

seai SUSTAINABLE
ENERGY AUTHORITY
OF IRELAND

ENERGY AWARDS

Recognising and
rewarding excellence
in sustainable energy

2020

#SEAlawards20



Rialtas na hÉireann
Government of Ireland

Celebrating excellence in sustainable energy

2020 in numbers



124
entries



€379m
annual energy spend



Achieving
11%
energy savings



€42m
in cost savings



Foreword

The SEAI Energy Awards recognise and reward excellence in all aspects of energy efficiency and renewable energy. Despite the significant challenges this year from Covid-19, the volume and quality of Award applications reflect the unwavering commitment to sustainability by individuals, businesses, communities and public organisations right across Ireland. This in itself is commendable.

The next decade is pivotal to our society. Accelerated climate action is essential to achieve our energy and carbon emission targets. SEAI is a willing supporter to those who want to take action. Like this year's finalists, we want others to play their part and experience the benefits from sustainable energy, including lower energy bills, more comfortable buildings and lower CO₂ emissions.

The leadership of this year's finalists is hugely inspiring. We encourage them to share their journeys and to share their expertise so their efforts can be replicated and amplified across all sectors.

This year's finalists deserve our collective congratulations for their continued commitment to sustainable energy and climate action.

Congratulations on your great work.

Regards

William Walsh,
CEO, SEAI

2020 Finalists in SEAI Energy Awards

Categories

Energy Team / Energy Manager of the Year

- Astellas
- Ian O'Connor (John Sisk & Son)
- J&J Campus Ireland Energy Team

Large Business – Exemplary Energy Performance

- Boston Scientific
- Danone Wexford
- Wyeth Nutritionals

Small and Medium Business – Exemplary Energy Performance

- Finian O'Harte Poultry and CHP Mechanical Services
- SOLA
- Terra Spirits and Liqueurs

Public Sector – Energy Leadership

- Dublin City Council
- Ervia Business Services
- National University of Ireland, Galway

Inspirational Energy Community

- Dunleer Sustainable Energy Community
- Good Energies Alliance – Ballinaglera SEC
- Lárionad Acmhainní Nádúrtha CTR

Excellence in Energy Research and Innovation

- Glasport Bio
- International Energy Research Centre (IERC)
- National University of Ireland, Galway

Energy in Buildings

- Cosgrave Developments
- ESB Engineering and Major Projects
- SSE Airtricity Energy Services

Innovative Deployment of Renewable Energy

- Aurivo Consumer Foods
- Energia
- Green Generation Ltd.



OUR 2020 FINALISTS

Energy Team/Energy Manager of the Year



Astellas Ireland (AICL) Kerry Plant is a pharmaceutical company headquartered in Japan, manufacturing a range of medicinal treatments. These are supplied globally from the Killorglin facility in Co. Kerry. The Astellas Kerry Energy Management team works in conjunction with employees and senior management, to continuously improve energy performance onsite. Over the past three years, the team has delivered an energy reduction of 15% by lowering energy use, reducing the carbon footprint and increasing renewable energy integration. This supports the site's approach to the mitigation of climate change. The Astellas team are also actively engaged with the local community through supporting and sponsoring local school initiatives and participating in the Tidy Towns.



John Sisk & Son (Holdings) Ltd. is one of Ireland's leading providers of construction and engineering services with extensive operations across Ireland, the United Kingdom and mainland Europe. Sisk Group has achieved energy savings of 42% since 2015. As Sisk Group Energy Manager, Ian O'Connor has set a goal to achieve a zero-carbon construction industry. Ian has already led the company to become the first construction company in Ireland to achieve certification to ISO 50001. Ian has developed a three-year energy management strategy for the business and ensures its successful implementation across all Sisk operations. It outlines goals, objectives and actions to ensure energy performance is measured and the strategic goals are achieved across all business functions.

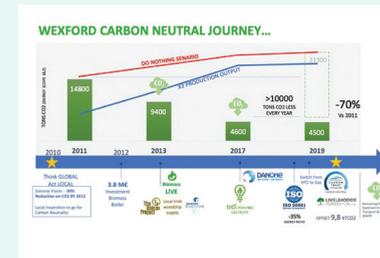


Johnson & Johnson is the largest, diversified healthcare company in the world with three business sectors including consumer, pharmaceutical and medical devices. The Johnson & Johnson (J&J) Campus Ireland (C.I.) Energy Team is responsible for continual energy performance improvement at four manufacturing and pharmaceutical J&J companies in Ireland, each with their own unique business function and operational characteristics. The C.I. Energy Team has successfully delivered an ambitious four year integrated multi-site energy management strategy across all sites resulting in energy savings of 17%. The team have delivered multiple projects including the installation of renewable technologies and embedded energy management practices across the campus. The improved manufacturing efficiency has created a competitive advantage for Irish operations resulting in increased employment and investment benefits into the local regions of Cork and Limerick.

Large Business – Exemplary Energy Management



Boston Scientific Corporation is a global medical technology leader, with significant manufacturing operations in Galway, Clonmel and Cork. Boston Scientific transforms lives through innovative medical manufacturing solutions that improve the health of patients globally. Boston Scientific Galway in collaboration with National University of Ireland Galway, have developed GEMS (global energy management system) - a novel methodology for a multi-site manufacturing organisation to systematically manage its energy use and associated carbon emissions. Using this approach, Boston Scientific achieved ISO 50001:2018 certification in 2019 in its three sites. This has resulted in energy savings of over 10% in the first year of the program and has given Boston Scientific the confidence to commit to achieving carbon neutrality in its manufacturing and key distribution sites by 2030.



Danone Wexford sustainably manufactures high quality infant formula. The site produces leading brands like Aptamil, Cow & Gate and Nutrilon for consumers in 41 countries around the world. Danone Wexford is the first Danone Specialised Nutrition factory to achieve certification to the latest ISO 50001:2018 standard. Over the past 10 years the site has invested €10 million to transform itself into a carbon neutral facility whilst doubling production volumes and delivering energy savings of 35%. Danone Wexford was involved in developing a sustainable local woodchip producer group in the South East of Ireland. With Danone's support, this project created many local jobs and now supports over 400 farm families and small forestry owners. Danone also committed to purchase the wood fuel providing a stable demand from the start. Danone Wexford is the first infant formula production plant in the world to be certified carbon neutral.



Wyeth Nutrition has operated in Askeaton, Co. Limerick since 1974 supplying infant nutrition products to a global market. Wyeth Nutrition has pioneered innovative nutrition science with premium quality products that meet the needs of infants and young children. Since 2012, the Wyeth 'Energy Efficiency Journey' has cut energy use by 38%. This involved a number of projects including building and control upgrades, a new heat recovery system, system optimisations, lean manufacturing, and SEAI EXEED projects, culminating in the achievement of the ISO 50001 Energy Management standard in 2017. Wyeth is currently tendering for a solar farm to supply electricity to the site. This has set Wyeth on the road to zero carbon by 2030.

OUR 2020 FINALISTS

Small and Medium Business – Exemplary Energy Management



Finian O'Harte Poultry and CHP Mechanical Services. The owner of Finian O'Harte Poultry based in Clones, Co. Monaghan was determined to address his farm's reliance on fossil fuel gas and make environmental advances which would ensure the long-term future of his business. With the help of CHP Mechanical Services, the business achieved the ideal solution reducing fossil fuel related carbon dioxide emissions by 100% (150 tonnes per annum). The upgrade involved installing high performance insulation on buildings, switching to a biomass boiler and using a finned tube heating system for the poultry units. In addition to energy and carbon related savings, the new system has had many welfare benefits for the birds and the farmer including; lowering ammonia levels due to drier litter and removing carbon monoxide from the poultry unit.



SOLA Energy Solutions is a one stop provider and installer of renewable energy systems to the new build and retrofit market in Ireland. In late 2018, SOLA purchased a 261sqm building outside Templemore town Co. Tipperary, to develop into offices and a showroom for its products. SOLA carried out energy upgrades, including the installation of insulation upgrades, LED lighting, air to water heat pump, solar photovoltaic array, mechanical heat recovery ventilation system, triple glazing and air tightness measures. As a result, the building's Building Energy Rating jumped from F to an A and the business made impressive energy savings of 80%. SOLA now has regular visits from local schools coming to learn about the impact of renewable energy systems and their environmental benefits.



Terra Spirits and Liqueurs located in Bailieboro, Co. Cavan is Ireland's largest family owned producer of Irish Cream Liqueurs which are exported to over 60 markets worldwide. In recent years, Terra has invested significantly in energy efficiency and decarbonisation and has reduced energy consumption by 20%. Projects delivered include; two phases of solar photovoltaics, heat pump installation, wastewater reduction, heat recovery and the transition from oil to Bio LPG. Terra recognise the combined benefits of reducing the site's environmental impact through energy reduction measures whilst delivering cost reduction, quality improvement and overall customer appreciation. Terra Spirits and Liqueurs have definite plans to continue the sustainable culture in the organisation long into the future.

Public Sector – Energy Leadership



Dublin City Council (DCC) is the largest Local Authority in the country. Employing 6000 staff, the Council delivers over 500 services to the people living, working and visiting Dublin city. There is extraordinary support from the Senior Management team to address the 5 key Climate Action Areas, which include: Energy and Buildings, Transport, Flood, Nature and Resource. DCC has delivered energy savings of 34% since beginning its energy journey. It has used innovative contracts to achieve its objectives, exhibiting to other public bodies what can be achieved through replication and coordination. The Council recognises the multiple benefits of energy efficiency such as alleviating energy poverty in social housing and, through sustainable urban mobility plans, improving the air quality in the city.



Ervia Business Services is an integral part of the Ervia Group of companies. Ervia itself is a large commercial semi-state multi-utility company responsible for the delivery of Ireland's national gas and water infrastructure and services, through Gas Networks Ireland and Irish Water. The Energy and Sustainability Team within Ervia Business Services successfully rolled out a fleet replacement programme together with a multitude of energy efficiency projects across all divisions. Since 2010, Ervia Business Services has delivered energy savings of 48%. The principles of energy efficient design are embedded and are a key feature of all projects. The business has strong ambitions towards significantly decarbonising their activities by 2030.



National University of Ireland, Galway (NUIG) is one of Ireland's foremost centres of academic excellence with over 18,000 students. NUIG achieved the public sector 2020 33% energy efficiency target three years early. Building on these results, the team continued with further projects setting a new ambitious target of 40% by 2020. This was achieved by the end of 2019. NUIG's success is down to a committed team that incorporates a strong behavioural change programme together with delivery of multiple energy efficiency and renewable projects that include a wide range of technologies. The university is providing leadership to inform the transition to a sustainable future through its teaching, research, actions and impacts, and is developing a roadmap to move ambitiously towards carbon neutrality by 2030.

OUR 2020 FINALISTS

Inspirational Energy Community



Dunleer Sustainable Energy Community is a very well-established and professional organisation who is providing end-to-end service from education on energy efficiency and renewable energy, to administration of grant applications, and coordinating upgrades. This community has made a real impact on energy use in Dunleer with over 200 premises significantly upgraded. It has also provided a one-stop-shop type retrofit model by bringing together the different community partners

for successful projects, including technical, educational and financial. The experiences gained by this community have been shared with others to support their energy journey.



The sustainable community **Good Energies Alliance – Ballinaglera SEC** has demonstrated a comprehensive sustainability vision and a set of goals with grassroots community support. Successes include an extensive household survey, engagement with 400 local participants and a roadmap to reduce carbon emissions. This community delivered a series of local climate talks and a Transition Year, Climate Action day

which showed an excellent example of intergenerational community engagement. The community has also undertaken some demonstration projects to showcase renewables in action.



The Donegal Gaeltacht community of **Lárionad Acmhainní Nádúrtha CTR** takes a holistic approach to local sustainability and looks to address supply chain issues and identify local opportunities for local contractors. The sustainable energy community demonstrates a strong influence with 70 cross-sector participants involved. Lárionad Acmhainní Nádúrtha uses a 'pop-up energy clinic' approach to community engagement based on individual requirements to help the community understand their energy needs.

The group has demonstrated strong ambition for energy independence through efficiency and the use of local natural energy resources in this Gaeltacht community.

Excellence in Energy Research and Innovation



Glasport Bio, an SME based in Galway, researches and develops innovative solutions to allow end-users derive greater use and reuse value from perceived waste agricultural materials. Glasport Bio aims to play a key role in the fight against climate change, by reducing greenhouse gas (GHG) emissions released by wastes, while also enhancing their renewable energy potential.

Agriculture produces approximately 34% of all GHG emissions in Ireland. Glasport Bio estimates that its product, an additive for agricultural slurry, has the potential to reduce national emissions by approximately 3% while also enhancing the renewable energy output of treated slurry as a feedstock for anaerobic digestion (AD). During testing, the AD energy output from treated manure has been demonstrated to increase by up to 30%, while also reducing the greenhouse gas emissions from treated pig slurry by up to 98%.



International Energy Research Centre (IERC) is a collaborative research centre based at University College Cork, with a focus on integrated sustainable energy systems. This project with Solo Energy, ESB Networks and Electric Ireland includes 20 residential properties located in Dingle, Co. Kerry. The virtual power plant stores and effectively manages renewably generated electricity, delivering the stored energy

during peak demand. This aims to facilitate the transition to a 100% renewable future while delivering value to consumers, the grid operator, utility suppliers, renewable generators and aggregators. Based on early results, when aggregating 20 homes, the team estimated that 100% clean energy could be utilised for their own use. In addition, optimised control resulted in cost savings in the order of 28-42% for the consumer and 10-15% for the utility.



National University of Ireland, Galway has a leading international reputation in research and technology development. The VorTech research team, based within Civil Engineering in the College of Engineering & Science, is part of the Ryan Institute, NUI Galway. The team works primarily within the strategic research priority area of "Environment,

Marine and Energy" with a focus on water and wastewater engineering, sustainability and technology development. The VorTech technology (Vortex Powered Aerator – VPA) aims to revolutionise the energy intensive aeration process within wastewater treatment plants. The team demonstrated the technology in practice, leading to 30% energy recovery. A spin-out company has been formed, VorTech Water Solutions, and aims to deliver energy savings at wastewater treatment plants both in Ireland and at international level.

OUR 2020 FINALISTS

Energy in Buildings



The Cosgrave Group was founded in 1979 by brothers Joe, Peter and Michael Cosgrave. The organisation has enjoyed sustained growth with the core business providing high quality residential developments constructed to the highest standards. Bridgefield & Pappan Grove is a high-density residential scheme located in the centre of Northwood, Santry, Co. Dublin. The Bridgefield and Pappan Grove development which significantly exceeded the requirements of building regulations

comprises of 251 A2 rated apartments. The development includes a combination of innovative technologies including renewable heating systems, heat recovery ventilation systems, and the incorporation of passive house details to reduce thermal bridging. Glazing and orientation were designed to maximise the benefit from solar gain. Superior insulation specification and air tightness were key features of the design. A district heating system, incorporating high efficiency boilers, Combined Heat & Power Units and heat pumps ensured a highly energy efficient development.



Electricity Supply Board (ESB) was established in 1927, and now operates as a leading Irish utility supplying electricity to approximately 1.4 million customers throughout the island of Ireland. The new ESB Archives is a bespoke 992 m2 state of the art facility, constructed on a brown-field site and comprises of a single-storey archival repository with material processing, cold storage, administrative, research and exhibition facilities. The new ESB Archives incorporates technologies and passive design features which result in exceptional levels of environmental

performance. The building is certified as achieving BER A1, and BREEAM Excellent. It is a pioneering building design which demonstrates that it is possible to achieve a BER of A1, while also providing an environmentally stable and robust environment that meets stringent performance criteria.



SSE Airtricity Energy Services is a leader in building energy upgrades with considerable experience in energy efficiency technologies such as external wall insulation, energy efficient windows and doors, heat pumps, energy efficient boilers, airtightness and ventilation, solar PV systems, battery systems and electric vehicle charging points. Moyola Court in South Dublin consists of two rows of terraced houses owned by Dun Laoghaire Rathdown County Council. These houses were built in the 1970's and were in poor condition when SSE were approached to do the deep retrofit

refurbishment works. Supported under the SEAI Deep Retrofit programme for the installation of innovative heating technologies, advanced insulation, and renewable generation and storage resulted in these inefficient units to become some of the most efficient and comfortable in the country. The BER ratings improved from G to A3 which had a hugely positive impact on the residents.

Innovative Deployment of Renewable Energy



Aurivo is a global agri-business with a diverse portfolio across dairy ingredients, consumer foods, health and nutrition, retail and lifestyle stores, animal nutrition and livestock marts. The Aurivo Consumer Foods site in Killygordon, Co. Donegal produces a variety of fresh milk products for well-known national and regional milk brands such as Donegal Creameries, Connacht Gold and Organic For Us. Aurivo decided to use SEAI's EXEED process of energy efficient design when

a decision was made to upgrade the Killygordon processing plant. This would ensure energy efficiency was embedded in the entire project. It was determined during this process that a heat pump could be used to recover heat from various milk streams and then use this heat for pasteurisation and cleaning. This has almost eliminated the requirements for fossil fuel generated steam on site and will result in a reduction of almost 21,000 tonnes of CO₂ over the lifetime of the project.



Energia is a modern customer-centric utility focusing on renewable technology and customer solutions. Energia in partnership with Eirgrid and Moixa, launched a project that enables consumers to become prosumers. This allows them to generate their own electricity, actively partake in the national electricity markets and reduce their CO₂ emissions. This pilot project which involves 20 homeowners, demonstrates how smart home batteries, rooftop

solar and smart electric vehicle charging can deliver valuable flexibility services to help balance the grid with renewable technologies. The technology underpinning the system is a first for Ireland, it identifies a home's renewable energy generation and consumption patterns and optimises the use of available variable tariffs. Using artificial intelligence and machine learning each battery maximises the value homeowners get as well as generating environmental benefits with an estimated saving of 13.5 tonnes of CO₂ from the 20 systems over their lifetime.



Green Generation is a Kildare-based company, using anaerobic digestion to convert agricultural and food waste to renewable energy. Green Generation harnesses natural microbial activity to break down organic waste into biogas and an organic fertiliser by-product. Half of the biogas is used to produce renewable electricity which is sent to the national grid. The rest is upgraded to "biomethane" which is injected into the natural gas grid. Unsold food from Tesco is fed to the Anaerobic Digester, and the biogas generated is sold back to Tesco for use in their stores. The plastic packaging from the food is processed to manufacture durable plastic products, using 'waste' heat from

electricity generation and finally the digestate from the process is once again used as fertiliser to grow food. This is an excellent example of the circular economy in practice.

Thanks to our guest judges

VIP Guest Judges

- Aoife McEvelly (Commission for Regulation of Utilities)
- Bernadette Phelan (Business in the Community Ireland)
- Damien Owens (Engineers Ireland)
- Donna Gartland (City of Dublin Energy Management Agency)
- Kevin O’Sullivan (Irish Times)
- Michael Curran (Chartered Institution of Building Services Engineers)
- Pat Lehane (Pressline)

Consultant / Chair

- Ger Purtil
- Purtill Consulting

