

CLIMATE ACTION ECONOMIC OPPORTUNITIES

Local Authorities Supporting Enterprise

Business Case Studies

Foreword



In recent years we have seen a stronger focus on the development of climate frameworks at international, European, national and indeed the local level. All of this activity is seeking to strengthen relevant climate policy responses that are aimed at identifying urgent solutions to both reducing carbon emissions (mitigation) and planning for, and addressing the inevitable consequences of climate action (adaptation).

What we understand is that economic development now, and into the future, needs to be based on the fundamentals of decarbonisation and the need to preserve, if not enhance, our natural environment. With the shift to a climate neutral economy, there are opportunities for new growth, for new jobs, new products and innovation and to bring everyone along in a just and fair way. The role of local government, through its enterprise and broader economic remit, is significant in this.

In supporting the work of the Local Enterprise Offices (LEO) and local authorities in general, the Business and Enterprise committee¹ of the City and County Management Association (CCMA) have set about exploring the opportunities that exist and are emerging from the necessary transitions required, to confront the challenges of climate change. As part of this committee, the Climate Action and Economic Opportunities steering group continue to explore the subject area for the sector, with deeper research into the supporting policy arena, the work of local government in other jurisdictions on this area and the dissemination of information through conferences, training and information sessions.

As part of the ongoing research, this catalogue showcases case study examples of how businesses are pivoting to capitalise on new opportunities and in doing so are becoming green economy pioneers, with the support of local authorities. Each company highlights, in its own way, how the pursuit of initiatives to tackle climate change are responding to the transformations required and are demonstrating a competitive advantage in the marketplace.

I extend my appreciation to the Business and Enterprise committee of the CCMA and the Climate Action and Economic Opportunities steering group for their work to date on exploring the subject matter and for highlighting inspiring examples that are reassuring of the potential of local enterprise and economic development in tackling climate change. The role of local government is steadfast in supporting and enabling this to occur.

Joan Martin
CE Louth County Council
Chair, Climate Action & Economic Opportunities Steering Group

¹ Business, Tourism, Enterprise, Innovation and Urban/Town Economic Renewal (BTEIUR) Committee

Case Study: BHSL

[Web contact](#)

Introduction

Based in Kantoher Business Park, Ballagh, Co. Limerick, BHSL is a global leader in sustainable poultry production technology. They champion the first and only system accredited in using the industry manure to provide energy solutions. BHSL have developed and patented Fluidised Bed Combustion (FBC) Technology to reliably convert poultry manure into heat and electricity for use on poultry farms.

Project outline

Complying with EU Regulations, 592/2014, for the treatment of poultry manure for combustion, BHSL have designed and installed plants to collect, store, process and convert poultry manure into heat or heat and electricity. The process, FBC, has a number of very significant environment benefits including, ability to handle poultry manure of different moisture contents, reduced furnace heat and thus reduced harmful emissions such as SO₂, Nox or HCL (Sulphur dioxide, Nitrogen oxides, Hydrogen chloride).

Green credentials/Circular economy links

The treatment of waste products on farms eliminates the need for transporting materials off site, thus saving on fuel and transportation costs. It also negates issues with spreading of poultry manure on land. The process has numerous other benefits including;

- Use of waste products to replace fossil fuels for energy generation;
- Provision of direct heating and electricity to the farm;
- Reduced emissions;
- Reduced potential for environmental issues such as acidification and eutrophication from landspreading;
- Delivers on obligations for renewables and circular economy principals.

Conclusions/Comments

Taking what is a waste product which in itself causes issues when spread directly on land, BHSL have designed technology to treat the material onsite. This has generated numerous benefits for the farmer and the environment including reduced costs, production of heat and power onsite, healthier stock, lower emissions and the generation of an ash based end product that is high in Potassium and Phosphorus.



**CLIMATE ACTION
ECONOMIC OPPORTUNITIES**
Local Authorities Supporting Enterprise

Case Study: BiaSol

[Web contact](#)

Introduction

BiaSol was founded in Tullamore, Co. Offaly in 2020 as way to combat food wastage. They take the spent barley from the brewery industry and upcycle it to create nutritious, zero-waste food products and baking mixes for the retail market.

Project outline

With the rapid growth of craft brewing across Ireland there has been an increase in the availability of brewers' spent grains. Not usually an ingredient used for baking or cereals, BiaSol have taken this once considered food waste and repurposed it to create a number of healthy food products.

Green credentials/Circular economy links

Using a waste by-product from the brewing industry, spent grain, which is high in protein, fibre and the amino acid Lysine, BiaSol have created several innovative food solutions. These include products such as breakfast cereals, baking mix, soda bread mix, scone, and cookie mixes.

Using spent grain in baking is an innovative development as the product was never seen as being of use to the food industry. It is both delicious and sustainable and locally sourced, thereby helping to keep the embedded food miles low.

Conclusions/Comments

BiaSol is a young Offaly company using what was once seen as a waste product to make sustainable and healthy products. Having won the 2021, *Irish Times* Innovation Award for manufacturing and design, this company is going from strength to strength and keeping things local.



CLIMATE ACTION
ECONOMIC OPPORTUNITIES
Local Authorities Supporting Enterprise



Case Study: Soltec

[Web contact](#)

Introduction

Soltec (Ireland) Ltd., located in Mullingar, Co. Westmeath specialises in the recovery of hazardous waste solvents. Additional services offered by the company include a wide range of recycling, recovery and disposal treatment methods for other hazardous waste materials.

Founded over 25 years ago, the company now treats 25,000 tonnes of waste, including over 5000 tonnes of hazardous waste each year with over 90% being recovered on site in Mullingar.

Project outline

Soltec (Ireland) Ltd. offers quality, sustainable and cost-effective waste management solutions. They tailor their products to meet the specific needs of the clients, from single operator body shops to large scale industry. Each of the waste management solutions are based on over 25 years' experience gained from working with companies in providing innovative, safe and compliant treatment options.

Recovery has always been a key part of Soltec's mission, as Ireland's only solvent recovery distillation plant. They pride themselves on offering their clients this important service which includes toll recovery and the manufacture of paint-related materials such as standard thinners, premium thinners, and degreasing solvents.

Green credentials/Circular economy links

Soltec take away our waste solvent, recovers it and sends it back to us. The service they provide is always reliable, compliant, and cost effective. IAC, Shannon

As an Enterprise Ireland sponsored company, Soltec (Ireland) Ltd., have carried out three major research and development projects over the last five years in relation to product and process innovation, and are accredited under the Environmental Management System ISO 14001 in addition to Quality Standard ISO 9001.

Conclusions/Comments

Waste solvents will always need to be disposed of in an environmentally sound way, and Soltec provides a service where these solvents are recovered and recycled and either returned to the waste provider or sold on to recognised markets while complying with ISO 14001.



CLIMATE ACTION
ECONOMIC OPPORTUNITIES
Local Authorities Supporting Enterprise

Case Study: ACT Studio

[Web contact](#)

Introduction

ACT (Accelerating Change Together), as a social enterprise, brings together a number of disciplines including architects, urbanists and policy specialists working to the aim of accelerating the green transition and implementing sustainable development through design, to help address some of the biggest global and local challenges.

Project outline

Through a process of design, enabling, collaboration and acting, ACT bring forward future envisioning perspectives that can be applied locally to address challenges of climate change.

ACT have presented ideas around the greening of Ballina, living in town centres instead of suburbs, and reinforcing the local government promotion of the GAA, as being a key driver for the green transition on the island of Ireland, through the Green Clubs Programme. Other interesting projects include the citizens co-designed park in Newry and a new forest for Belfast city.

Green credentials/Circular economy links

With a desire to enable others to help accelerate change, ACT have designed a dedicated Sustainable Development Goals (SDG) Tag Tool site. This tool allows users to upskill themselves and to discover, improve and communicate their sustainable impact in as little as 15 minutes.

Conclusions/Comments

ACT promote sustainable development to enable collaboration. Having been accredited by the UN, they are an organisation that help companies reduce their carbon footprint. The company brings a multi-disciplinary approach to tackling the challenges of today.



Case Study: Dingle Hub

[Web contact](#)

Introduction

Dingle Hub opened by Údarás na Gaeltachta in 2017, provides a modern community workspace for small businesses, entrepreneurs and self-employed people in the Dingle area. Since opening, they have expanded their brief to embrace innovative projects to improve life for everyone in the area..

Project outline

Dingle Hub is host to tech companies, writers, artists, engineers, filmmakers, and community organisers. Some have their own office space while others work from the communal hot desk area. They promote the coming together of independent, creative people to spark new ideas and projects. .

Green credentials/Circular economy links

Dingle Hub manages projects under three pillars namely: sustainability, digital transformation, and creative industries. They have identified these areas as those most likely to create long-term employment across the Dingle Peninsula.

The sustainability initiative entitled Dingle Peninsula 2030, aims to move toward a more environmentally and economically sustainable future on the Dingle Peninsula. They are forward looking and are in the process of transitioning their peninsula into a low-carbon society.

Reducing energy demands and using local renewable resources could save the peninsula as much as €8 million. Under the sustainable initiative, they are currently working on projects in four different areas, Energy, Agriculture, Transport and Tourism.

Dingle Hub is leading efforts to ensure the natural environment and social connections are sustainable for the long term.

Conclusions/Comment

While working in areas across environment, farming, energy, transport, tourism and services, the Dingle Hub is best described as 'Propelling Innovation Across the Dingle Peninsula'.



**CLIMATE ACTION
ECONOMIC OPPORTUNITIES**
Local Authorities Supporting Enterprise



Case Study: Galetech Energy

[Web contact](#)

Introduction

Galetech Energy Services is an Irish multi-disciplinary renewable energy consultancy and services provider with an extensive expertise in renewable energy. They provide development support, technical advisory, project management and engineering services from project feasibility through to construction and operation of wind energy projects.

Project outline

Galetech Energy Services works to support the delivery of the national and global obligations on climate action through the design, planning and delivery of renewable energy infrastructure. It is a company that values smart innovative thinking with the goal of finding solutions that create value, particularly to local economic development.

Green credentials/Circular economy links

The Company have advised on over 2GW of project feasibility and grid studies, prepared and managed planning applications for over 680MW of wind and solar developments, acted as a project manager and provided engineering services to over 250MW of construction projects, is a current manager for over 180MW of operational wind farms across the globe and 300 MW of energy storage.

Conclusions/Comments

Galetech Energy Services, an Irish company providing support and services to an international clientele. Working from offices in Cavan and in Cork, the company provides support to the renewable energy sector in Europe, Africa and Asia.



CLIMATE ACTION
ECONOMIC OPPORTUNITIES
Local Authorities Supporting Enterprise



Case Study: Grant Engineering

[Web contact](#)

Introduction

Grant Engineering, based in Birr, Co. Offaly, was founded in 1978 to deliver solid fuel back boilers and insets but quickly moved on to more efficient multipass boiler and since then to solar and air source heat pumps. Grant has been at the forefront of the heating industry for more than 40 years and continues to evolve in support of the emission reduction targets set out under the National Climate Action Plan.

Project outline

Innovation is the cornerstone of Grant's success. They have been consistent in their approach to innovative products, solutions and services that are valued by their customers. They have largely transformed to a renewable heating company with a portfolio of biofuel ready condensing boilers, condensing pellet boilers, solar thermal panels, underfloor heating, hot water cylinders, aluminium radiators, and air to water air source heat pumps.

Working in line with national climate obligations, reducing the carbon footprint of homeowners has become a key aim of the company.

Green credentials/Circular economy links

In support of national climate policy for the retrofit of the residential sector Grant embarked on a Research and Development project with an investment of c.€250,000 to help homeowners reduce their carbon emissions and prevent the high costs and disruption that can come with deep retrofitting. The development of Hydro-treated vegetable Oil (HVO) (bio-fuel) ready condensing boilers has the ability to help decarbonise over 1 million liquid-fueled homes in Ireland at a significantly reduced cost to the homeowner.

Conclusions/Comments

Grant Engineering, a company that views excellence, respect, innovation and integrity as essential to achieving their business goals. An Irish success story that has been 40 years in the making and still going strong. Now with a new emphasis on renewable energy sources for the domestic and industrial sectors.



**CLIMATE ACTION
ECONOMIC OPPORTUNITIES**
Local Authorities Supporting Enterprise

Case Study: Green Generation

[Web contact](#)

Introduction

Green Generation, based in Nurney, Co. Kildare, are an Irish company that use anaerobic digestion to convert agricultural and food waste into renewable energy. The company works with many of the major food producers and supermarket chains in Ireland. They combine decades of agricultural expertise, with leading experts in microbiology, anaerobic digestion, and renewable energy, to turn this waste product into biogas and organic fertiliser known as 'digestate'.

Project outline

Green Generation harness natural microbial activity to break down organic waste into biogas and an organic fertiliser by-product. The biogas created is upgraded to "biomethane" which is then used as a versatile clean transport fuel or injected into the natural gas grid.

AD (Anaerobic Digestion) is the optimal strategy for organic waste management because it captures the greenhouse gases (GHG) that would otherwise be released to the atmosphere from landfill or composting. The process is flexible enough to allow processing of a mix of organic waste streams (known as co-digestion), such as food waste and food processing waste (fats, oils and grease) with agricultural wastes. Treating farm waste in AD reduces agricultural GHG emissions, odours, pathogens and weed seeds and results in a nutrient rich organic fertiliser (digestate).

In parallel, the company also tackles the global plastics problem head-on. With their innovative sister company, Paltech, they use patented technology to reuse packaging from food waste to produce high value products like telegraph poles, motorway bollards, flood defence structures and garden furniture.

Green credentials/Circular economy links

In a partnership with Gas Networks Ireland, Green Generation are the first renewable energy producer in Ireland commissioned to inject renewable gas back into the national grid through the state-of-the-art facility at Cush, Co. Kildare. This represents an important step towards decarbonising Ireland's energy use.

Conclusions/Comments

Green Generation is an Irish company at the leading edge of AD to help reduce food and agricultural waste and to convert it back into Biogas and organic fertiliser. Their grid injection point contributes toward achieving national renewable energy targets.



**CLIMATE ACTION
ECONOMIC OPPORTUNITIES**
Local Authorities Supporting Enterprise



Case Study: Green Rebel

[Web contact](#)

Introduction

Green Rebel, based in Cork, is enabling the successful harnessing of offshore wind energy that has the least impact on the environment, while delivering the optimal harnessing of energy, and the best return for investors. Green Rebel, winner of the Cork Chamber Awards – Emerging Cork Company of the Year 2022, has a team more than 80 scientists, chemists, engineers, ecologists, vessel crew and business practitioners working between Cork and Limerick.

Project outline

Green Rebel recognises that Ireland has a massive green energy resource offshore that can be harnessed for sustainable energy. To do it right requires a complete understanding of the offshore environment.

It offers offshore wind developers an end-to-end set of data services that extend from acquisition, processing, interpretations and reporting, with their fleet of purpose-built vessels, aircraft, floating LiDAR buoys and in-house team of scientists and industry experts.

We need to harness the incredible supply of wind energy that exists on our shores, but we need to do it right – right for the environment, right for optimal energy generation, and right for our communities. Getting it right starts with a complete understanding of the offshore environment. We need the bravery and ambition to build a new industry, create thousands of jobs, and make a significant contribution to our communities, country, and environment. Pearse Flynn, Founder, Green Rebel

Green credentials/Circular economy links

Green Rebel is enabling the successful harnessing of offshore wind energy. The company is successful in acquiring and analysing relevant data, informing site selection and planning, de-risking investment and accelerating the development process to deliver the renewable energy infrastructure required to help Ireland achieve its climate objectives.

Conclusions/Comments

Green Rebel is an Irish company that has embraced change and provided technological solutions in support of offshore wind development that will assist Ireland in reaching its national climate targets.



CLIMATE ACTION
ECONOMIC OPPORTUNITIES
Local Authorities Supporting Enterprise



Case Study: Lumcloon Energy

[Web contact](#)

Introduction

Lumcloon Energy was founded in 2008 as a project development company focused on flexible power and energy assets.

Originally focused on the development of flexible Combined Cycle Gas Turbine plant, Lumcloon Energy has pivoted its focus to Energy Storage based solutions, in particular, Battery Energy Storage Systems (BESS). Such systems are an established technology which has proven beneficial for a broad range of applications, including Frequency Response which is required to assist the transition to a decarbonised power source.

Project outline

The company's mission is to design, develop and deploy solutions onto power systems which will enable a secure and sustainable supply of electricity. Current projects include Lumcloon and Shannonbridge 200 MW BESS (Battery Energy Storage System).

Green credentials/Circular economy links

BESS is providing System Services to the national power system. This is required by the system operator to enhance the management of the transmission grid and to ultimately increase the stability and improve the reliability of the electricity supply to consumers.

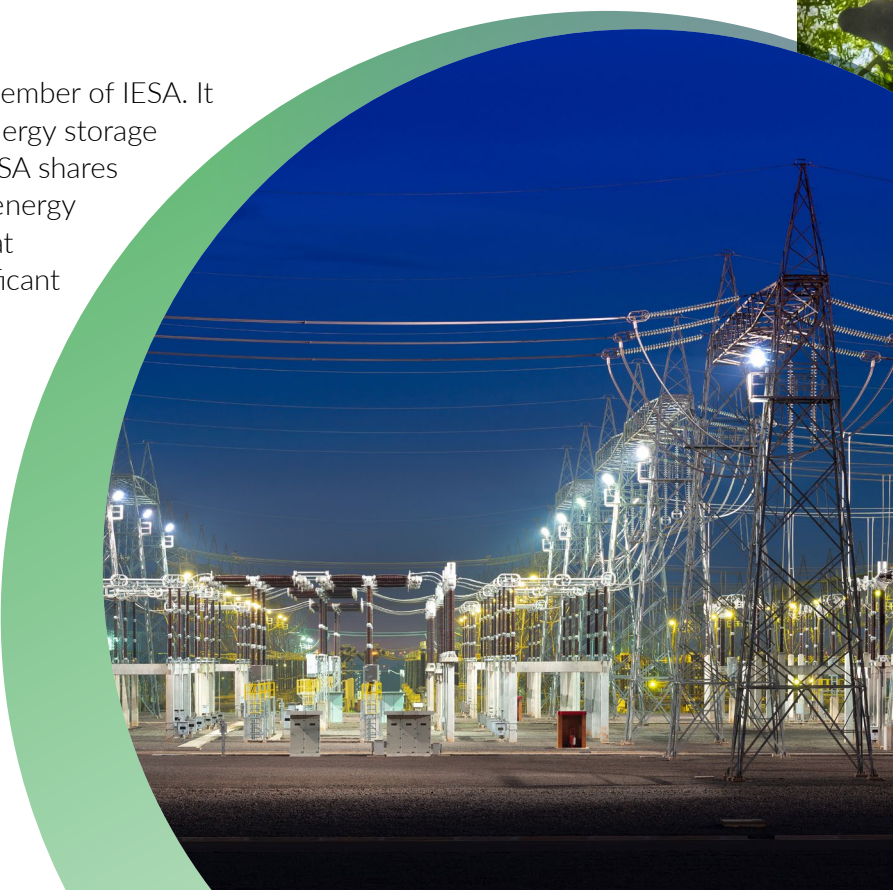
BESS is a highly effective and efficient source of System Services to the power system, offering high availability with minimal down-time for maintenance outages. The System Services provided by BESS assists the system operator realise its operational goal and achieve the targets for electricity demand, met by renewables.

Conclusions/Comments

Lumcloon Energy is a founding member of IESA. It represents the interests of the energy storage sector on the island of Ireland. IESA shares knowledge and experience with energy storage players worldwide, so that players here can learn from significant energy storage developments around the globe.



**CLIMATE ACTION
ECONOMIC OPPORTUNITIES**
Local Authorities Supporting Enterprise



Case Study: The Factory

[Web contact](#)

Introduction

The Factory, located in Fivealley, Birr, Co. Offaly, is an eco-friendly printers and graphic design studio. They are involved in the design, printing, and branding of products from wedding invitations, signage and business cards to large scale promotional work and branding of products such as Seven Churches Irish Whiskey, Offaly Organics and The Irish Parcel Company.

Project outline

Printing and graphic design would not normally be considered when thinking about sustainability practices. The Factory however consider themselves to be Ireland's most environmentally friendly printing service and they back this up with actions. From using paper that is either recycled or from sustainably managed forests to the use of plant-based inks/toners. The Factory also use 100% plastic free packaging and generate most of their own energy from solar and a recently installed wind turbine.

Green credentials/Circular economy links

The actions taken by the company, in this area, have been acknowledged by others. During 2022, the company were named as a winner in the SEAI Energy Awards, the Green Small Organisation of the Year Awards and the Offaly Local Enterprise Board Sustainability Award.

Conclusions/Comments

The Factory is considered Ireland's leading eco-friendly printers and graphic design studio. A company that appreciates and supports biodiversity, on five acres of managed open land, to the use of carbon balanced paper, solar and wind energy generation, and plant-based inks. The use of sustainable paper sources, recycled packaging and their own product passport system makes them an example for others to follow.



CLIMATE ACTION
ECONOMIC OPPORTUNITIES
Local Authorities Supporting Enterprise

Case Study: Viva Green

[Web contact](#)

Introduction

Viva Green was founded in 1999 to supply sustainable products to the market from natural origins and sustainable sources. They produce a range of biodegradable, plastic-free and chemical free products used to across gardening and landscaping and household products. Initially these products included the 'McDivot', a 2 inch biodegradable divot anchor for golf courses, currently used in St. Andrews and Augusta National, and 'GreenStake Biodegradable Staples', a plastic-free anchoring stake for use in Landscaping, Forestry, Golf and the Amenities sector. The company is based in Deansgrange Business Park with offices in the UK, USA and Canada.

Project outline

Viva Green is a world leader in the research and development of biodegradable, chemical and plastic-free materials and the company is committed to producing products that are not only the greenest but are also of the highest quality. It is a knowledge-based company that is driven by the founders' engineering backgrounds to bring fresh, innovative products made from renewable resources to the marketplace.

Green credentials/Circular economy links

The company has been nominated for a number of awards in 2022 including:

- Home, Beauty and Lifestyle, Guaranteed Irish Business Award;
- Micro Enterprise of the Year, Green Awards by Bord na Móna;
- Innovator of the Year, SFA National Small Business Awards.

Conclusions/Comments

An Irish company that has been a pioneer in chemical and plastic-free products for over 25 years. Their products are used widely by business including Musgrave Group, McDonald's, the Masters Golf, Croke Park and Wembley.



CLIMATE ACTION
ECONOMIC OPPORTUNITIES
Local Authorities Supporting Enterprise

