
Participants:	
<ul style="list-style-type: none"> ▪ PLANENERGI FOND ▪ INSTITUT ZA NULEVO ENERGIJNI SGRADI ▪ COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES ▪ ARBEITSGEMEINSCHAFT - ERNEUERBARE ENERGIE - INSTITUT FUR NACHHALTIGE TECHNOLOGIEN ▪ HIR HAMBURG INSTITUT RESEARCH GGMBH ▪ THURINGER MINISTERIUM FUR UMWELT, ENERGIE UND NATURSCHUTZ 	<ul style="list-style-type: none"> ▪ EUROHEAT & POWER ▪ CIT ENERGY MANAGEMENT AB ▪ EC BREC INSTYTUT ENERGETYKI ODNAWIALNEJ SP ZOO ▪ Ambiente Italia s.r.l. ▪ RHONALPENERGIE- ENVIRONNEMENT ASSOCIATION ▪ S.O.L.I.D. GESELLSCHAFT FUR SOLARINSTALLATION UND DESIGN MBH ▪ Land Steiermark ▪ AGFW-PROJEKTGESELLSCHAFT FUR RATIONALISIERUNG, INFORMATION UND STANDARDISIERUNG MBH
Countries: IT;DE;AT;DK;FR;SE;BE;BG;PL	
Objectives:	
<p>SDHp2m stands for 'Solar District Heating (SDH)' and actions from 'Policy to Market'. The project addresses market uptake challenges for a wider use of district heating and cooling systems (DHC) with high shares of RES, specifically the action focuses on the use of large-scale solar thermal plants combined with other RES in DHC systems.</p> <p>The key approach of the project is to develop, improve and implement in 9 participating EU regions advanced policies and support measures for SDH. In 3 focus regions Thuringia (DE), Styria (AT) and Rhone-Alpes (FR) the regulating regional authorities are participating as project partners to ensure a strong implementation capacity within the project. In 6 follower regions from BG, DE, IT, PL, SE the regulating authorities are engaged through letters of commitment. The project activities aim at a direct mobilization of investments in SDH and hence a significant market rollout.</p> <p>The project work program in the participating regions follows a process including 1) strategy and action planning based on a survey, best practices and stakeholder consultation 2) an implementation phase starting at an early project stage and 3) efficient dissemination of the project results at national and international level.</p> <p>Adressed market uptake challenges are: Improved RES DHC policy, better access to plant financing and business models, sustained public acceptance and bridging the gap between policy and market through market support and capacity building. Denmark and Sweden reached already today a high share of RES in DHC and shall be used as a role model for this project.</p> <p>The direct expected outcome and impact of SDHp2m is estimated to an installed or planned new RES DHC capacity and new SDH capacity directly triggered by the project until project end corresponding to a total investment of 350 Mio. € and leading to 1 420 GWh RES heat and cold production per year. A multiple effect is expected in the period after the project and in further EU regions.</p>	

Topic LCE-05 – Projects

Topic: LCE-05-2015	Acronym: PROMOTION
Call: H2020-LCE-2015-3	Type of Action: IA
Title: PROMOTioN - Progress on Meshed HVDC Offshore Transmission Networks	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 51,685,330.00 €	EU max. contribution: 39,327,743.88 €
Coordinator: KEMA NEDERLAND BV	
Participants: <ul style="list-style-type: none"> ▪ MHI VESTAS OFFSHORE WIND AS ▪ RIJKSUNIVERSITEIT GRONINGEN ▪ PRYSMIAN ▪ ADWEN OFFSHORE S.L. ▪ UNIVERSITY OF STRATHCLYDE ▪ IBERDROLA RENOVABLES ENERGIA SA ▪ STATKRAFT AS ▪ TRACTEBEL ENGINEERING S.A. ▪ DONG ENERGY WIND POWER AS ▪ RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN ▪ DANMARKS TEKNISKE UNIVERSITET ▪ SIEMENS AKTIENGESELLSCHAFT ▪ TENNET TSO BV ▪ STATOIL ASA ▪ TECHNISCHE UNIVERSITEIT DELFT ▪ AFFARSVERKET SVENSKA KRAFTNAT ▪ MITSUBISHI ELECTRIC EUROPE BV ▪ SUPERGRID INSTITUTE ▪ KUNGLIGA TEKNISKA HOEGSKOLAN ▪ ABB AB ▪ SCOTTISH HYDRO ELECTRIC TRANSMISSION PLC ▪ ENERGINET.DK ▪ ASSOCIATION EUROPEENNE DE L'INDUSTRIE DES EQUIPEMENTS ET DES SERVICES DE TRANSMISSION ET DE DISTRIBUTION D'ELECTRICITE AISBL ▪ EUROPEAN UNIVERSITY INSTITUTE ▪ THE CARBON TRUST ▪ FORSCHUNGSGEMEINSCHAFT FUER ELEKTRISCHE ANLAGEN UND STROMWIRTSCHAFT E.V. ▪ UNIVERSITAT POLITECNICA DE VALENCIA ▪ STIFTUNG DER DEUTSCHEN WIRTSCHAFT FUER DIE NUTZUNG UND ERFORSCHUNG DER WINDENERGIE AUF SEE (OFFSHORE-STIFTUNG) ▪ RTE RESEAU DE TRANSPORT D ELECTRICITE SA ▪ THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN ▪ ALSTOM GRID UK LIMITED ▪ DEUTSCHE WIND GUARD GMBH ▪ EIRGRID PLC ▪ KATHOLIEKE UNIVERSITEIT LEUVEN 	
Countries: UK;SE;DE;ES;IT;NO;FR;BE;DK;NL;IE	

Objectives:

In order to unlock the full potential of Europe's offshore resources, network infrastructure is urgently required, linking off-shore wind parks and on-shore grids in different countries. HVDC technology is envisaged but the deployment of meshed HVDC offshore grids is currently hindered by the high cost of converter technology, lack of experience with protection systems and fault clearance components and immature international regulations and financial instruments. PROMOTioN will overcome these barriers by development and demonstration of three key technologies, a regulatory and financial framework and an offshore grid deployment plan for 2020 and beyond. A first key technology is presented by Diode Rectifier offshore converter. This concept is ground breaking as it challenges the need for complex, bulky and expensive converters, reducing significantly investment and maintenance cost and increasing availability. A fully rated compact diode rectifier converter will be connected to an existing wind farm. The second key technology is an HVDC grid protection system which will be developed and demonstrated utilising multi-vendor methods within the full scale Multi-Terminal Test Environment. The multi-vendor approach will allow DC grid protection to become a "plug-and-play" solution. The third technology pathway will first time demonstrate performance of existing HVDC circuit breaker prototypes to provide confidence and demonstrate technology readiness of this crucial network component. The additional pathway will develop the international regulatory and financial framework, essential for funding, deployment and operation of meshed offshore HVDC grids. With 35 partners PROMOTioN is ambitious in its scope and advances crucial HVDC grid technologies from medium to high TRL. Consortium includes all major HVDC and wind turbine manufacturers, TSO's linked to the North Sea, offshore wind developers, leading academia and consulting companies.

Topic LCE-06 – Projects

Topic: LCE-06-2015	Acronym: FutureFlow
Call: H2020-LCE-2015-3	Type of Action: RIA
Title: Designing eTrading Solutions for Electricity Balancing and Redispatching in Europe	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 12,985,242.50 €	EU max. contribution: 12,985,233.50 €
Coordinator: ELES DOO SISTEMSKI OPERATOR PRENOSNEGA ELEKTROENERGETSKEGA OMREZJA	
Participants: <ul style="list-style-type: none"> ▪ 3E N.V. ▪ CYBERGRID GMBH ▪ SAP SE ▪ GEN-I, TRGOVANJE IN PRODAJA ELEKTRICNE ENERGIJE, D.O.O. ▪ ELEKTROENERGETSKI KOORDINACIONI CENTAR DOO ▪ COMPANIA NATIONALA DE TRANSPORT ALENERGIEI ELECTRICE TRANSELECTRICA SA ▪ AUSTRIAN POWER GRID AG ▪ GEMALTO SA ▪ ELEKTRO ENERGIJA, PODJETJE ZA PRODAJO ELEKTRIKE IN DRUGIH ENERAGENTOV, SVETOVANJE IN STORITVE, D.O.O. ▪ Elektroinstitut Milan Vidmar ▪ MAVIR MAGYAR VILLAMOSENERGIA-IPARI ATVITELI RENDSZERIRANYITO ZARTKORUEN MUKODO RESZVENYTARSASAG 	
Countries: HU;BE;DE;SI;RO;AT;RS;FR	
Objectives: <p>Four European TSOs of Central-Eastern Europe (Austria, Hungary, Romania, Slovenia), associated with power system experts, electricity retailers, IT providers and renewable electricity providers, propose to design a unique regional cooperation scheme: it aims at opening Balancing and Redispatching markets to new sources of flexibility and supporting such sources to act on such markets competitively. Thanks to a prototype aggregation solution and renewable generation forecasting techniques, flexibility providers – distributed generators (DG) and Commercial and Industrial (C&I) consumers providing demand response (DR) – are enabled, through retailers acting as flexibility aggregators, to provide competitive offers for Frequency Restoration Reserve (including secondary control activated with a response time between 30 seconds and 15 minutes). A comprehensive techno-economic model for the cross-border integration of such services involves a common activation function (CAF) tailored to congested borders and optimized to overcome critical intra-regional barriers. The resulting CAF is implemented into a prototype Regional Balancing and Redispatching Platform, securely integrated within the four TSOs' IT systems: this makes research activities about cross-border integration flexible while linking with the aggregation solution. Use cases of growing complexity are pilot tested, going from the involvement of DR and DG into national balancing markets to cross-border competition between flexibility aggregators. Based on past experience with tertiary reserve, participating C&I consumers and DG are expected to provide close to 40MW of secondary reserve. Impact analyses of the pilot tests together with dissemination activities towards all the stakeholders of the electricity value chain will recommend business models and deployment roadmaps for the most promising use cases, which, in turn, contribute to the practical implementation of the European Balancing Target Model by 2020.</p>	

Topic: LCE-06-2015	Acronym: MIGRATE
Call: H2020-LCE-2015-3	Type of Action: RIA
Title: Massive InteGRATion of power Electronic devices	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 17,855,205.00 €	EU max. contribution: 16,733,998.75 €
Coordinator: TENNET TSO GMBH	
Participants:	
<ul style="list-style-type: none"> ▪ Elektrotechnisches Institut Milan Vidmar ▪ TECHNISCHE UNIVERSITÄT BERLIN ▪ UNIVERZA V LJUBLJANI ▪ THE UNIVERSITY OF MANCHESTER ▪ UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN ▪ TECHNISCHE UNIVERSITÄT DELFT ▪ SCHNEIDER ELECTRIC INDUSTRIES SAS ▪ ELERING AS ▪ AMPRION GMBH ▪ RED ELECTRICA DE ESPAÑA S.A.U. ▪ SCOTTISH POWER ENERGY NETWORKS HOLDINGS LIMITED ▪ ELEKTRO-SLOVENIJA DOO 	<ul style="list-style-type: none"> ▪ CONSORZIO INTERUNIVERSITARIO NAZIONALE PER ENERGIA E SISTEMI ELETTRICI ▪ FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS ▪ EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH ▪ ECOLE NATIONALE SUPERIEURE D'ARTS ET METIERS ▪ TALLINNA TEHNIKAULIKOOL ▪ GOTTFRIED WILHELM LEIBNIZ UNIVERSITÄT HANNOVER ▪ LANDSNET HF ▪ TERNA RETE ITALIA SPA ▪ Fingrid Oyj ▪ EIRGRID PLC ▪ RTE RESEAU DE TRANSPORT D ELECTRICITE SA
Countries: ES;UK;IT;FR;SI;EE;DE;IE;NL;CH;FI;IS	
Objectives:	
<p>By 2020, several areas of the HVAC pan-European transmission system will be operated with extremely high penetrations of Power Electronics(PE)-interfaced generators, thus becoming the only generating units for some periods of the day or of the year – due to renewable (wind, solar) electricity. This will result in i) growing dynamic stability issues for the power system (possibly a new major barrier against future renewable penetration), ii) the necessity to upgrade existing protection schemes and iii) measures to mitigate the resulting degradation of power quality due to harmonics propagation. European TSOs from Estonia, Finland, France, Germany, Iceland, Ireland, Italy, Netherlands, Slovenia, Spain and UK have joined to address such challenges with manufacturers (Alstom, Enercon, Schneider Electric) and universities/research centres. They propose innovative solutions to progressively adjust the HVAC system operations. Firstly, a replicable methodology is developed for appraising the distance of any EU 28 control zone to instability due to PE proliferation and for monitoring it in real time, along with a portfolio of incremental improvements of existing technologies (the tuning of controllers, a pilot test of wide-area control techniques and the upgrading of protection devices with impacts on the present grid codes). Next, innovative power system control laws are designed to cope with the lack of synchronous machines. Numerical simulations and laboratory tests deliver promising control solutions together with recommendations for new PE grid connection rules and the development of a novel protection technology and mitigation of the foreseen power quality disturbances. Technology and economic impacts of such innovations are quantified together with barriers to be overcome in order to recommend future deployment scenarios. Dissemination activities support the deployment schemes of the project outputs based on knowledge sharing among targeted stakeholders at EC level.</p>	

Topic: LCE-06-2015	Acronym: SmartNet
Call: H2020-LCE-2015-3	Type of Action: RIA
Title: Smart TSO-DSO interaction schemes, market architectures and ICT Solutions for the integration of ancillary services from demand side management and distributed generation	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 12,657,928.00 €	EU max. contribution: 12,657,928.00 €
Coordinator: RICERCA SUL SISTEMA ENERGETICO - RSE SPA	
Participants:	
<ul style="list-style-type: none"> ▪ VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. ▪ UNIVERSITY OF STRATHCLYDE ▪ SINTEF ENERGI AS ▪ SELTA SPA ▪ SELNET SRL ▪ NYFORS ENTERPRISE AS ▪ N-SIDE ▪ NOVASOL AS ▪ ENERGINET.DK ▪ DANMARKS TEKNISKE UNIVERSITET ▪ AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH 	<ul style="list-style-type: none"> ▪ Vodafone Procurement Company S. à r.l. ▪ Teknologian tutkimuskeskus VTT Oy ▪ TERNA RETE ITALIA SPA ▪ FUNDACION TECNALIA RESEARCH & INNOVATION ▪ STIFTELSEN SINTEF ▪ SIEMENS SPA ▪ EUROPEAN UNIVERSITY INSTITUTE ▪ EURISCO APS ▪ ENDESA DISTRIBUCION ELECTRICA S.L ▪ DANSKE COMMODITIES A/S
Countries: AT;NO;ES;DK;IT;LU;BE;FI;UK	
Objectives:	
<p>The project SmartNet aims at providing architectures for optimized interaction between TSOs and DSOs in managing the exchange of information for monitoring and for the acquisition of ancillary services (reserve and balancing, voltage regulation, congestion management) both at national level and in a cross-border context. Local needs for ancillary services in distribution systems are supposed to co-exist with system needs for balancing and congestion management. Resources located in distribution systems, like demand side management and distributed generation, are supposed to participate to the provision of ancillary services both locally and for the system in the context of competitive ancillary services markets.</p> <p>Through an in-depth and a simulation in a lab-environment, answers are sought for to the following questions:</p> <ul style="list-style-type: none"> • which ancillary services could be provided from distribution to the whole system (via transmission), • which optimized modalities could be adopted for managing the network at the TSO-DSO interface and what monitoring and control signals could be exchanged to carry out a coordinated action, • how the architectures of the real time markets (in particular the balancing markets) could be consequently revised, • what information has to be exchanged and how (ICT) for the coordination on the distribution-transmission border, starting from monitoring aspects, to guarantee observability and control of distributed generation, flexible demand and storage systems, • which implications could the above issues have on the on-going market coupling process, that is going to be extended to real time markets in the next years, according to the draft Network Code on Electricity Balancing by ENTSO-E. <p>Different TSO-DSO interaction modalities are compared with reference to three selected national cases (Italian, Danish, Spanish) also supposing the possibility of a cross-border exchange of balancing services.</p> <p>Physical pilots are developed for the same national cases.</p>	

Topic LCE- 09- Projects

Topic: LCE-09-2015	Acronym: CryoHub
Call: H2020-LCE-2015-3	Type of Action: IA
Title: Developing Cryogenic Energy Storage at Refrigerated Warehouses as an Interactive Hub to Integrate Renewable Energy in Industrial Food Refrigeration and to Enhance PowerGrid Sustainability	
Starting date: 01.04.2016	End date: 30.09.2019
Total Cost: 8,325,745.00 €	EU max. contribution: 7,045,594.38 €
Coordinator: LONDON SOUTH BANK UNIVERSITY LBG	
Participants:	
<ul style="list-style-type: none"> ▪ EUREC EESV ▪ NV MAYEKAWA EUROPE SA ▪ ITP NV ▪ CARBON DATA RESOURCES LTD ▪ CORAC ENERGY TECHNOLOGIES LIMITED ▪ TEHNICE UNIVERSITET SOFIA. ▪ CRANFIELD UNIVERSITY ▪ FUNDACION CENER-CIEMAT ▪ PSUTEC SPRL 	<ul style="list-style-type: none"> ▪ THE UNIVERSITY OF BIRMINGHAM ▪ International Institute of Refrigeration ▪ INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE ▪ L'AIR LIQUIDE S.A
Countries: FR;BE;UK;ES;BG	
Objectives:	
<p>The CryoHub innovation project will investigate and extend the potential of large-scale Cryogenic Energy Storage (CES) and will apply the stored energy for both cooling and energy generation. By employing Renewable Energy Sources (RES) to liquefy and store cryogens, CryoHub will balance the power grid, while meeting the cooling demand of a refrigerated food warehouse and recovering the waste heat from its equipment and components.</p> <p>The intermittent supply is a major obstacle to the RES power market. In reality, RES are fickle forces, prone to over-producing when demand is low and failing to meet requirements when demand peaks. Europe is about to generate 20% of its required energy from RES by 2020, so that the proper RES integration poses continent-wide challenges.</p> <p>The Cryogenic Energy Storage (CES), and particularly the Liquid Air Energy Storage (LAES), is a promising technology enabling on-site storage of RES energy during periods of high generation and its use at peak grid demand. Thus, CES acts as Grid Energy Storage (GES), where cryogen is boiled to drive a turbine and to restore electricity to the grid. To date, CES applications have been rather limited by the poor round trip efficiency (ratio between energies spent for and retrieved from energy storage) due to unrecovered energy losses.</p> <p>The CryoHub project is therefore designed to maximise the CES efficiency by recovering energy from cooling and heating in a perfect RES-driven cycle of cryogen liquefaction, storage, distribution and efficient use. Refrigerated warehouses for chilled and frozen food commodities are large electricity consumers, possess powerful installed capacities for cooling and heating and waste substantial amounts of heat. Such facilities provide the ideal industrial environment to advance and demonstrate the LAES benefits.</p> <p>CryoHub will thus resolve most of the above-mentioned problems at one go, thereby paving the way for broader market prospects for CES-based technologies across Europe.</p>	

Topic: LCE-09-2015	Acronym: STOREandGO
Call: H2020-LCE-2015-3	Type of Action: IA
Title: Innovative large-scale energy STOragE technologies AND Power-to-Gas concepts after Optimisation	
Starting date: 01.03.2016	End date: 29.02.2020
Total Cost: 27,973,369.75 €	EU max. contribution: 17,937,358.63 €
Coordinator: DVGW DEUTSCHER VEREIN DES GAS- UND WASSERFACHES - TECHNISCH-WISSENSCHAFTLICHER VEREIN EV	
Participants:	
<ul style="list-style-type: none"> ▪ THYSSENKRUPP INDUSTRIAL SOLUTIONS AG ▪ KARLSRUHER INSTITUT FUER TECHNOLOGIE ▪ STICHTING ENERGY VALLEY ▪ ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE ▪ EIDGENOSSISCHE MATERIALPRUFUNGS- UND FORSCHUNGSANSTALT ▪ STICHTING ENERGY DELTA INSTITUTE ▪ STUDIO TECNICO BFP SOCIETA A RESPONSABILITA LIMITATA ▪ CLIMEWORKS AG ▪ ATMOSTAT ▪ ENERGIEINSTITUT AN DER JOHANNES KEPLER UNIVERSITAT LINZ VEREIN ▪ ENGINEERING - INGEGNERIA INFORMATICA SPA ▪ UNIPER ENERGY STORAGE GMBH 	<ul style="list-style-type: none"> ▪ HYSYTECH S.R.L. ▪ COMUNE DI TROIA ▪ SCHWEIZERISCHER VEREIN DES GAS- UND WASSERFACHES ▪ IREN SPA ▪ HANZEHOGESCHOOL GRONINGEN STICHTING ▪ GASWARME-INSTITUT ESSEN EV ▪ Electrochaea GmbH ▪ STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND ▪ DBI GAS UND UMWELTTECHNIK GMBH ▪ COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES ▪ RIJKSUNIVERSITEIT GRONINGEN ▪ POLITECNICO DI TORINO ▪ HSR HOCHSCHULE FUR TECHNIK RAPPERSWIL ▪ REGIO ENERGIE SOLOTHURN
Countries: NL;IT;FR;CH;AT;DE	
Objectives:	
<p>This proposal is an application to the EU programme “Horizon 2020” and its topic “Large scale energy storage” (LCE-09-2015). The presented project “STORE&GO” will demonstrate three “innovative Power to Gas storage concepts” at locations in Germany, Switzerland and Italy in order to overcome technical, economic, social and legal barriers. The demonstration will pave the way for an integration of PtG storage into flexible energy supply and distribution systems with a high share of renewable energy. Using methanation processes as bridging technologies, it will demonstrate and investigate in which way these innovative PtG concepts will be able to solve the main problems of renewable energies: fluctuating production of renewable energies; consideration of renewables as suboptimal power grid infrastructure; expensive; missing storage solutions for renewable power at the local, national and European level. At the same time PtG concepts will contribute in maintaining natural gas or SNG with an existing huge European infrastructure and an already advantageous and continuously improving environmental footprint as an important primary/secondary energy carrier, which is nowadays in doubt due to geo-political reasons/conflicts. So, STORE&GO will show that new PtG concepts can bridge the gaps associated with renewable energies and security of energy supply. STORE&GO will rise the acceptance in the public for renewable energy technologies in the demonstration of bridging technologies at three “living” best practice locations in Europe.</p>	

Topic LCE-11- Projects

Topic: LCE-11-2015	Acronym: BABET-REAL5
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: New technology and strategy for a large and sustainable deployment of second generation biofuel in rural areas	
Starting date: 01.02.2016	End date: 31.01.2020
Total Cost: 5,995,198.66 €	EU max. contribution: 5,573,643.51 €
Coordinator: INSTITUT NATIONAL POLYTECHNIQUE DE TOULOUSE	
Participants: <ul style="list-style-type: none"> ▪ Instituto Nacional de Investigacion Agropecuaria ▪ INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA ▪ WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG ▪ UNIVERSITE DE REIMS CHAMPAGNE-ARDENNE ▪ Laboratorio Nacional de Energia e Geologia I.P. ▪ INSTITUT NATIONAL DES SCIENCES APPLIQUEES DE TOULOUSE INSAT ▪ UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO ▪ ARTERRIS INNOVATION ▪ OVALIE INNOVATION ▪ Adour Pyrénées Garonne Environnement Etudes et Conseil ▪ Centro Mario Molina para Estudios Estrategicos sobre Energia y Medio Ambiente AC ▪ MAGUIN S.A.S ▪ SOLAGRO ASSOCIATION ▪ CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT 	
Countries: UY;DE;ES;FR;PT;MX;AR	
Objectives: <p>The business model currently under development for second generation ethanol is a replication of the model used for first generation which is plants with massive annual production capacities. Such high production rates require high capital investment and huge amounts of biomasses (250-350,000 tons per year) concentrated in small radius catchment areas to afford transportation costs (50 km). Under such conditions, opportunities for installing plants in most rural areas in Europe and worldwide are scarce. The objective of the project is to develop an alternative solution for the production of 2G ethanol, competitive at smaller industrial scale and therefore applicable to a large amount of countries, rural areas and feedstocks. The target is to reach technical, environmental and economical viabilities in production units processing at least 30,000 tons equivalent dry biomass per year. This approach will definitely enlarge the scope of biomass feedstocks exploitable for the production of biofuel and create better conditions for the deployment of production sites, to the benefit of rural areas in Europe and worldwide. The main concept underpinning the project relies on a new biomass conversion process able to run all the steps from the pretreatment of the raw material to the enzymatic pre-hydrolysis in one-stage-reactor under mild operating conditions. This new process recently developed to TRL 4, offers the most integrated and compact solution for the conversion of lignocellulosic biomass for the production of ethanol developed so far, and it will lead to reduced capital and operation expenditures. The new process will be developed to TRL 5 in the project with the goal of achieving satisfactory technical, environmental and economical performances in relevant operation environment. The project will investigate and select business cases for installations of demonstration/first-of-a-kind small-scale industrial plants in different European and Latino American countries.</p>	

Topic: LCE-11-2015	Acronym: MacroFuels
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Developing the next generation Macro-Algae based biofuels for transportation via advanced bio-refinery processes	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 5,999,892.50 €	EU max. contribution: 5,999,892.50 €
Coordinator: TEKNOLOGISK INSTITUT	
Participants: <ul style="list-style-type: none"> ▪ MATIS OHF ▪ CLANCY HAUSSLER RITA ▪ AARHUS UNIVERSITET ▪ SIOEN INDUSTRIES NV ▪ AVANTIUM CHEMICALS BV ▪ STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND ▪ Fermentationexperts AS ▪ ENVIRONMENTAL RESOURCES MANAGEMENT LIMITED ▪ THE SCOTTISH ASSOCIATION FOR MARINESCIENCE LBG ▪ STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK 	
Countries: DE;UK;IS;NL;DK;BE	
Objectives: <p>MacroFuels aims to produce advanced biofuels from seaweed or macro-algae. The targeted biofuels are ethanol, butanol, furanics and biogas. The project will achieve a breakthrough in biofuel production from macroalgae by:</p> <ul style="list-style-type: none"> • Increasing the biomass supply by developing a rotating crop scheme for cultivation of seaweed, using native, highly productive brown, red and green seaweeds. Combined with the use of advanced textile substrates these breakthroughs will result in a year round biomass yield of 25 kg seaweeds (wet weight) per m² per year harvested at 1000m²/hr; • Improving the pre-treatment and storage of seaweed and to yield fermentable and convertible sugars at economically relevant concentrations (10-30%); • Increasing the bio-ethanol production to economically viable concentrations of > 4%/l and; • Increasing the bio-butanol yield to 15 g./l by developing novel fermenting organisms which metabolize all sugars at 90% efficiency for ethanol and butanol; • Increasing the biogas yield to convert 90% of the available carbon in the residues by adapting the organisms to seaweed; • Developing the thermochemical conversion of sugars to fuels from the mg. scale to the kg. scale; • Performing an integral techno-economic, sustainability and risk assessment of the entire seaweed to biofuel chain. <p>MacroFuels will develop technology for the production of fuels which are suitable as liquid fuels or precursor thereof for the heavy transport sector as well as potentially for the aviation sector. The technology will be taken from TRL3 to TRL 4/5.</p> <p>MacroFuels will expand the biomass available for the production of advanced biofuels. Seaweed does not need fresh water, arable land or fertilizers to grow, which provides environmental benefits, and in addition has a high carbon dioxide reduction potential as well as reduces the demand for natural resources on land. The technology offers many novel opportunities for employment along the entire value chain.</p>	

Topic: LCE-11-2015	Acronym: SUN-to-LIQUID
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: SUNlight-to-LIQUID: Integrated solar-thermochemical synthesis of liquid hydrocarbon fuels	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 6,150,031.25 €	EU max. contribution: 4,450,618.00 €
Coordinator: BAUHAUS LUFTFAHRT EV	
Participants:	
<ul style="list-style-type: none"> ▪ ABENGOA RESEARCH SL ▪ Fundacion IMDEA Energia ▪ EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH 	<ul style="list-style-type: none"> ▪ ARTTIC ▪ HYGEAR TECHNOLOGY AND SERVICES BV ▪ DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV
Countries: DE;NL;CH;FR;ES	
Objectives:	
<p>Liquid hydrocarbon fuels are ideal energy carriers for the transportation sector due to their exceptionally high energy density and most convenient handling, without requiring changes in the existing global infrastructure. Currently, virtually all renewable hydrocarbon fuels originate from biomass. Their feasibility to meet the global fuel demand and their environmental impact are controversial. In contrast, SUN-to-LIQUID has the potential to cover future fuel consumption as it establishes a radically different non-biomass non-fossil path to synthesize renewable liquid hydrocarbon fuels from abundant feedstocks of H₂O, CO₂ and solar energy. Concentrated solar radiation drives a thermochemical redox cycle, which inherently operates at high temperatures and utilizes the full solar spectrum. Thereby, it provides a thermodynamically favourable path to solar fuel production with high energy conversion efficiency and, consequently, economic competitiveness. Recently, the first-ever production of solar jet fuel has been experimentally demonstrated at laboratory scale using a solar reactor containing a ceria-based reticulated porous structure undergoing the redox cyclic process.</p> <p>SUN-to-LIQUID aims at advancing this solar fuel technology from the laboratory to the next field phase: expected key innovations include an advanced high-flux ultra-modular solar heliostat field, a 50 kW solar reactor, and optimized redox materials to produce synthesis gas that is subsequently processed to liquid hydrocarbon fuels. The complete integrated fuel production chain will be experimentally validated at a pre-commercial scale and with record high energy conversion efficiency.</p> <p>The ambition of SUN-to-LIQUID is to advance solar fuels well beyond the state of the art and to guide the further scale-up towards a reliable basis for competitive industrial exploitation. Large-scale solar fuel production is expected to have a major impact on a sustainable future transportation sector.</p>	

Topic: LCE-11-2015	Acronym: WASTE2FUELS
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Sustainable production of next generation biofuels from waste streams	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 5,989,743.75 €	EU max. contribution: 5,989,742.50 €
Coordinator: INNOVACIO I RECERCA INDUSTRIAL I SOSTENIBLE SL	
Participants: <ul style="list-style-type: none"> ▪ ELVIO ANONYMI ETAIREIA ▪ SYSTIMATON PARAGOGIS ▪ YDROGONOU KAI ENERGEIAS ▪ ENCO SRL ▪ TOMSA DESTIL SL ▪ EXERGY LTD ▪ UNIVERSIDAD DE ZARAGOZA ▪ CONSIGLIO NAZIONALE DELLE RICERCHE ▪ BEN-GURION UNIVERSITY OF THE NEGEV ▪ UNIVERSITY COLLEGE LONDON ▪ TECHNISCHE UNIVERSITAET WIEN ▪ UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. ▪ SOLARIS BIOTECHNOLOGY SRL ▪ ARGUS Umweltbiotechnologie GmbH ▪ BIOPOX SRL ▪ WEIZMANN INSTITUTE OF SCIENCE ▪ UNIVERSIDAD POLITECNICA DE MADRID ▪ BEUTH-HOCHSCHULE FUER TECHNIK BERLIN ▪ TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY ▪ INSTITUTO TECNOLOGICO AGRARIO DE CASTILLA Y LEON ▪ ABENGOA RESEARCH SL 	
Countries: IT;AT;UK;ES;IL;DE;IE;EL	
Objectives: <p>WASTE2FUELS aims to develop next generation biofuel technologies capable of converting agrofood waste (AFW) streams into high quality biobutanol.</p> <p>Butanol is one of the most promising biofuels due to its superior fuel properties compared to current main biofuels, bioethanol and biodiesel. In addition to its ability to reduce carbon emissions, its higher energy content (almost 30% more than ethanol), its ability to blend with both gasoline and diesel, its lower risk of separation and corrosion, its resistance to water absorption, allowing it to be transported in pipes and carriers used by gasoline, it offers a very exciting advantage for adoption as engines require almost no modifications to use it.</p> <p>The main WASTE2FUELS innovations include:</p> <ul style="list-style-type: none"> • Development of novel pretreatment methods for converting AFW to an appropriate feedstock for biobutanol production thus dramatically enlarging current available biomass for biofuels production • Genetically modified microorganisms for enhancing conversion efficiencies of the biobutanol fermentation process • Coupled recovery and biofilm reactor systems for enhancing conversion efficiencies of Acetone-Butanol-Ethanol fermentation • Development of new routes for biobutanol production via ethanol catalytic conversion • Biobutanol engine tests and ecotoxicological assessment of the produced biobutanol • Valorisation of the process by-products • Development of an integrated model to optimise the waste-to-biofuel conversion and facilitate the industrial scale-up • Process fingerprint analysis by environmental and techno-economic assessment • Biomass supply chain study and design of a waste management strategy for rural development <p>By valorising 50% of the unavoidable and undervalorised AFW as feedstock for biobutanol production, WASTE2FUELS could divert up to 45 M tonnes of food waste from EU landfills, preventing 18 M tonnes of GHG and saving almost 0.5 billion litres of fossil fuels.</p>	

Topic LCE- 14- Projects

Topic: LCE-14-2015	Acronym: BiogasAction
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: BiogasAction: Promotion of sustainable biogas production in EU	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 1,999,885.00 €	EU max. contribution: 1,999,885.00 €
Coordinator: ENERGY CONSULTING NETWORK APS	
Participants: <ul style="list-style-type: none"> ▪ SEVERN WYE ENERGY AGENCY LTD ▪ ENERGETSKI INSTITUT HRVOJE POZAR ▪ EKODOMA ▪ IBBK FACHGRUPPE BIOGAS GMBH ▪ RHONALPENENERGIE-ENVIRONNEMENT ASSOCIATION ▪ EUROPEAN BIOGAS ASSOCIATION ▪ CESKA BIOPLYNOVA ASOCIACE ZS ▪ AGENCE INNOVATION ET INITIATIVES LOCALES ASSOCIATION ▪ FEDERATION EUROPEENNE DES AGENCES ET DES REGIONS POUR L'ENERGIE ET L'ENVIRONNEMENT AISBL ▪ CORNELISSEN CONSULTING SERVICES BV ▪ DANSK FAGCENTER FOR BIOGAS ▪ ENERGIKONTOR SYDOST AB 	
Countries: CZ;FR;SE;LV;BE;NL;HR;UK;DK;DE	
<p>Objectives: BiogasAction aim to serve as vehicle for the development of the European biogas sector and thereby contribute to the EU 2020 targets by focusing on removing non-technical barriers to widespread production of biogas/biomethane from manure and other waste. Central driver is the cooperation between different policy levels at EU, national and regional level. The project will boost biogas development in the target regions in conjunction with replication efforts & promotion at broad EU scale. BiogasAction key activity & expected impact:</p> <ul style="list-style-type: none"> • A web portal containing EU-wide biogas market overview, technical biogas and biomethane information and experience of EU/national biogas projects, case studies and free on-line/off-line biogas tools • Biogas and biomethane intervention strategy plans in the 9 target regions • Replication of the project in 5 EU countries/regions • A guidance document for investors about financing biogas/biomethane project and reducing investment risk. • A guidance document for policy and decision makers and for local authorities/municipalities, to enable them to improve national framework conditions for biogas and biomethane deployment • Definition and support of a total of 50 high quality, sustainable biogas projects in the 9 target regions. • 3 peer learning European workshops focusing on key competence areas (80 participants), 1 European roundtable about advanced biogas applications, organisation of at least 1 national energy info day in each target region, with more than 100 participants/event • 3-4 events/training courses per target region for public administration aimed to improve the framework, including follow-up of the recommendations • 2-4 events/training courses per target region aimed to raise the public acceptance • A local training package incl. use of training material from previous projects • Series of 6-8 trainings in each of the 9 target regions on specific topics for biogas plant operators • Final event on project achievements 	

Topic: LCE-14-2015	Acronym: Biomasad Plus
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Developing the sustainable market of residential Mediterranean solid biofuels.	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 1,971,610.00 €	EU max. contribution: 1,971,610.00 €
Coordinator: ASOCIACION ESPANOLA DE LA VALORIZACION ENERGETICA DE LA BIOMASA	
Participants: <ul style="list-style-type: none"> ▪ Zelena energetska zadruga za usluge ▪ BIOS BIOENERGIESYSTEME GMBH ▪ CENTRO DA BIOMASSA PARA A ENERGIA ▪ AIEL ASSOCIAZIONE ITALIANA ENERGIE AGROFORESTALI ▪ CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT ▪ ASOCIACION PARA LA CERTIFICACIÓN ESPAÑOLA FORESTAL - PEFC ESPAÑA ▪ GOZDARSKI INSTITUT SLOVENIJE ▪ ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS ▪ TERCERA FASE SOFTWARE SL ▪ TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU 	
Countries: ES;EL;HR;SI;AT;IT;PT;TR	
Objectives: <p>The Biomasad certification system of the quality and sustainability of solid biofuels (http://biomasud.eu/), was created within the BIOMASUD interreg IV project in 2013 with the aim of covering all typical Mediterranean biomass resources used as solid biofuels in small and medium heating installations: domestic, commercial, institutional etc. The label is owned by several partners established in Spain, Portugal and France. Presently, the label includes wood chips and pellets, olive stones and some types of nut shells.</p> <p>Also within Biomasad project, a GIS tool that provides information about sustainable biomass resources and costs available in different Mediterranean countries was updated and upgraded with new information about agroindustrial residues and pellets production and producers</p> <p>Presently, some solid biofuel companies are already producing under the Biomasad quality label in Spain, and others have also shown the interest to adopt it in Spain and Italy, but there is a strong need for development of the label along the whole Mediterranean area where the biomasses and solid biofuels under the label are widely produced and used in the domestic sector market out of any standards. Moreover, there is also a need to extend the label to new biomasses that are used in the Mediterranean area and which are not covered by the label, this making therefore more difficult their appropriate combustion in stoves or small-medium size boilers.</p> <p>Finally, it is also important to mention that, in order to improve the label, a research is needed to develop new and/or review the existing Biomasad label analytical limits and sustainability tools along the value chain, including, the GHG calculation procedure.</p> <p>In the described context, the overall goal of the project is the improvement, dissemination and market development of the Biomasad label in order to promote the sustainable use of the Mediterranean autochthonous solid biofuels in the domestic sector.</p>	

Topic: LCE-14-2015	Acronym: BioVill
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Bioenergy Villages (BioVill) - Increasing the Market Uptake of Sustainable Bioenergy	
Starting date: 01.03.2016	End date: 28.02.2019
Total Cost: 1,998,917.50 €	EU max. contribution: 1,998,917.50 €
Coordinator: DEUTSCHE GESELLSCHAFT FUR INTERNATIONALE ZUSAMMENARBEIT (GIZ) GMBH	
Participants:	
<ul style="list-style-type: none"> ▪ GOZDARSKI INSTITUT SLOVENIJE ▪ ASOCIATIA "GREEN ENERGY" ▪ OSTERREICHISCHE ENERGIEAGENTUR AUSTRIAN ENERGY AGENCY ▪ WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG 	<ul style="list-style-type: none"> ▪ STALNA KONFERENCIJA GRADOVA I OPSTINA ▪ MEDUNARODNI CENTAR ZA ODRZIVI RAZVOJ ENERGETIKE VODA I OKOLISA ▪ REGIONALNA ENERGETSKA AGENCIJA SJEVEROZAPADNE HRVATSKE ▪ KEA KLIMASCHUTZ- UND ENERGIEAGENTUR BADEN-WUERTTEMBERG GMBH
Countries: DE;SI;HR;RS;AT;RO	
Objectives:	
<p>The overall objective of BioVill is to develop regional bioenergy concepts in Slovenia, Serbia, Croatia, Macedonia and Romania up to the investment stage in order to become "bioenergy villages". This will increase the market uptake of bioenergy on the basis of cooperation with partners from countries with established bioenergy markets (Austria, Germany). The following specific objectives and activities will contribute to the overall objective: (1) 5 villages have developed the institutional set-up and energy management concept for becoming a bioenergy village up to investment stage for physical infrastructure with at least one bioenergy village in Serbia, Croatia, Slovenia, Romania and Macedonia. The local market uptake of bioenergy value chains are to be proven by signing of letters of commitment. (2) Mobilization of 62 GWh/y heat and power based on solid biomass in at least 5 target villages. The individual biomass value chains will include the production and distribution of heat and electricity. The concepts include technical and non-technical aspects for each target village. (3) Increase public acceptance of sustainable bioenergy and raise public awareness on commercial opportunities for farmers, foresters and the bioenergy value chain as a whole by means of public participation. This will be realized by ensuring the public participation of the inhabitants (10,000 households) in the target regions for setting up at least 5 villages across the 5 implementing countries. (4) Capacity Building of users and key actors in business and legislation to manage the bioenergy villages in a sustainable way and be able to either enact the EU based national legislation or make full use of the opportunities that these new markets create for them. In the set-up of bioenergy villages along the bioenergy value chains it will involve at least 500 participants in order to have a critical mass of key actors.</p>	

Topic: LCE-14-2015	Acronym: FORBIO
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Fostering Sustainable Feedstock Production for Advanced Biofuels on underutilised land in Europe	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 1,941,581.25 €	EU max. contribution: 1,941,581.25 €
Coordinator: WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG	
Participants: <ul style="list-style-type: none"> ▪ UNIVERSITY OF LIMERICK ▪ POLSKIE TOWARZYSTWO BIOMASY POLBIOM ▪ FORSHUNGSINSTITUTE FUR BERGBAUFOLGELANDSCAFTEN E.V. ▪ BLACKSMITH INITIATIVE (UK) ▪ CONSIGLIO PER LA RICERCA IN AGRICOLTURA E L'ANALISI DELL'ECONOMIA AGRARIA ▪ FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS FAO ▪ EUROPEAN LANDOWNERS ORGANIZATION ▪ CENTRUL PENTRU PROMOVAREA ENERGIEI CURATE SI EFICIENTA IN ROMANIA ENERO ASOCIATIEI ▪ NAUKOVO-TEHNICHNII CENTAR BIOMASA LLC ▪ BIOCHEMTEX SPA ▪ GEONARDO ENVIRONMENTAL TECHNOLOGIES LTD 	
Countries: DE;IT;BE;HU;RO;UA;IE;UK;PL	
Objectives: <p>Sustainable bioenergy production and use in the EU should be further developed in order to support Member States (MS) achieving 20-20-20 targets and foster rural development as set out in EIP AGRI. FORBIO will demonstrate the viability of using land in MSs for non-food bioenergy feedstock production without interfering with the production of food or feed, nor with land currently used for recreational and/or conservational purposes. Competition with other uses of the land is only one component of the sustainability of bioenergy and a number of cross-cutting environmental, social and economic aspects may present challenges to the extended deployment of these value chains, while assuring that biofuel sustainability standards are met. FORBIO will develop a methodology to assess bioenergy production potential on available “underutilised lands” in Europe (contaminated, abandoned, fallow land, etc.) at national and local level. In addition, in this context the project will provide multiple feasibility studies in selected case study locations in three countries that that aim to set the basis for building up local bioenergy value chains that meet the highest sustainability standards and improve efficiency and sustainability of those already available in the case study sites through the provision of roadmaps for bioenergy development.</p>	

Topic: LCE-14-2015	Acronym: ISAAC
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Increasing Social Awareness and ACceptance of biogas and biomethane	
Starting date: 01.01.2016	End date: 30.06.2018
Total Cost: 1,480,535.00 €	EU max. contribution: 1,480,535.00 €
Coordinator: AZZERO CO2 SRL	
Participants: <ul style="list-style-type: none"> ▪ CHIMICA VERDE BIONET ▪ LEGAMBIENTE ASSOCIAZIONE ONLUS ▪ CIB-CONSORZIO ITALIANO BIOGAS E GASSIFICAZIONE ▪ CONSIGLIO NAZIONALE DELLE RICERCHE 	
Countries: IT	
Objectives: <p>Although Italy has a great potential for biogas production, many non-technical barriers are still present in the current framework. Some of the limiting factors involve public acceptance of the biogas facilities diffusion, as well as lack of a reliable coordination between different stakeholders. Furthermore, normative and legislative inadequacies and deficiencies haven't facilitated the implementation of these technologies within the national context.</p> <p>The main project objective consists on the construction of a communicative model oriented to spread balanced information, based on environmental and economic benefits, between all the actors potentially involved in biogas/biomethane implementation. At the same time, actions will be focused on reducing the fragmentation between farmers, foresters and other stakeholders in order to reach the minimal facility dimension needed, increased biogas and biomethane penetration and reduce cost management.</p> <p>A participatory process model will be developed as the main project's approach to reduce social conflict and to include all actors in important common decision making process; starting from the experience, a normative proposal on the participatory process will be recommended.</p> <p>The effectiveness of the proposal will be maximized applying the actions on specific and restricted areas: the study of the energetic unhatched potential deriving from anaerobic digestion of residual biomass or organic waste will constitute the starting point for communication and information campaigns toward the territory and its stakeholders. The attention will be focused on some high energetic potential regions where the diffusion of these technologies struggles to be realized and the effects of project actions on awareness and acceptance will be evaluated.</p> <p>In particular, a specific decisional participative model will be implemented and applied in one of the selected districts, as case study, involving in an active way all the stakeholders.</p>	

Topic: LCE-14-2015	Acronym: ISABEL
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Triggering Sustainable Biogas Energy Communities through Social Innovation	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 1,897,437.50 €	EU max. contribution: 1,897,437.50 €
Coordinator: Q-PLAN INTERNATIONAL ADVISORS EPE	
Participants:	
<ul style="list-style-type: none"> ▪ EUROENERGY BIOGAS WEST SOCIETE ANONYME PRODUCTION AND TRADING OF ELECTRICAL ENERGY ▪ UNIVERSITY OF SURREY ▪ INSEAD-INSTITUT EUROPEEN D'ADMINISTRATION DES AFFAIRES 	<ul style="list-style-type: none"> ▪ BODENSEE STIFTUNG ▪ WHITE RESEARCH SPRL ▪ GLOBAL BIOTECHNOLOGY TRANSFER FOUNDATION LIMITED ▪ Fachagentur Nachwachsende Rohstoffe e.V.
Countries: EL;DE;UK;BE;FR	
Objectives:	
<p>Community energy sits high in the energy policy agenda as an inseparable part of the strategy towards a low-carbon EU economy. Sustainable biogas technologies have been extremely slow in catching up with community energy developments, failing to benefit from their undeniable potential. ISABEL aims to remove the obstacles and to promote community biogas in the EU by bringing out its societal relevance and by joining forces with a major revolutionary movement – Social Innovation. To achieve and sustain this transition, ISABEL employs modern marketing research to understand the needs and cultural diversities of the communities, fuses Social Innovation to reposition Biogas from an economic bio-fuel carrier to a social good, to come up with new community concepts and to build a stronger and wider community engagement in support of biogas. We zoom in on specific areas with diverse interest and we support communities on the ground to realize community biogas plans in coordination with all the stakeholders, slashing transaction overheads. We bring communities together to exchange and inspire each other as we carefully steer them towards quality sustainability and impact assessment principles. We zoom out to inform the policy world about what works and what does not, what should change and how we can scale-up, replicate and innovate in order to make investments more attractive. We envision a more innovative, better connected, less sensitive to policy and more transparent community biogas movement which will serve as a spring of ideas for other renewable energy technologies.</p> <p>But we start simple – we want more ideas, more and deeper public involvement, more responsible community biogas plans and more bold and fair policies; and we bring along a highly complementary team of practical minded people to do it.</p>	

Topic: LCE-14-2015	Acronym: SEEMLA
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Sustainable exploitation of biomass for bioenergy from marginal lands in Europe	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 1,629,883.75 €	EU max. contribution: 1,629,883.75 €
Coordinator: Fachagentur Nachwachsende Rohstoffe e.V.	
Participants:	
<ul style="list-style-type: none"> ▪ INSTITUTE OF BIOENERGY CROPS AND SUGAR BEET NATIONAL ACADEMY OF AGRARIAN SCIENCES OF UKRAINE ▪ BRANDENBURGISCHE TECHNISCHE UNIVERSITÄT COTTBUS-SENFTENBERG ▪ IFEU - INSTITUT FÜR ENERGIE UND UMWELTFORSCHUNG HEIDELBERG GMBH 	<ul style="list-style-type: none"> ▪ LIMITED LIABILITY COMPANY SALIX ENERGY ▪ DECENTRALISED ADMINISTRATION OF MACEDONIA&THRACE ▪ DEMOCRITUS UNIVERSITY OF THRACE ▪ LEGAMBIENTE ASSOCIAZIONE ONLUS
Countries: IT;UA;DE;EL	
Objectives:	
<p>The aim of the SEEMLA project is the reliable and sustainable exploitation of biomass from marginal lands (MagL), which are used neither for food nor feed production and are not posing an environmental threat.</p> <p>The main target groups are regional authorities and public or private owners of MagLs, who can provide knowledge on land availability and are responsible for managing these. Furthermore foresters, farmers and the civil society affected by transformation of MagL into energy crop plantations are important cooperation partners for the project's success.</p> <p>The initial challenge of the project is to define MagL. In order to achieve high yields on the MagL the goal is to develop and optimize cropping systems for special sites. The project focuses both on existing plantations of energy crops on MagL and on the establishment of new plantations on MagLs. General guidelines and manuals shall attract and help relevant stakeholders as well as piloting shall prove the feasibility of SEEMLA results.</p> <p>The first scenario will enable the assessment of good practice and the refinement of current practices, making them more sustainable (environmental, economic, social). The second approach will transfer good practices to underused MagL.</p> <p>The project will focus on three main objectives: the promotion of re-conversion of MagLs for the production of bioenergy through the direct involvement of farmers and foresters, the strengthening of local small scale supply chains and the promotion of plantations of bioenergy plants on MagLs. Moreover the expected impacts are: Increasing the production of bioenergy, farmers' incomes, investments in new technologies and the design of new policy measures.</p> <p>The project team is balanced between scientific and technical partners as well as national and regional organisations. By including partners from South-East, Eastern and Central Europe the knowledge transfer between regions of different climatic and political backgrounds can be established.</p>	

Topic: LCE-14-2015	Acronym: uP_running
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: Take-off for sustainable supply of woody biomass from agrarian pruning and plantation removal	
Starting date: 01.04.2016	End date: 30.06.2019
Total Cost: 1,992,920.00 €	EU max. contribution: 1,992,920.00 €
Coordinator: FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS	
Participants:	
<ul style="list-style-type: none"> ▪ SERVICES COOP DE FRANCE, UNION DES COOPERATIVES AGRICOLES ▪ CONFEDERACAO NACIONAL DAS COOPERATIVAS AGRICOLAS E DO CREDITO AGRICOLA DE PORTUGAL CCRL ▪ PANHELLENIC CONFEDERATION OF UNIONS OF AGRICULTURAL COOPERATIVES SOMATEIO ▪ ASOCIACION AGRARIA DE JOVENES AGRICULTORES ALTO ARAGON 	<ul style="list-style-type: none"> ▪ NAUKOVO-TEHNICHNII CENTAR BIOMASA LLC ▪ HRVATSKA POLJOPRIVREDNA KOMORA ▪ ASSOCIATION UKRAINIAN AGRIBUSINESSCLUB ▪ DISTRETTO AGROALIMENTARE REGIONALE SCRL ▪ Università degli Studi di Foggia (University of Foggia) ▪ ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS
Countries: EL;FR;IT;ES;UA;HR;PT	
Objectives:	
<p>uP_running project aims to set the path for the development of the bioenergy utilisation of agrarian pruning and plantation removal (APPR) wood obtained from vineyards, olive groves and fruit tree plantations. uP_running vocation is the abatement of the current immobilism of the value chain actors for the utilization of APPR woody biomass. For that purpose uP_running incorporates a set of straight actions aimed to reshape the sectors perception, to provide evidences of real success and replicable models to follow, as well as to promote the take-off for the utilisation of APPR biomass residues. An intense communication campaign will address the varied target audience with tailored messages and materials to raise the awareness. An impact on policy barriers and on the legal framework currently setting limits for the utilisation of APPR wood will be carried out through direct advocacy and lobbying work at national and EU level. Once the awareness is raised and the sector is released of hindering barriers, a snowball effect will be triggered through multiplicative and dissemination actions. First part of uP_running multiplicative strategy is to create a permanent capacity in Europe, by empowering national and regional agrarian associations, extension services and/or private consultants with capacities to give support for decision making to farmers, cooperatives and agro-industries owing the APPR residues. A call for entrepreneurship will put into operation the newly created capacities in 7 EU countries to promote the decision making of pioneer entrepreneurs. Setting up and running new APPR biomass value chains is the key for a self-replication and to further contribute to the development of the bio-economy in Europe. The actions will be initiated in a set of 4 “demo” countries (that together account for 50% of EU potential), replicated in 3 relevant EU countries, and extended through precursor actions to 7 additional EU countries.</p>	

Topic LCE-15 - Projects

Topic: LCE-15-2015	Acronym: LEILAC
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Low Emissions Intensity Lime and Cement	
Starting date: 01.01.2016	End date: 31.12.2020
Total Cost: 20,770,635.00 €	EU max. contribution: 11,932,231.00 €
Coordinator: CALIX (EUROPE) LIMITED	
Participants: <ul style="list-style-type: none"> ▪ THE CARBON TRUST ▪ STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND ▪ AMEC FOSTER WHEELER ENERGY LIMITED ▪ TARMAC LTD ▪ HEIDELBERGCEMENT AG ▪ Quantis Sàrl ▪ PROCESS SYSTEMS ENTERPRISE LIMITED ▪ IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE ▪ CALIX LTD ▪ LHOIST RECHERCHE ET DEVELOPPEMENT SA ▪ CEMEX RESEARCH GROUP AG 	
Countries: UK;BE;NL;CH;AU;DE	
Objectives: <p>LEILAC, Low Emissions Intensity Lime And Cement, will successfully pilot a breakthrough technology that will enable both Europe's cement and lime industries to reduce their emissions dramatically while retaining, or even increasing, international competitiveness. LEILAC will develop, build and operate a 240 tonne per day pilot plant demonstrating Direct Separation calcining technology which will capture over 95% of the process CO2 emissions (which is 60 % of total CO2 emissions) from both industries without significant energy or capital penalty.</p> <p>Direct Separation technology uses indirect heating in which the process CO2 and furnace combustion gases do not mix, resulting in the simple capture of high quality CO2. This innovation requires minimal changes to the conventional processes for cement, replacing the calciner in the Preheater-Calciner Tower. For lime there is no product contamination from the combustion gas. The technology can be used with alternative fuels and other capture technologies to achieve negative CO2 emissions. The project will also enable research into novel building materials with a reduced CO2 footprint, as well the upgrade of low value limestone fines and dust to high value lime applications.</p> <p>The high potential of the project is complemented by high deliverability. The requested grant will secure €8.8m of in-kind funding and support from the LEILAC consortium members, which include world leading engineering, cement, lime and R&D organisations.</p> <p>To accelerate further development, LEILAC will deliver a techno-economic roadmap, and comprehensive knowledge sharing activities including a visitor centre at the pilot site near Brussels. In order to reach the required 80% emissions reductions by 2050, CCS will need to be applied to 85% of European clinker production, and LEILAC is uniquely placed to allow Europe to achieve these targets in a timely, effective and efficient manner.</p>	

Topic: LCE-15-2015	Acronym: STEMM-CCS
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Strategies for Environmental Monitoring of Marine Carbon Capture and Storage	
Starting date: 01.03.2016	End date: 29.02.2020
Total Cost: 15,968,369.00 €	EU max. contribution: 15,918,369.00 €
Coordinator: NATURAL ENVIRONMENT RESEARCH COUNCIL	
Participants: <ul style="list-style-type: none"> ▪ PLYMOUTH MARINE LABORATORY ▪ HERIOT-WATT UNIVERSITY ▪ UNIVERSITETET I TROMSOE ▪ MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. ▪ UNIVERSITETET I BERGEN ▪ SHELL GLOBAL SOLUTIONS INTERNATIONAL B.V. ▪ SEASCAPE CONSULTANTS LTD ▪ NORSK INSTITUTT FOR VANNFORSKNING ▪ UNIVERSITY OF SOUTHAMPTON ▪ TECHNISCHE UNIVERSITAET GRAZ ▪ UNI RESEARCH AS ▪ HELMHOLTZ ZENTRUM FUR OZEANFORSCHUNG KIEL 	
Countries: AT;UK;NO;DE;NL	
Objectives: <p>STEMM-CCS is an ambitious research and innovation project on geological carbon dioxide (CO₂) storage that will deliver new insights, guidelines for best practice, and tools for all phases of the CO₂ storage cycle at ocean Carbon Capture and Storage (CCS) sites. It brings together the main operator (Shell) of the world's first commercial scale full-chain ocean demonstration CCS project (Peterhead Project) with the leading scientific and academic researchers in the field of ocean CCS. The work performed in STEMM-CCS will add value to this existing operational programme, and fill gaps in future capability by providing generically applicable definitive guides, technologies and techniques informing how to select a site for CCS operations, how to undertake a risk assessment, how best to monitor the operations, how to provide information on fluxes and quantification of any leakage; necessary for the European Union Emissions Trading Scheme (ETS) and to guide mitigation/remediation actions. All of this information will be used to better communicate the case for offshore CCS, with a particular focus on communities directly and indirectly impacted. During STEMM-CCS we will perform a simulated CO₂ leak beneath the surface sediments at the site to be used for CCS as part of the Peterhead project. This experiment will be used to test CO₂ leak detection, leak quantification, impact assessment, and mitigation/remediation decision support techniques currently at the Technology Readiness Level (TRL) stage 4-5 and support their development to a higher TRL. In addition, using new geophysical approaches STEMM-CCS will develop tools to assess leakage from natural geological features (e.g. chimneys) and engineered structures such as abandoned wells. The Peterhead project will commence during the life of STEMM-CCS and so a unique aspect is the focus on a real-world ocean CCS site covering its initial phases of implementation, with direct involvement of industrial partners.</p>	

Topic LCE-17 - Projects

Topic: LCE-17-2015	Acronym: FLEXTURBINE
Call: H2020-LCE-2015-1-two-stage	Type of Action: RIA
Title: Flexible Fossil Power Plants for the Future Energy Market through new and advanced Turbine Technologies	
Starting date: 01.01.2016	End date: 31.12.2018
Total Cost: 9,634,573.75 €	EU max. contribution: 6,477,595.50 €
Coordinator: DOOSAN SKODA POWER SRO	
Participants:	
<ul style="list-style-type: none"> ▪ COMTES FHT AS ▪ TECHNISCHE UNIVERSITAET DRESDEN ▪ KARLSRUHER INSTITUT FUER TECHNOLOGIE ▪ University of Belgrade - Faculty of Mechanical Engineering ▪ TECHNISCHE UNIVERSITAET MUENCHEN ▪ UNIVERSITA DEGLI STUDI DI FIRENZE ▪ SIEMENS AKTIENGESELLSCHAFT ▪ GENERAL ELECTRIC DEUTSCHLAND HOLDING GMBH ▪ ALSTOM (SCHWEIZ) AG 	<ul style="list-style-type: none"> ▪ RUHR-UNIVERSITAET BOCHUM ▪ CESKE VYSOKE UCENI TECHNICKE V PRAZE ▪ TECHNISCHE UNIVERSITAT DARMSTADT ▪ POLITECNICO DI MILANO ▪ LINKOPINGS UNIVERSITET ▪ LULEA TEKNISKA UNIVERSITET ▪ UNIVERSITA DI PISA ▪ ZAPADOCESKA UNIVERZITA V PLZNI ▪ ARTTIC ▪ NUOVO PIGNONE SRL ▪ MAN DIESEL & TURBO SE ▪ A.S.EN. ANSALDO SVILUPPO ENERGIA
Countries: DE;SE;CH;IT;CZ;FR;RS	
Objectives:	
<p>The share of renewable energy is growing rapidly driven by the objective to reduce greenhouse gas emissions. The amount of electric power which can be supplied to the grid depends on the time of the day and weather conditions. A conventional fleet of thermal power plants is required to compensate for these fluctuations before large scale energy storage technologies will be mature and economically viable. All power market projections expect this to be the case for the next 50 years at least. For a strong expansion of renewables, this fleet has to operate flexibly at competitive cost.</p> <p>Current power plants cannot fill this role immediately without impeding their efficiency and engine lifetime through increased wear and damage induced by the higher number of (shorter) operating/loading cycles. New technologies need to be introduced to balance demand peaks with renewable output fluctuations at minimal fuel consumption and emissions without negative effects on cycling operation. The FLEXTURBINE partners have developed a medium to long term technology roadmap addressing future and existing power plants. The FLEXTURBINE project presented hereafter is the first step in such technology roadmap and consists of: (1) new solutions for extended operating ranges to predict and control flutter, (2) improved sealing and bearing designs to increase turbine lifetime and efficiency by reducing degradation/damages, and (3) an improved lifecycle management through better control and prediction of critical parts to improve competitive costs by more flexible service intervals and planned downtime, and by reducing unplanned outages. In all areas, individual technologies will be developed from TRL 3 to TRL 4-6.</p> <p>FLEXTURBINE brings together the main European turbine manufacturers, renowned research institutes and universities. It involves plant and transmission system operators to include user feedback and to prepare the take-up of the FLEXTURBINE technologies in power plants world-wide.</p>	

Topic LCE-18 – Projects

Topic: LCE-18-2015	Acronym: ACT
Call: H2020-LCE-2015-3	Type of Action: ERA-NET-Cofund
Title: Accelerating CCS technologies as a new low-carbon energy vector	
Starting date: 01.02.2016	End date: 31.01.2021
Total Cost: 42,831,250.00 €	EU max. contribution: 12,814,312.50 €
Coordinator: NORGES FORSKNINGSRAD	
Participants: <ul style="list-style-type: none"> ▪ MINISTERIO DE ECONOMIA Y COMPETITIVIDAD ▪ GASSNOVA SF ▪ MINISTERIE VAN ECONOMISCHE ZAKEN ▪ Unitatea Executiva pentru Finantarea Invatamantului Superior, a Cercetarii, Dezvoltarii si Inovarii ▪ FORSCHUNGSZENTRUM JULICH GMBH ▪ TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU ▪ ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS ▪ The Department Of Energy and Climate Change ▪ FEDERAL DEPARTMENT FOR ENVIRONMENT TRANSPORTS ENERGY AND COMMUNICATION 	
Countries: CH;NO;EL;DE;ES;NL;TR;RO;UK	
Objectives: <p>"This ERA-NET Cofund action is a transnational collaboration on CO2 Capture and Storage (CCS) technology. CCS is regarded as one of the main routes for Europe to mitigate climate change. Our initiative "Accelerating CCS technology as a new low-carbon energy vector" (ACT) targets mainly the energy sector, but will also have benefits for energy intensive industries. The vision of ACT is to ensure that the energy sector makes a better contribution to climate protection by developing a collection of different CCS technologies ready for commercialisation. The consortium consists of 10 partners from 9 countries highly engaged to further development of CCS. The partner contribution for the first call is Euros 28.8 million. The consortium has received Letter of Support (LOS) from several important stakeholders in the CCS area in Europe.</p> <p>The main objective of ACT is to facilitate the emergence of CCS by significant transnational joint calls that will stimulate close cooperation between researchers and industry in order to accelerate the deployment of CCS. During these calls the consortium will address the most relevant RD&D gaps in the CCS chain. ACT will bring researchers and CCS stakeholders from a number of countries closer together in a joint effort that will generate momentum towards deployment of CCS technology in Europa.</p> <p>ACT will fund transnational R&D and innovation projects, facilitate meeting places for knowledge sharing, ensure synergies with pilots and demonstration projects, and invite to discussions with stakeholders in the CCS field. ACT will also ensure dissemination of results from ACT funded projects as part of an extensive outreach program targeting the research community, policymakers and the public in general. The result will be new knowledge which in turn will close gaps and accelerate CCS deployment.</p> <p>ACT has seven work packages, of which five are directly related to the first call and the last two are dedicated to additional activities."</p>	

Topic: LCE-18-2015	Acronym: BESTF3
Call: H2020-LCE-2015-3	Type of Action: ERA-NET-Cofund
Title: Bioenergy Sustaining the Future (BESTF) 3	
Starting date: 01.01.2016	End date: 31.12.2020
Total Cost: 22,863,655.00 €	EU max. contribution: 7,545,006.15 €
Coordinator: The Department Of Energy and Climate Change	
Participants:	
<ul style="list-style-type: none"> ▪ MINISTERIO DE ECONOMIA Y COMPETITIVIDAD ▪ NARODOWE CENTRUM BADAN I ROZWOJU ▪ MINISTERIE VAN ECONOMISCHE ZAKEN ▪ CENTRO PARA EL DESARROLLO TECNOLÓGICO INDUSTRIAL. 	<ul style="list-style-type: none"> ▪ BUNDESMINISTERIUM FUER VERKEHR, INNOVATION UND TECHNOLOGIE ▪ Fachagentur Nachwachsende Rohstoffe e.V. ▪ ENERGISTYRELSEN ▪ INNOVAATORAHOITUSKESKUS TEKES ▪ STATENS ENERGIMYNDIGHET
Countries: FI;SE;ES;DE;PL;NL;AT;DK	
Objectives:	
<p>This ERA-NET Co-fund will bring together a number of national and transnational organisations with an interest in promoting the greater use of bioenergy. It follows on from two previous BESTF ERA-NET Plus initiatives launched in 2013 and, like its predecessors, aims to kick-start large scale investment in close-to-market implementation of bioenergy, thereby helping to achieve the key objectives of the European Industrial Bioenergy Initiative (EIBI) Implementation Plan and the Strategic Energy Technology (SET) Plan.</p> <p>The EIBI aims to boost the contribution of sustainable bioenergy to the 2020 climate and energy objectives.</p> <p>This proposal addresses the need for integrated action across Europe to promote the development of bioenergy demonstrators across a number of technologies by coordinating research and development projects and providing a financial mechanism to support projects that are close to commercialisation.</p> <p>The overall aim for this third BESTF ERA-NET is to implement a joint programme for bioenergy demonstration projects to demonstrate enhanced bioenergy technologies that will help Europe progress towards achieving its 2016 and 2020 targets. It will leverage public-private partnerships to manage the risks and share the financing of close to market bioenergy projects.</p> <p>The key objectives of BESTF3 are:</p> <ol style="list-style-type: none"> 1.To implement a single collaborative funding call that will support projects focused on the generation of bioenergy. 2.To maintain and enhance coherence and networking between national bioenergy programmes across the EU. 3.To further the demonstration of enhanced bioenergy technologies in order to help develop robust project plans for a range of demonstrator and flagship plants, that will help Europe to make progress towards achieving its 2016 and 2020 energy targets. 4.To disseminate knowledge gained from the programme and individual projects across the EU. 	

Topic: LCE-18-2015	Acronym: DemoWind 2
Call: H2020-LCE-2015-3	Type of Action: ERA-NET-Cofund
Title: DemoWind 2 ERA-NET Cofund action - delivering cost reduction in offshore wind	
Starting date: 01.01.2016	End date: 31.12.2020
Total Cost: 25,932,924.00 €	EU max. contribution: 8,557,864.92 €
Coordinator: The Department Of Energy and Climate Change	
Participants:	
<ul style="list-style-type: none"> ▪ ENOVA SF ▪ CENTRO PARA EL DESARROLLO TECNOLÓGICO INDUSTRIAL. ▪ MINISTERIE VAN ECONOMISCHE ZAKEN ▪ ENERGISTYRELSEN 	<ul style="list-style-type: none"> ▪ MINISTERIO DE ECONOMIA Y COMPETITIVIDAD ▪ NORGES FORSKNINGSRAD ▪ AGENTSCHAP VOOR INNOVATIE DOOR WETENSCHAP EN TECHNOLOGIE
Countries: ES;NO;NL;DK;BE	
Objectives:	
<p>DemoWind 2 proposes to bring together a number of national and transnational organisations with an interest in accelerating cost reduction in offshore wind. It follows on from the first DemoWind initiative that launched in 2014 and, like its predecessor, is focussed on enabling industry, through partnership, to push technologies through TRLs 5-6 to 6-7 in transnationally funded projects. We aim to connect existing and new European offshore wind demonstration opportunities, exchange knowledge and facilitate the acceleration of cost reducing innovative technologies to commercialisation.</p> <p>This action will contribute to European cost reduction targets for offshore wind, economic development of the European offshore wind sector and help to maintain the EU's internationally leading position in offshore wind. Reducing technology cost is essential to increasing the deployment of offshore wind, making a significant contribution to the EU's climate change targets, replacing aging fossil burning power plants with affordable energy.</p> <p>The main objectives of the DemoWind 2 project are split into two parts:</p> <ul style="list-style-type: none"> •Part A is dedicated to activities related to the main co-funded Call (Work Packages 1-5) •Part B is dedicated to additional activities (Work Packages 6-7), which will be aimed at widening the dissemination of technologies supported by DemoWind 2 and at identifying and taking forward further opportunities for the DemoWind 2 partners and others to fund further RD&D activities targeting cost reduction in offshore wind without Commission funding. Initially, these additional activities will involve DemoWind 2 strengthening links with existing OSW industry groups looking at innovation and cost reduction, specifically the OWA Europe programme. 	

Topic: LCE-18-2015	Acronym: SOLAR-ERA.NET Cofund
Call: H2020-LCE-2015-3	Type of Action: ERA-NET-Cofund
Title: SOLAR-ERA.NET Cofund	
Starting date: 01.11.2016	End date: 31.10.2021
Total Cost: 19,670,150.13 €	EU max. contribution: 5,930,149.50 €
Coordinator: NET NOWAK ENERGIE & TECHNOLOGIE AG	
Participants:	
<ul style="list-style-type: none"> ▪ OESTERREICHISCHE FORSCHUNGSFOERDERUNGSGESELLSCHAFT MBH ▪ NARODOWE CENTRUM BADAN I ROZWOJU ▪ The Technology Strategy Board ▪ TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU ▪ IDRYMA PROOTHISIS EREVNAS ▪ CENTRO PARA EL DESARROLLO TECNOLÓGICO INDUSTRIAL. ▪ FEDERAL DEPARTMENT FOR ENVIRONMENT TRANSPORTS ENERGY AND COMMUNICATION 	<ul style="list-style-type: none"> ▪ BUNDESMINISTERIUM FUER VERKEHR, INNOVATION UND TECHNOLOGIE ▪ KLIMA - UND ENERGIEFONDS ▪ AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE ▪ MINISTERIE VAN ECONOMISCHE ZAKEN ▪ STATENS ENERGIMYNDIGHET ▪ MINISTERIO DE ECONOMIA Y COMPETITIVIDAD ▪ FORSCHUNGSZENTRUM JULICH GMBH
Countries: CH;AT;FR;DE;CY;SE;ES;UK;PL;NL;TR	
Objectives:	
<p>SOLAR-ERA.NET Cofund will bring together 15 national organisations owning and / or managing major solar power research and innovation programmes throughout Europe, covering photovoltaics (PV) and concentrating solar power (CSP).</p> <p>According to the challenges addressed in the work programme on Low Carbon Energy, SOLAR-ERA.NET Cofund has different objectives:</p> <ul style="list-style-type: none"> • To implement a joint call on subjects of highest priority and European added value in line with the Solar Europe Industry Initiative within the Strategic Energy Technology (SET) Plan • To pool resources and to provide critical mass for transnationally highly relevant and innovative projects • To mobilise 20 MEUR of public funding (national and EC funding), and, together with the resources provided by the private industry sector, a total of 40 MEUR. • To enhance coordination, coherence and networking between national programmes <p>SOLAR-ERA.NET Cofund will contribute to substantial cost reductions of solar power technologies, economic development of the European solar power sector and to reinforce Europe's strong position in solar power technologies. Reducing technology cost and advancing manufacturing technologies, applications and grid / system integration are essential to increasing the deployment of solar power technologies. This way, SOLAR-ERA.NET Cofund will greatly contribute to:</p> <ul style="list-style-type: none"> • Acceleration of the time to market by advancing technologies • Affordable, cost-effective and resource-efficient technology solutions • Decarbonisation of the energy system • Sustainable, secure energy supply and completion of the energy internal market • Strengthening the European industrial technology base (growth and jobs in Europe) <p>SOLAR-ERA.NET Cofund follows on from SOLAR-ERA.NET project and network and previous PV-ERA-NET network, taking advantage of more than ten years of ERA-NET experience and expertise from all major key stakeholders in the solar research, innovation and industry sector.</p>	

Topic LCE-19 – Projects

Topic: LCE-19-2015	Acronym: Record Biomap
Call: H2020-LCE-2015-2	Type of Action: CSA
Title: Research Coordination for a Low-Cost Biomethane Production at Small and Medium Scale Applications	
Starting date: 01.04.2016	End date: 31.03.2018
Total Cost: 499,922.00 €	EU max. contribution: 499,921.00 €
Coordinator: DBFZ DEUTSCHES BIOMASSEFORSCHUNGSZENTRUM GEMEINNUETZIGE GMBH	
Participants:	
<ul style="list-style-type: none"> ▪ UNIWERSYTET WARMINSKO-MAZURSKI W OLSZTYNIE 	<ul style="list-style-type: none"> ▪ JTI - Institutet för jordbruks- och miljöteknik AB
Countries: SE;PL	
Objectives:	
<p>"The objective of the project "Research Coordination for a Low-Cost Biomethane Production at Small and Medium Scale Applications", short Record Biomap, is to establish the most promising innovative process and technology solutions along the biomethane supply chain, from raw material/residues, substrate pre-treatment, digestion, gas conditioning/digestate further utilisation and digestate/fertilizer deployment for a cost and energy sufficient biomethane production and to support their development up to market uptake. To bridge the gap between research and market, a biomethane platform will be established to support the dissemination and exploitation of the knowledge ascertained in the project to the industry sector, the end users and other important stakeholders, and therefore to foster the use of research outcomes. An R&D strategy will lead the way forward into new project concepts.</p> <p>Answering to the scope of LCE 19-2014/2015 of the call of Competitive Low-Carbon Energy in the Horizon2020 work program, the wider goal of Record Biomap will be to accelerate innovation in small to medium scale biomethane production and therefore shorten the time to market of technology solutions which currently have the technical readiness level (TRL) of 3 to 5.</p> <p>The objectives of Record Biomap can be summarised as following:</p> <ul style="list-style-type: none"> - Accelerate innovation and creation of an European market for small to medium scale biomethane supply through innovative technology and process solutions - Continuous R&D monitoring to bridge the gap between independent technology developers - Continuous knowledge transfer from science to market and policy decision makers and vice verca through building up a biomethane platform for intensive networking - Identification of different sources of private and public financing and bringing together of relevant stakeholders for a continuative development of a more cost and and energy efficient biomethane production at small to medium scale applications." 	

Topic LCE- 21- Projects

Topic: LCE-21-2015	Acronym: MEDEAS
Call: H2020-LCE-2015-2	Type of Action: RIA
Title: Guiding European Policy toward a low-carbon economy. Modelling Energy system Development under Environmental And Socioeconomic constraints	
Starting date: 01.01.2016	End date: 31.12.2019
Total Cost: 3,735,308.75 €	EU max. contribution: 3,735,308.75 €
Coordinator: AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS	
Participants:	
<ul style="list-style-type: none"> ▪ OSTERREICHISCHE ENERGIEAGENTUR AUSTRIAN ENERGY AGENCY ▪ SDRUZHENIE CHERNOMORSKI IZSLEDOVATELSKI ENERGIEN TSENTAR ▪ FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS ▪ CONSORZIO INTERUNIVERSITARIO NAZIONALE PER LA SCIENZA E TECNOLOGIA DEI MATERIALI 	<ul style="list-style-type: none"> ▪ HNUTI DUHA - FRIENDS OF THE EARTH CZECH REPUBLIC ▪ BLUE4YOU SPRL ▪ INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE ▪ ANGLIA RUSKIN UNIVERSITY HIGHER EDUCATION CORPORATION ▪ UNIVERSIDAD DE VALLADOLID ▪ Masarykova univerzita ▪ CENTRE FOR RENEWABLE ENERGY SOURCESAND SAVING FONDATION
Countries: AT;ES;CZ;EL;BE;UK;IT;BG	
Objectives:	
<p>The transition to a low carbon economy needs to achieve multiple aims: competitiveness, protection of the environment, creation of quality jobs, and social welfare. Thus policy-makers and other key stakeholders require tools that need to focus beyond the energy sector by including these other domains of economy, society and the environment. Currently, most available tools lack integration of these important areas despite being tightly connected to the energy sector. Moreover, current energy modelling tools often lack documentation, transparency and have been developed for a specialized insider audience, which makes validation and comparison of results as well as independent review impossible. Our project aims to solve the current needs of integration and transparency by developing a leading-edge policy modelling tool based on WoLiM, TIMES and LEAP models and incorporating Input-Output Analysis, that allows for accounting of environmental, social and economic impacts. The modular design of the tool will take into account the necessary flexibility to deal with different levels and interests of stakeholders at great sectorial and spatial detail. Finally, transparency will be achieved through an open access freeware distribution of the model based on the open access programming language (Python), providing a detailed user manual, addressed to a wider non-specialist audience, and including free internet courses and learning materials.</p>	

Topic: LCE-21-2015	Acronym: REEEM
Call: H2020-LCE-2015-2	Type of Action: RIA
Title: Role of technologies in an energy efficient economy – model-based analysis of policy measures and transformation pathways to a sustainable energy system	
Starting date: 01.02.2016	End date: 31.07.2019
Total Cost: 3,997,458.75 €	EU max. contribution: 3,997,458.75 €
Coordinator: KUNGLIGA TEKNISKA HOEGSKOLAN	
Participants:	
<ul style="list-style-type: none"> ▪ SPF TOKNI ▪ LIETUVOS ENERGETIKOS INSTITUTAS ▪ DANMARKS TEKNISKE UNIVERSITET ▪ AALTO-KORKEAKOULUSAATIO 	<ul style="list-style-type: none"> ▪ UNIVERSITAET STUTTGART ▪ UNIVERSITY COLLEGE LONDON ▪ Reiner Lemoine Institut gGmbH ▪ KIC INNOENERGY SE ▪ ENERGETSKI INSTITUT HRVOJE POZAR ▪ AARHUS UNIVERSITET
Countries: FO;DK;DE;FI;LT;NL;HR;UK	
Objectives:	
<p>REEEM aims to gain a clear and comprehensive understanding of the system-wide implications of energy strategies in support of transitions to a competitive low-carbon EU society. Comprehensive technology impact assessments will target the full integration from demand to supply and from the individual to the entire system. It will further address its trade-offs across society, environment and economy along the whole transition pathway. The strong integration of stakeholder involvement will be a key aspect of the proposal. The assessments performed within REEEM will focus on integrated pathways, which will be clustered and categorised around two focal points: the four integrated challenges of the Integrated Roadmap of the Strategic Energy Technology (SET)-Plan and the five dimensions of the Energy Union. Case studies will further serve to investigate details and highlight issues that cannot be resolved at a European level. A range of outputs will target the specific needs of various stakeholder groups and serve to broaden the knowledge base. These include, among others, Policy Briefs, Integrated Impact Reports, Case Study reports and Focus Reports on economy, society and environment. A focus on technology research, development and innovation will be included through the development of Technology Roadmaps with assessments of the Innovation Readiness Level of technologies. Further, a set of enabling tools will help to disseminate and actively engage stakeholders, including a Stakeholder Interaction Portal, a Pathways Diagnostic Tool and an Energy System Learning Simulation. Access to all work developed and transparency in the process will be guiding principles within this project exhibited by, for example, providing open access to a Pathways Database.</p>	

Topic: LCE-21-2015	Acronym: REFLEX
Call: H2020-LCE-2015-2	Type of Action: RIA
Title: Analysis of the European energy system under the aspects of flexibility and technological progress	
Starting date: 01.05.2016	End date: 30.04.2019
Total Cost: 3,285,530.00 €	EU max. contribution: 2,779,700.00 €
Coordinator: TECHNISCHE UNIVERSITAET DRESDEN	
Participants:	
<ul style="list-style-type: none"> ▪ UNIVERSITEIT UTRECHT ▪ FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. ▪ AKADEMIA GORNICZO-HUTNICZA IM. STANISLAWA STASZICA W KRAKOWIE 	<ul style="list-style-type: none"> ▪ TRT TRASPORTI E TERRITORIO SRL ▪ TEP ENERGY GMBH ▪ KUNGLIGA TEKNISKA HOEGSKOLAN ▪ KARLSRUHER INSTITUT FUER TECHNOLOGIE ▪ ENERGY SYSTEMS ANALYSIS ASSOCIATES - ESA2 GMBH
Countries: IT;PL;SE;NL;DE;CH	
Objectives:	
<p>The future energy system is challenged by the intermittent nature of renewables and requires therefore several flexibility options. Still, the interaction between different options, the optimal portfolio and the impact on environment and society are unknown. It is thus the core objective of REFLEX to analyse and evaluate the development towards a low-carbon energy system with focus on flexibility options in the EU to support the implementation of the SET-Plan. The analysis are based on a modelling environment that considers the full extent to which current and future energy technologies and policies interfere and how they affect the environment and society while considering technological learning of low-carbon and flexibility technologies.</p> <p>For this purpose, REFLEX brings together the comprehensive expertise and competences of known European experts from six different countries. Each partner focusses on one of the research fields techno-economic learning, fundamental energy system modelling or environmental and social life cycle assessment. To link and apply these three research fields in a compatible way, an innovative and comprehensive energy models system (EMS) is developed, which couples the models and tools from all REFLEX-Partners. It is based on a common database and scenario framework. The results from the EMS will help to understand the complex links, interactions and interdependencies between different actors, available technologies and impact of the different interventions on all levels from the individual to the whole energy system. In this way, the knowledge base for decision-making concerning feasibility, effectiveness, costs and impacts of different policy measures will be strengthened, which will assist policy makers and support the implementation of the SET-Plan. Stakeholders will be actively involved during the entire project from definition of scenarios to dissemination and exploitation of results via workshops, publications and a project website.</p>	

Topic: LCE-21-2015	Acronym: SET-Nav
Call: H2020-LCE-2015-2	Type of Action: RIA
Title: Navigating the Roadmap for Clean, Secure and Efficient Energy Innovation	
Starting date: 01.04.2016	End date: 31.03.2019
Total Cost: 3,999,411.25 €	EU max. contribution: 3,999,411.25 €
Coordinator: TECHNISCHE UNIVERSITAET WIEN	
Participants: <ul style="list-style-type: none"> ▪ AXPO SERVICES AG ▪ EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH ▪ UNIVERSITY OF EAST ANGLIA ▪ REKK ENERGIAPICI TANACSADO KFT ▪ UNIVERSIDAD PONTIFICIA COMILLAS ▪ NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU ▪ FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. ▪ INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE ▪ ALSTOM (SCHWEIZ) AG ▪ CENTRE FOR EUROPEAN POLICY STUDIES ▪ NATIONAL TECHNICAL UNIVERSITY OF ATHENS - NTUA ▪ SEURECO SOCIETE EUROPEENNE D'ECONOMIE SARL ▪ STIFTELSEN SINTEF ▪ DEUTSCHES INSTITUT FUR WIRTSCHAFTSFORSCHUNG DIW (INSTITUT FUR KONJUNKTURFORSCHUNG) EV 	
Countries: AT;FR;UK;NO;EL;CH;BE;DE;HU;ES	
Objectives: <p>SET-Nav will support strategic decision making in Europe's energy sector, enhancing innovation towards a clean, secure and efficient energy system. Our research will enable the EC, national governments and regulators to facilitate the development of optimal technology portfolios by market actors. We will comprehensively address critical uncertainties and derive appropriate policy and market responses. Our findings will support the further development of the SET-Plan and its implementation by continuous stakeholder involvement.</p> <p>These contributions of the SET-Nav project rest on three pillars:</p> <p>The wide range of objectives and analytical challenges set out by the call for proposals can only be met by developing a broad and technically-advanced modelling portfolio. Advancing this portfolio and enabling knowledge exchange via a modelling forum is our first pillar.</p> <p>The EU's energy, innovation and climate challenges define the direction of a future EU energy system, but the specific technology pathways are policy sensitive and need careful comparative evaluation. This is our second pillar. Using our strengthened modelling capabilities in an integrated modelling hierarchy, we will analyse multiple dimensions of impact of future pathways: sustainability, reliability and supply security, global competitiveness and efficiency. This analysis will combine bottom-up 'case studies' linked to the full range of SET-Plan themes with holistic 'transformation pathways'.</p> <p>Stakeholder dialogue and dissemination is the third pillar of SET-Nav. We have prepared for a lively stakeholder dialogue through a series of events on critical SET-Plan themes. The active involvement of stakeholders in a two-way feedback process will provide a reality check on our modelling assumptions and approaches, and ensure high policy relevance. Our aim is to ensure policy and market actors alike can navigate effectively through the diverse options available on energy innovation and system transformation.</p>	

Topic LCE-23 – Projects

Topic: LCE-23-2015	Acronym: ICTFOOTPRINT.eu
Call: H2020-LCE-2015-3	Type of Action: CSA
Title: European Framework Initiative for Energy and Environmental Efficiency in the ICT Sector	
Starting date: 01.02.2016	End date: 31.01.2019
Total Cost: 404,401.25 €	EU max. contribution: 400,000.00 €
Coordinator: TRUST-IT SERVICES LIMITED	
Participants:	
▪ BIO INTELLIGENCE SERVICE	▪ EUROCITIES ASBL
Countries: BE;FR	
<p>Objectives:</p> <p>ICTFOOTPRINT.eu, EU Framework Initiative for Energy & Environmental Efficiency in the ICT Sector aims to deliver a practical response to the outcome of the pilot study conducted by the EC back in 2013 for the adoption of ICT footprint calculation methodologies. Too many organisations, whilst wanting more energy-efficient products & services do not know where to start nor have the adequate time or resources to pursue this efficiently. The project aims to change this by raising awareness but at the same time create an ecosystem allowing a win-win approach to end-users or providers of ICT services (including data centres & networks), ICT large players, SDOs, Public Authorities & Legislators.</p> <p>Specific Goals include:</p> <ul style="list-style-type: none"> Create an LCE Support Framework Platform informing end-users, agnostically, of ICT specific methodologies available & support them Create a marketplace of opportunities for solution providers in ICT energy & environmental efficiency Deliver a tool allowing SMEs, to make an assessment of their carbon footprint Interface & engage with relevant stakeholders to disseminate the methodologies Produce the ICTFOOTPRINT.eu Policy Action Plan Strategy Report Provide Sustainability-driven Mechanisms to involve & incentivize all players that are necessary to create the aforementioned ecosystem. <p>The consortia is led by a lean, skilled & complementary consortia. Trust-IT, a dynamic UK, SME over 20 yrs of experience on EC related support activities & communicating ICT innovation for its global network. Professional partners BIOIntelligence Services/ Deloitte, FR, centre of excellence & innovation in the field of sustainability & brings with it the necessary ingredient of finding answers to clients facing environmental challenges. The Green Digital Charter/ EuroCities BE, over 40 major EU cities to working together to deliver on the EU climate objectives through the use of ICT. Stakeholders involved through an External Advisory Group passionate about IT resource efficiency.</p>	

List of Calls Low Carbon Energy

CALL: H2020-LCE-2015-1-two-stage

Deadline: 05.05.2015

Topic	Title	Number of funded projects	Total EU-contribution [€]
LCE-02	Developing the next generation technologies of renewable electricity and heating/cooling	12	57,595,565.90
LCE-11	Developing next generation technologies for biofuels and sustainable alternative fuels	4	22,013,896.51
LCE-15	Enabling decarbonisation of the fossil fuel-based power sector and energy intensive industry through CCS	2	27,850,600.00
LCE-17	Highly flexible and efficient fossil fuel power plants	1	6,477,595.50
Total		19	113,937,657.91

CALL: H2020-LCE-2015-2

Deadline: 05.05.2015

Topic	Title	Number of funded projects	Total EU-contribution [€]
LCE-03	Demonstration of renewable electricity and heating/cooling technologies	7	96,905,083.79
LCE-19	Supporting coordination of national R&D activities	1	499,921.00
LCE-21	Modelling and analysing the energy system, its transformation and impacts	4	14,511,878.75
Total		12	111,916,883.54

CALL: H2020-LCE-2015-3

Deadline: 5.05.2015

Topic	Title	Number of funded projects	Total EU-contribution [€]
LCE-04	Market uptake of existing and emerging renewable electricity, heating and cooling technologies	3	5,558,450.25
LCE-05	Innovation and technologies for the deployment of meshed off-shore grids	1	39,327,743.88
LCE-06	Transmission grid and wholesale market	3	42,377,160.25
LCE-09	Large scale energy storage	2	24,982,953.01
LCE-14	Market uptake of existing and emerging sustainable bioenergy	8	14,912,770.00
LCE-18	Supporting Joint Actions on demonstration and validation of innovative energy solutions	4	34,847,333.07
LCE-23	Supporting the community in deploying a common framework for measuring the energy and environmental efficiency of the ICT-sector	1	400,000.00
Total		22	162,406,410.46

List of Abbreviations

Type of Actions

IA	Innovation Action
RIA	Research and Innovation Action
CSA	Coordination and Support Action

Topics

EE	Efficient Energy
LCE	Low Carbon Energy
SCC	Smart Cities and Communities
FCH	Fuel Cells and Hydrogen

Others

H2020	Horizon 2020
NCP	National Contact Point
PPP	Public Private Partnership
PDA	Project Development Assistance

