

PEP	Project Title	Organisation	Category	Description	SEAI commitment	Total Project Costs
109	<b>Methods for Improved Collector Design/Completion - Irish Ground Thermal Properties (IGTP-3)</b>	Terra GeoServ Ltd.	Geothermal	The proposed research seeks to enhance data associated with site-specific rock properties and related parameters used to size heat-collector's. The aim is to increase the number of installations of ground source heat pumps in Ireland and ensure high standards across the sector. GeoServ Ltd. will lead this research in collaboration with the Geological Survey of Ireland, Fastnet Analytical, Roadstone and Wall's Well Drilling. The project follows on from SEAI funded research in 2014 and 2015 that aimed to improve the understanding of mapped and shallow geothermal resources in Ireland, the outputs of which are available through IGTP website <a href="http://www.irishgroundtherm.com">www.irishgroundtherm.com</a> .	€39,800.8	€39,800
111	<b>Enabling the Bioenergy Sector to Understand and Assess Life Cycle Sustainability</b>	Irbea	Renewable Heat	This project aims to generate new industry-relevant knowledge and guidance on Lifecycle Analysis LCA and sustainability criteria of local bioenergy supply chains in Ireland. The analysis will support the development of a more comprehensive investigation by SEAI on the sustainability of bioenergy, which will inform development of the Renewable Heat Incentive RHI. The project will develop in-depth, comprehensive case studies of relevance to the bioenergy sector. In addition, this project will support the implementation of the Clean Energy Package.	€27,922	€28,506
112	<b>Planning Guidance Recommendations for the Bio Energy sector in Ireland</b>	Irbea	Renewable Heat	This project will support the development of the bioenergy sector in Ireland addressing a key barrier, in terms of moving through planning, consistently highlighted as an impediment to the sector. This research intends to address a number of areas relating to the town planning implications associated with the development of bioenergy developments in Ireland. The project team will develop planning guidance recommendations following an assessment of third party planning objections lodged against proposed bioenergy schemes in urban and rural contexts to understand the key issues and obstacles.	€26,487.16	€27,412.5
114	<b>Creating and Harmonising Energy and Co2 Baselines for the Development of LA's Climate Change Mitigation Action Plans</b>	Dublin Energy Agency - CODEMA	Climate Change	This project aims to create a CO2 emissions and energy baseline inventory at greater resolution than what is currently available for the Dublin Region, disaggregated into four Local Authority areas. The work will complement the national inventories produced by the EPA. CODEMA will share the methodology with other Local Authorities to ensure consistency across future regional emissions inventories. This work will support the National Mitigation Plan and the development of policies and measures at a Local Authority scale.	€37,483	€39,349
116	<b>National Building Energy Retrofit Testbed NBERT Research Portal</b>	CIT	Energy Efficiency	The project aims to deliver an open-source, performance assessment tool to address the climatic cooling potential of natural ventilation systems in Ireland. The project builds on a previous CIT research, which developed a low energy testbed building in 2012. The proposed SEAI RD&D project will provide a platform for the next phase of the testbed initiative at CIT and will build on participation in IEA- EBC Annex 62 on Ventilated Cooling - <a href="http://ow.ly/xBVW30dgFg3">http://ow.ly/xBVW30dgFg3</a> . The project will help bridge the knowledge gap surrounding overheating risk in low energy buildings and will be the first source of ventilated cooling potential assessment, within an Irish context.	€38,615.3	€38,615

117	<b>Decision Support System for Energy use in Dairy production DSSSED</b>	CIT	Energy Efficiency	This project aims to develop a decision support system for optimal energy use in dairy production. This is particularly pertinent given national targets to increase milk production with the abolition of milk quota's while maintaining strong sustainability credentials of the Irish dairy industry. The project outputs will inform government policy in relation to energy utilisation in dairy production. It will also inform farm managers of optimal operation strategies to reduce energy consumption for on-farm milk production systems and for increasing renewable generation. Farm managers will be able to access the decision-support tool through an on-line open-source web app, which will result in the immediate application of best practice guidelines in energy utilisation on Irish dairy farms. Teagasc are collaborating with the project in terms of using its commercial farm network as a test-bed for the application of the sensor networks and disseminating the tool.	€48,773.5	€49,038
118	<b>Northwest Energy Communities Start-up NECS</b>	IT-Sligo	Community	The project aims to support the transition from passive consumer to energy citizen on a targeted community scale in line with the ambitions of the Energy White Paper. It will establish a study group of 6 communities within the region of Co. Donegal, Sligo & Leitrim, survey their energy demand and develop a road map to 2025. The data and information gathered as part of this project will facilitate participation in other SEAI programmes such as SEC.	€58,653.44	€65,753.44
120	<b>ReBioGen - Development of policy and community based business model underpinning distributed energy recovery from residual biomass involving multiple stakeholder types</b>	tcbb-RESOURCE not-for-profit	Renewable Heat	The project aims to develop a viable business model supporting the mobilisation and exploitation of Ireland's agri-food, marine, forestry and municipal waste residues for recovery of renewable energy. The project is a collaboration between tcbb-Resource, CKEA, Tipp. Co and TEA. The team will consider the sustainable exploitation of these residues through an integrated approach to supply chain development, facilitating aggregation and mobilisation of feedstock together with deployment of energy production technology focusing on AD and pyrolysis. The analysis will focus on the design of a community-based model that can aggregate and mobilise supply of a range of feedstock's within a given locality and that deploys shared (or public) processing infrastructure to recover renewable energy. The project will contribute to Ireland's renewable energy and climate change obligations as well as broader sustainability, circular economy, waste management and rural development objectives.	€46,353	€49,043
122	<b>Grange Castle Business Park Energy MasterPlan</b>	South Dublin Co. Council SDCC	Energy Planning	This innovative project will establish a 'living laboratory' energy zone in South Dublin County. The project team will develop an Energy Masterplan for Grange Castle Business Park by South Dublin County Council. The work aims to explore the existing and future energy profile of the Business Park and investigate opportunities for on-site low carbon and renewable energy responses, including waste heat recovery and utilisation. There is high demonstration value and replicability in this project.	€24,920	€25,000
124	<b>Smartblocks</b>	CIT	Smartgrid	This project looks to explore the potential of blockchain technology in the energy sector. The project team will develop and evaluate a proof-of-concept solution to evaluate the viability of using blockchain technology to support the promotion of renewable energy usage and the independent verification of energy transactions (usage, renewable penetration) between prosumers and consumers.	€99,200.64	€99,600.92
126	<b>Strategic Planning Toolkit for Building Energy Retrofits</b>	xd Consulting Ltd.	Energy Efficiency	This project aims to develop a consistent framework and tool for use by communities and Local Authority (LA) to understand their residential energy usage. This will help in identifying appropriate retrofit measures to reduce energy usage in subsequent	€32,673.6	€50,805.5

				years. The output from the project will enable more consistent and straightforward means for communities and LA's to carry out assessments and could be used by any Sustainable Energy Community or Covenant of Mayors signatory body.		
128	<b>The Relationship between Radon and Ventilation in Retrofit Buildings: Experimental Validation of Model Predictions</b>	NUI Galway	Radon	The project team aim to validate a model - funded through the EPA's research programme - developed to examine the relationship between improved energy efficiency and elevated indoor radon concentrations. The project team will conduct field trials to measure real-world ventilation status and radon concentrations for selected dwellings. This data will validate the model for these selected dwellings. Given the potential interaction of radon levels and energy efficiency retrofits, this is an important project. Full validation and parameterisation of the model is essential for it to provide meaningful information.	€55,065.44	€59,302.57
129	<b>Segmentation of the energy consumer market in Ireland</b>	Interactions Ltd.	Behaviour	The project intends to segment national energy consumers drawing upon European best practice. The project will validate the most effective behavioural models to encourage action across the segments to accelerate the uptake of renewable energy practices in Ireland. The methodology primarily employs social marketing tools to achieve specific behavioural goals. The results will provide useful insights for SEAI communications, delivery of grant programmes and inform behavioural interventions which will be examined in more detail by the Behavioural Economics Unit in SEAI.	€23,827	€35,709
131	<b>Obstacle impact analysis on large scale wind auto producers in peri-urban locations, based on multi-annual SCADA data</b>	DkIT	Wind	This project will investigate the impact of local obstacles on the energy performance of 3 existing large scale wind auto-producers at separate semi-urban locations, based on the analysis of multi-annual 10-minute SCADA data sets. The project aims to inform appropriate building set back distances for energy maximisation, which will benefit planning guidelines regarding setback distance justification. The outputs will be of use to IEA Wind activities such as Task 27 and 28 - <a href="http://ow.ly/2ciz30dgl3g">http://ow.ly/2ciz30dgl3g</a>	€32,540.62	€32,540.62
132	<b>Ireland 2050 and the relationship between information and behavioural/attitude change in communities</b>	Energy Institute	Behaviour	The overall purpose of the study is to gain insights on the Ireland 2050 project - Ireland 2050 website, My2050, and the 2050 Calculator - from users as to its effectiveness in empowering citizen engagement and changing attitudes towards energy in Ireland through a series of regional talks and surveys in community groups. The Energy Institute's Ireland 2050 intervention assumes an empowered public will assist the evolution of Ireland's energy infrastructure in line with sustainability criteria.	€25,960	€28,560
138	<b>Measuring the Sustainability of Ireland's Data Industry</b>	GConn Technologies - Host in Ireland	Power - Data Centres	The project proposes an industry-wide study of Ireland's data-centre landscape with the aim of improving information related to the sector. The project team will enhance existing data centre locations in Ireland and expanding on a recent Greenpeace report to enhance Ireland's reputation as a green energy economy with data centres as a critical component of this. The project output will provide up-to-date and relevant information, and make recommendations on sustainability for the sector	€65,504.25	€85,368.15
141	<b>Biomass drying trials with wind resource analysis</b>	DkIT	Biomass	This project aims to improve the standardisation and quality assured wood chip feedstock stream supplied by Coillte to their end-users. The team will determine the optimal drying orientation of wood stocks for the months of storage pre-chipping, and build the knowledge base of the interaction of wind and bioenergy drying. The output from this process should be chip of a quality to allow direct shipment without further drying by air or heat.	€44,835	€44,835
142	<b>Microgrids in Rural and Isolated Communities in Ireland - Model</b>	NUI Galway	Microgrid/Community	This project will develop a modelling tool for analysing the technical and economic feasibility of various microgrid solutions for rural and isolated communities. Inis Oírr in the Aran Islands will be used as a case study to develop the tool, and will provide a	€27,001.57	€34,942

	<b>Development using the island of Inis Oirr as a case study</b>			detailed technical and economic analysis of a number of potential microgrid solutions for serving the island's population of 250. The results of this case study will examine the potential for microgrid solutions for community energy projects in Ireland.		
144	<b>Thurles Heat Demand Map and Outline Feasibility study</b>	Tipperary Energy Agency TEA	Renewable Heat	The output of the project will be a map illustrating thermal energy demand in Thurles, as well as an outline feasibility study, focusing on a pilot district heating system on one side of the town of Thurles. This map will help inform Tipperary County Council's district heating policy. In addition, the map will show areas of fuel poverty that will allow these areas to be targeted for energy efficiency upgrade programmes designed for the fuel poor.	€5,391.7	€5,882.5
147	<b>Energy Cost Optimisation for Large Commercial Premises</b>	Predictive Control Systems Ltd. PCS	Smartgrid	This project seeks to optimise electricity-costs for large consumers, using advanced, dynamic predictive-control technology. The technology developed at Nimbus, CIT was licensed by PCS DAC Ltd (the lead applicant), for commercial exploitation. To date it has been trialled in the water sector. This project aims to adapt the platform for the retail sector, validate energy-cost savings and enable rollout to sister stores across Ireland and UK. This project is a collaboration with PCS DAC, DSC Group (the energy management company already contracted by the trial site company) and GMC Ltd.	€64,350	€79,150
152	<b>Development and deployment of a multi vehicle carport/ charging solution for electric vehicles (EVs)</b>	CIT	Electric Vehicles	This is a collaboration between PV Generation Ltd, a major pharmaceutical company in Dublin and the Nimbus Centre in CIT. This proposal is seeking part funding for the development and deployment of a PV powered carport with an integrated EV charging station at a pharmaceutical plant that already services 5 EV vehicles. Data analytics, will be carried out by the Nimbus Centre in CIT will inform future decisions for the technology.	€18,396.45	€22,489
153	<b>Conversion of Forest Residues into Renewable Solid Fuel</b>	Dowmann Ltd.	Biomass	The main objective of this project is to investigate and validate the pilot scale production of solid wood fuel products (briquettes & pellets) from forest thinning's. The project also intends to evaluate the economic and supply chain feasibility of converting a large volume of waste thinning's into a valuable renewable fuel. The project lead – Dowmann Ltd, are supported by Coillte and Teagasc and this work will build on SEAI's bioenergy supply chain report that estimated the energy potential of forest thinning's at 117,608 toe/year by 2030.	€22,077	€22,077
165	<b>Portlaoise District Heating Project</b>	Laois Farm Forestry Group	District Heating	This project will provide valuable insights in terms of deploying renewable heat and more specifically district heating, optimising local private forest resources and engaging the public sector. This will constitute an important next step in ascertaining whether a biomass district heating system in Portlaoise is viable.	€5,942	€5,941
172	<b>BERWow - Deep retrofit BER planning tool and mapping application</b>	IHER Energy Services Ltd.	Energy Efficiency	Using SEAI's BER dataset, this project involves further developing a web-based application to increase uptake of deep retrofit measures. The overall objective is to allow homeowners and estate agents to access BER data for specific dwellings and access information on recommended deep retrofit measures. The tool will provide information on payback for investments that will inform decision-making as well as ancillary benefits such as comfort and health benefits. The project aligns well with SEAI objectives on deep retrofit and improving accessibility and use of datasets held by public sector bodies.	€120,320.51	€120,320.51