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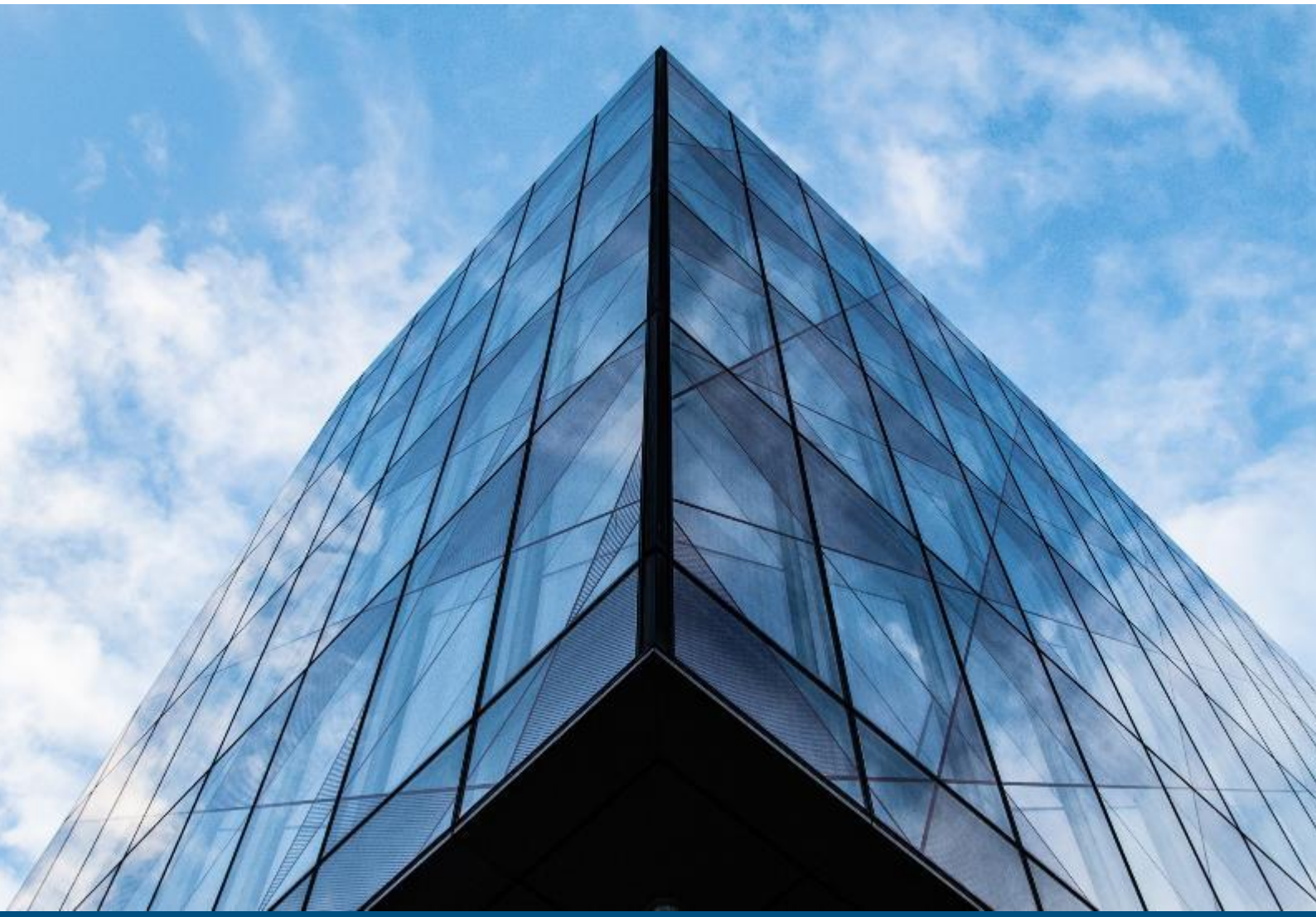

Energy Efficiency Awards in Ireland

Energy Efficiency in Buildings made in Germany

6th October 2020, Dublin

www.german-energy-solutions.de/en

Supported by:

Federal Ministry
for Economic Affairs
and Energy

on the basis of a decision
by the German Bundestag

Imprint

Publisher
German-Irish Chamber of Industry and Commerce
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Republic of Ireland
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Email: info@german-irish.ie, www.german-irish.ie

Date
September 2020

Illustrations
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Image by Thomasz Juszczak from Imageworks (Lunos Lüftungstechnik GmbH für Raumluftsysteme)
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Editorial
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Table of Contents

Introduction to the Energy Efficiency Awards

The German-Irish Chamber of Industry and Commerce is delighted to welcome you to the Energy Efficiency Awards where five energy efficiency projects in Ireland using German technology will be presented as today's finalists.

The German – Irish Chamber of Industry and Commerce has invited German companies that have successfully implemented innovative energy-efficient technologies in Irish buildings to submit their most promising reference projects. Through a competitive selection process by our expert jury, five German companies have been chosen to receive one of the desired awards and present their building solutions to a broad range of experts, decision makers and media representatives.

Our five finalists are:

- Fa. Ökologischer Holzbau GmbH - *Edernish in its New Guise*
- LUNOS Lüftungstechnik GmbH für Raumluftsysteme - *Low Energy Family Home, Clane*
- SenerTec GmbH - *Fairways Apartments*
- Warema International GmbH - *Miesian Plaza*
- Wilo Ireland - *Central Bank of Ireland Dublin*

The Energy Efficiency Awards in Ireland is funded within the German Energy Solutions programme of the Federal Ministry for Economic Affairs and Energy. Its aim is to recognize outstanding achievements of German technology suppliers in Ireland, showcasing technologies and innovations that contribute to increasing energy efficiency in Irish buildings. It is designed to help German companies strengthen their position in the Irish market and make new connections within the sustainable energy and building sector. The awards provide participating German companies the chance to showcase their technologies and services that focus on increasing overall building performances.

The programme will include presentations by industry experts on energy efficiency in Irish buildings, the presentation of the five final projects, the award ceremony and a final digital networking event, giving you the opportunity to exchange ideas and explore business opportunities with industry pioneers and experts.

We hope you enjoy the Energy Efficiency Awards!

Welcome by the German-Irish Chamber of Industry and Commerce

The German-Irish Chamber of Industry and Commerce is delighted to host their first digital awards show for the Energy Efficiency Awards in Ireland. In the framework of this event the five finalist projects will be presented and rewarded with one of the desired awards.

I would like to express my gratitude towards the German Energy Solutions Initiative of the Federal Ministry for Economic Affairs and Energy for making the Awards as well as many other initiatives that helped Ireland to become greener, possible.

All pioneering projects are based across the country, ranging from small family homes to large office complexes, but they have one thing in common: they all feature some of the most innovative German technologies that help increase the overall energy efficiency of buildings. It makes me proud to present these projects because they demonstrate the widespread, positive impact the collaboration of German and Irish businesses can have not only on the respective businesses but also for a greater purpose like climate change prevention.

Those projects also demonstrate Ireland's aim to increase the energy efficiency in their buildings, with measures that not only comply with the many new energy regulations set by the Irish government but manage to go beyond. Germany, known for being home to many of the greatest engineers in the world, presents as an excellent partner for future related projects. And today, our five award-winning projects also offered the best proof.

The five final projects only provide a glimpse of the most successful from a much larger amount of German technologies already installed in Irish buildings. The German – Irish Chamber of Industry and Commerce is very keen on increasing such collaborations even further and will therefore continue to bring German and Irish businesses together.

A sincere thank you to our partners in Germany and Ireland who have supported us namely, the German Embassy in Dublin, our distinguished Jury, the Electricity Supply Board Ireland, Sustainable Energy Authority Of Ireland, Low Energy Design, Passive House Association of Ireland, Studio Negri and Passive Dynamics, as well as our participants.

Ralf Lissek
CEO
German-Irish Chamber of Industry and Commerce

Introduction by the Federal Ministry for Economic Affairs and Energy

The technology showcase is a celebration of innovative German energy-efficient solutions in buildings in Ireland. It is a great opportunity to promote successful German-Irish partnerships, which have led to increased building quality, reduced energy costs and lower CO2 emission levels in Ireland. The five innovative projects, which are being shown in the framework of the technology showcase, present Ireland as an attractive location for German companies seeking concrete partnerships and market opportunities.

The advanced technologies, know-how and expertise from the German companies involved in these projects conducted in Ireland are representative of a wider success story: Germany is a world leader in the field of energy efficiency. Cutting-edge German technology is featured in all energy efficiency market segments, including insulation systems, insulated glazing, heating, and cooling technologies, efficient home appliances, smart metering, energy-efficient lighting systems, cogeneration systems, as well as pumps and compressed air systems. German companies generate a turnover of about $79 billion per year in this industry.

Since 2007, the Federal Ministry for Economic Affairs and Energy has successfully supported German-Irish partnerships via the German Energy Solutions Initiative. The Irish market has proved to be very open to German suppliers of energy-efficient products, systems, and services. Since this initiative was launched, the German Irish Chamber of Commerce has been active in creating and hosting successful cooperation platforms such as trade missions and fact-finding missions. This showcase project is a second for Ireland, and it gives the German Ministry for Economic Affairs and Energy a welcome opportunity to celebrate some great examples of German-Irish partnerships in the building sector.

Christina Wittek
Head of Division
German Energy Solutions Initiative
Federal Ministry for Economic Affairs and Energy

About the German Energy Solutions Initiative

With energy prices on the rise and fossil fuel resources becoming scarce, both economic prosperity and competitiveness increasingly depend on our ability to use new energy sources and energy efficiency solutions. This applies to all countries worldwide. The use of innovative energy solutions offers enormous potential for energy conservation in all fields.

The promotion of smart and sustainable energy solutions in Germany has resulted in the establishment of an industry which offers some of the world's leading technologies. This industry encompasses several thousand small and medium-sized enterprises specialised in the development, design and production of renewable energy systems, energy efficiency solutions, smart grids, and storage technologies. Also new energy technologies like Power-to-Gas and fuel cells are the basis for cutting-edge energy solutions.

The transfer of energy expertise, the promotion of foreign trade and the facilitation of international development cooperation are part of the German Energy Solutions Initiative. We offer:

- networking and business opportunities both in your country and in Germany
- showcasing of reference projects
- know-how exchange

Coordinated and financed by the German Federal Ministry for Economic Affairs and Energy (BMWi), the initiative is implemented in cooperation with partners such as German bilateral chambers of commerce (the AHKs), the German Energy Agency (dena) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

For more information, please visit www.german-energy-solutions.de/en.

Presentation of our Jury

Sorcha Geoghegan

Sorcha has over 25 years' consultancy experience with significant experience within the energy sector having spent 15 years within ESB where she has supported low carbon renewable infrastructural projects. Her focus on renewable projects has supported the transition of heat from fossil fuel to low carbon alternatives. She has developed solutions today that will leave a positive legacy for generations to come, drive economic progress and bring about a more sustainable future.

In addition, she has overseen the delivery of multiple capital projects across the ESB Group for ESB Networks, Generation and Trading and Group Property and has built on early architectural career experience within the commercial, institutional, education and residential sectors.

Sorcha holds a MSc in Spatial Planning from the Technological University of Dublin, a Post Graduate Diploma in Project Management (Trinity College, Dublin) and a Diploma in Architectural Technology (Dublin Institute of Technology) and most recently been appointed Manager of the Project Management Office in Engineering and Major Projects within ESB.

Ciarán McCabe

Ciarán has over 10 years' experience as a qualified Building Services Engineer specialising in the field of Sustainability within the Built Environment. After working for various Mechanical & Electrical consultancies both in Ireland and the UK, in 2020 Ciarán set up his own Sustainability practice called Passive Dynamics. Passive Dynamics is an independent progressive Sustainability Consultancy offering clients advice in terms of the latest trends in energy efficiency, carbon reduction strategies and on-site renewable energy generation within the Built Environment.

Ciarán has a detailed knowledge of all facets of Sustainability offering services such as LEED AP, nZEB Compliance, Building Performance Simulation, Daylight analysis and Overheating / Comfort studies.

Barry McCarron

Barry Mc Carron is the Senior Business Development Officer for South West College InnoTech Centre. A key part of this role includes the reasonability for the award winning certified Passive House CREST (Centre for Renewable Energy and Sustainable Technologies) Pavilion at South West College in Northern Ireland. He is also the current Chairperson of the Passive house association of Ireland (PHAI).

Barry has just completed a PhD in Queen's University Belfast investigating the passive house building standards influence on indoor radon concentrations. He has more than 15 years' experience in the construction industry specialising in sustainable construction and renewable energy. Barry is a key part of the team at South West College working towards developing the College into a Regional Centre of Excellence for Passive House of training in both the Designer and Tradesperson courses. Barry was appointed as an Expert Advisor to Ministerial Advisory Group for Architecture and the Built Environment (MAG) in June 2019.

Helena McElmeel

Helena is the principal of Helena McElmeel Architects and the lecturer on the Built Environment (Architecture + Urban Planning) module in the School of Engineering, NUI Galway.

Helena began her architectural education in Dublin Institute of Technology, graduating in 2002, and became a Registered Architect in 2007. She was awarded a Masters of Science in Architecture: Advanced Energy and Environmental Studies in 2013 (CAT / UEL) and a Postgraduate Diploma in Project Management in 2018 (Trinity College Dublin). Helena qualified as a Certified Passive House Designer in 2013 and is a WELL Accredited Professional. She is an Architect Accredited in Conservation at Grade 3 and was a member of the RIAI Council from 2009 to 2011. Helena is presently serving on Galway County Council's Community and Culture Strategic Policy Committee (2019 – 2024) and is a member of the Turnkey Project Local Implementation Group in Ireland.

Helena's practice was awarded the Building and Architect of the Year Sustainability Award in 2017. She won the RIAI 3Twenty10 project for her research regarding potential for 'rebound' effect in low energy retrofits. Helena has particular interests in the potential of buildings to enhance well-being, and post occupancy evaluation – relating to both academic research and construction projects.

André Pierre Negri

André Negri is the Director of STUDIO NEGRI, an award-winning architecture and design firm based in Dublin, with a strong understanding of environmental and sustainable issues. As Certified Passive House Designers and Grade 3 Conservation Accreditation, the company is determined to consistently and sincerely deliver a quality product that offers added richness to their users.

With 22 years of experience in the Irish Planning Process and Building Regulations systems, their projects include: Commercial, Industrial, Educational, Residential and Leisure facilities.

Their buildings are designed with excellent thermal performance, quality natural light and low carbon footprints that automatically reduce energy consumption.

Jenny Power

Jenny Power has worked in SEAI since 2016, starting in the BER programme working on the development of energy performance methodologies and overall governance of the programme, before moving to the Energy Poverty Programmes, the Warmer Homes Scheme and the Warmth and Wellbeing Pilot. These are fully government funded home upgrade programmes for those at risk of energy poverty. Prior to that, she worked as an architect for 15 years but returned to third level to upskill in building performance strategies, incorporating digital analysis for effective retrofits in dwellings. She has participated in the successful transition of the current Warmer Homes Programme from delivering essential measures such as attic and cavity insulation, to more significant and meaningful interventions comprising solid wall insulation, window replacement and high efficiency heating systems.

James Walsh

James is a registered Architect based in Castleknock, Dublin 15 trading as Low Energy Design. Since 2010 the practice strives to design buildings that delight the owners and deliver high performance in energy efficiency, comfort, and reduced energy bills. James is a member of the Passive House Association of Ireland, Association for Environment Conscious Building as well as being a member of the RIAI and an NSAI registered Thermal Modeller.

Low Energy Design have designed numerous deep retrofit residential projects with the highlight, St. Bricin's Park, Dublin 7 for Dublin City Council in 2019. This is a multi-award-winning social housing retrofit project delivered to the Passivhaus EnerPHit standard. Among the honours, Low Energy Design won the design prize for Excellence in Residential Renovation at the Isover Awards 2019.

Fa. Ökologischer Holzbau GmbH

Reference Project: “Edernish in its New Guise“

Edernish Island, Burtonport

Year of Implementation

Project was completed in 2013-2014.

Key Characteristics

- The house from 1904 was completely renewed including completely new thermal barrier, thermal solar collectors, and heat pump
- Access only by boat which made the work more complicated

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The aim of all measures was to modernize the house and at the same time to preserve the interior rooms and decorations. The building received a completely new energy-efficient building envelope that keeps the house warm and windproof. The summer house with Victorian elegance from 1904 was converted into an energy-efficient, sustainable all-year house - the installed technology should make it even easier to live self-sufficiently in Ireland.

Technology made in Germany

A completely new thermal envelope, consisting of an airtightly sealed envelope, with subsequent blower door test was constructed for the building (15mm OSB board, 200mm stud frame from solid structural timber with insulation, 35mm softwood fibre board).

The wooden elements were planned and prefabricated in Sellstedt, Germany and transported to Ireland on low loaders. For the construction and conversion, ÖHS employees were on site to carry out the construction work. A civil engineering company had built a pier in advance and a crane was set up.

The previous heating system, which was based on gas and electric water heating was replaced by a heat pump. The system uses the temperature difference between the deep probes (120m deep in granite rock) and the surrounding temperature. The improved insulation of the building led to a decreasing demand in heat. In addition, the hot water preparation is supported by thermal solar collectors. All windows and doors were built in the style of the original design by an Austrian company and are triple glazed. The installation of the windows is done in cooperation of companies from Germany, Ireland, and Austria.

Energy Efficiency Achieved

- Energy reference area: 268 m²
- heating demand (annual method): 11405 kWh/a or 42.6 kWh/(m²a)
- Heat load: 4500 W or 16.8 W/m²
- U-value exterior wall: 0.121 W/(m²K)
- U-value roof: 0.130 W/(m²K)
- U-value floor: 0.377 W/(m²K)
- Transmission losses: 5430 kWh/a
- Heat supply solar radiation: 3088 kWh/a
- Value EnEV: 9830 kWh/a"

About Ökologischer Holzbau Sellstedt GmbH

Ökologischer Holzbau Sellstedt GmbH was founded in 1997 and is based in Sellstedt, Northern Germany. They offer a wide range of experiences in the field of planning, architecture, solution pattern, production, and passive house building. Their main mission is: "Energy-efficient construction in combination with individual architecture". To this end, they combine traditional craftsmanship and architecture with the consistent use of efficient, environmentally friendly building materials and holistic, ecological concepts.

ÖHS is considered a leading think tank for ecological building. The expertise they have developed over many years makes them a reliable partner for private and public clients. Their buildings are located in Germany, Denmark, Belgium, the Netherlands, Ireland, and South Africa - houses for well-being, tailored to the needs of their inhabitants.


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LUNOS Lüftungstechnik GmbH für Raumluftsysteme

Reference Project: Low Energy Family House "Clane"

Clane, Kildare County, Irland

Year of Implementation

Purchase of the house 2009, completion of the project 2016.

Key Characteristics

- Installation of decentralised ventilation system with heat recovery from LUNOS
- Increase of energy efficiency rating from G- to an A+++, according to the European Energy label

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The building is a 300-year-old farmhouse from the 18th century. As the energy costs of the four-storey house with its massive brickwork and traditional sliding windows were relatively high due to poor insulation, the owners decided to carry out a complete renovation and install a new heating and ventilation system. These plans were rejected by the responsible municipal administration, which classified the building as a historical monument. The building was only allowed to be treated very "gently" and a so-called Grade 1 architect was commissioned for the renovation and conversion.

Technology made in Germany

An underfloor heating system was installed in the entire building, which was an Ochsner 18 kW air source heat pump with a separate split evaporator. The building is thus effectively heated and kept dry without damage occurring and at the same time the moisture is reduced to a desirable level. The basic temperature of the house never drops below 16 ºC.

The decentralised ventilation system with heat recovery from LUNOS ensures the ventilation of both parts of the building. This system not only conforms to standards, it also enables energy-saving ventilation without the need to lay new air ducts. A total of twelve e2 fans and one ego fan were installed.

Both the e2 and the ego achieve a very high efficiency of 90.6 percent and 87.7 percent respectively, which means that very little heating energy is lost. If required, the ventilation system can be switched to an exhaust air mode in which a volume flow of 45 m3/h is discharged in order to quickly let fresh outside air flow into a room.

According to the European energy label, the energy efficiency of the Jordan House has been raised from a G- to an A+++ rating.

About LUNOS Lüftungstechnik GmbH für Raumluftsysteme

LUNOS Lüftungstechnik GmbH für Raumluftsysteme is a Berlin based company and market leader for decentralized residential ventilation systems. The company was founded in 1959 and is still based in Berlin-Spandau. In 2019 a second location was opened in Brandenburg, creating even more expansion opportunities for the company, which manufactures its products made in Germany and sells them in over 36 countries worldwide.

The core competencies of LUNOS lie in decentralized controlled residential ventilation with and without heat recovery, as well as in the development and production of energy-efficient fans and external wall diffusers. In addition, LUNOS develops all related components, as well as many other products, such as exhaust air fans and facade ventilation systems with hidden ventilation openings.

For decades LUNOS has stood for highest quality, functionality, and comfort. Ventilation systems, whether with or without heat recovery, improve the air quality in the house, moisture and mould are avoided and at the same time energy is saved in everyday life.

LUNOS has received several if-Design-Awards and Plus-X-Awards as well as The Red-Dot Award, the Federal Prize for Eco-design, and the Industry Prize. The company has been named one of the fastest growing companies in Germany by Focus, and one of the fastest growing companies in Europe by the Financial Times and has once again been voted Trade Brand of the Year by craftsmen in Germany. In 2019, LUNOS was named innovation leader 2019 and in 2020 Best Brand of the Year in the ventilation category.

SenerTec GmbH

Reference Project: Fairways Apartments

Cualanor, Dun Laoghaire, Dublin

Year of Implementation

Project was completed in 2020 and the apartments are already occupied.

Key Characteristics

- First system in Ireland that has combined boilers, CHP, and air source heat pumps into one heating solution
- BER of A2

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Technology made in Germany

The apartments in this development are supplied with heat from a centralised heating system. Three made in Germany Dachs micro CHP units from SenerTec were installed as part of this heating system providing electricity to the landlord board and contributing to the heat that is delivered to each of the apartments.

Energy Efficiency Achieved

As a result of being connected to this heating system, the apartments achieve an NZEB (Near Zero Energy Building) energy rating. This is because of the innovative mix of energy efficient and renewable technologies employed in the Fairways system.

Fairways apartments have a BER rating of A2. Their primary energy requirements are only 35KWh/m²/annum and the carbon emission will be less than 8kg CO2/m²/annum. The NZEB certification means these apartments have the highest energy rating and the lowest environmental impact.

Degree of Innovation

There are dozens of apartment developments in Ireland that were using centralised heating systems before, and SenerTec's Dachs has been installed in many of them. However, this is the first system in Ireland that has combined boilers, CHP, and air source heat pumps into one single heating solution for all the apartments. CHP and boilers traditionally work very well with each other, but heat pumps operate at much lower temperatures than CHP or boilers, so it poses a challenge to make them all operate together. This challenge was met through innovative engineering design and control strategies so that all the different technologies seamlessly operate in unison to create the most efficient heating system. The CHP and heat pumps are also sized to complement each other i.e. each CHP electrical output is matched to the electrical demands of each of the heat pumps.

Due to this combination and unique use of the various energy efficient technologies in the Fairways centralised heating system, residents will enjoy exceptionally low heating and hot water bills. The estimated annual heating and hot water costs is just €450. The CHP units themselves will continue to deliver efficient heat and electricity for at least the next 15 years.

About SenerTec Kraft-Wärme-Energiesysteme GmbH

SenerTec Kraft-Wärme-Energiesysteme GmbH has its roots in Fichtel & Sachs (now ZF Sachs), a well-known supplier to the automotive industry. It was here in 1979, that a one-cylinder combustion engine was developed specifically for a combustion engine-driven air/water heat pump. When the price of oil fell, Sachs integrated their engine into a heating system based on the principle of Combined Heat and Power, or CHP, and the Dachs micro CHP was born. The Dachs delivers 5.5KW of electricity and 14.8KW of heat from the one gas supply and is over 90% efficient. SenerTec was founded in March 1996 in Schweinfurt, Germany, now employs around 140 people and is the number one leading supplier of micro CHP systems in Europe.

SenerTec's partner in Ireland is Glenergy, based in Kilcoole, Co. Wicklow. They look after an ever-growing installed base of Dachs CHP units, currently numbering 150 units. Glenergy also works with a number of other German suppliers and is a specialist in developing and delivering low energy/renewable solutions to the residential and commercial sectors.

Warema International GmbH

Reference Project: Miesian Plaza

Lower Baggot Street, Saint Peters, Dublin 2, Ireland

Year of Implementation

Most of Warema´s work was carried out from 2015-2018. The base build was completed by end of 2016.

Key Characteristics

- Warema supplied the solar control solution for the building consisting of Interior Venetian Blinds and Façade Management and Control System for the blinds
- One of 179 buildings worldwide that were certified according to LEED Platinum V4

Contact details

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Miesian Plaza is the former Bank of Ireland Headquarter and is an office building complex on Lower Baggot Street, Dublin. It includes three buildings of four, five, and eight storeys in height, with a central plaza that have an overall footprint of 21,800 m². The Miesian Plaza is designed in the International Style, inspired by the architect Ludwig Mies van der Rohe. It was described by the Dublin City Council as "one of the most important Modernist buildings in Ireland" and "Dublin's finest example of the restrained and elegant Miesian style". Its facade and plaza were listed as protected structures in 2010.

Technology made in Germany

Warema supplied the solar control solution for this building, which consists of the following two main components:

1. Interior Venetian Blinds: This product has horizontally arranged louvers that can be rotated to control the amount of light and solar energy entering the space. The louvers (slats) are perforated to allow a limited vision through the fully closed blind. With a white colour at the top of the slat the performance of the system is increased; the underside was chosen to match the colour of the façade.

The blinds are motorised and have a smart motor for position feedback providing utmost accuracy when setting the louvers to a certain angle

2. Façade Management System – Control System for the blinds: All blinds are connected to this system and individually addressable. Weather sensors on the roof and the buildings location are used to determine the appropriate position of the blind and the slat angle throughout the day. The system knows when the solar radiation on the façade is too high and adjusts the position of a single blind or a group blinds to cut-off to lock out direct solar radiation and thus preventing solar heat gain.

The Façade Management System is tied into the Building Management System to exchange operational data and failure messages. The blinds can be controlled by local switches and tablets located in the floors.

Energy Efficiency Achieved

The building is certified according to LEED Platinum V4 – a standard for sustainable buildings. Only 179 buildings worldwide have achieved this certification. The annual energy consumption results in 144 kWh/m²/annum, which is a 77% reduction in comparison to the pre-retrofit demand. Half of the reduction is due to the façade with a huge impact of the solar control solution.

Degree of Innovation

The façade management system (FMS) provides automation based on the sun‘s position (sun tracking system) and opens or retracts blinds when parts of the building are shaded by surrounding buildings or other parts of the building itself (overshadowing model). The FMS connects to the Building Management System for increased performance and logging operational data.

About Warema

Intelligent sun shading that creates an atmosphere of enjoyment and provides comfort and energy efficiency: WAREMA has been known for exactly that for a long time. Their customers value them for well-designed products that offer a solution for all individual needs and set standards.

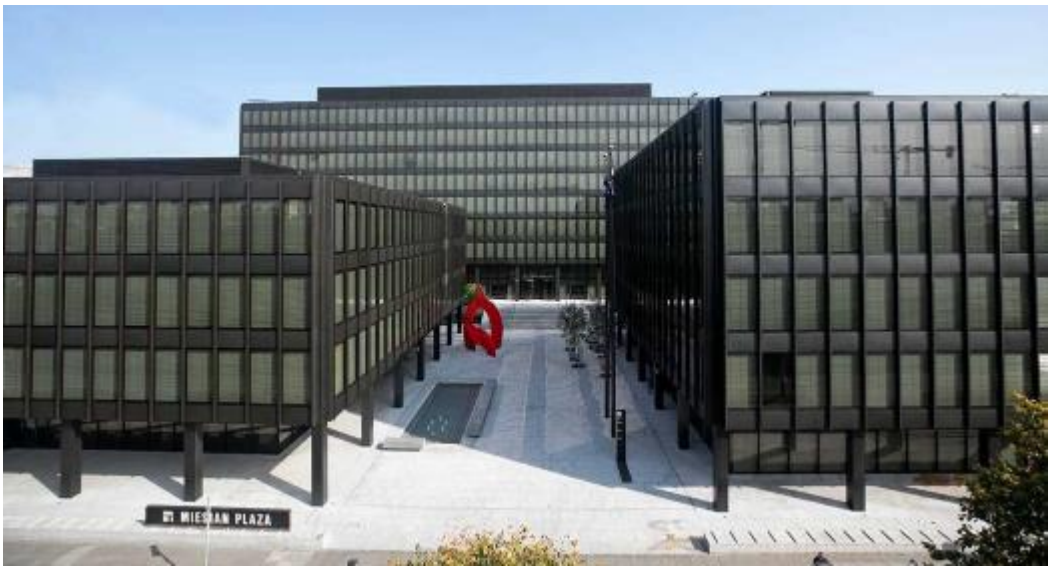
As a full-range provider WAREMA places great emphasis on professionally advising and supporting specialist dealers, architects, and principals. In addition, they apply their expertise to construction project development and are active in other industries as suppliers. They are a family-owned and run company with 63 years of experience in solar shading.

The product offering comprises of solar control solutions for family homes and patios like awnings, pergolas or umbrellas over interior roller shades and pleated blinds to exterior venetian blinds and large aerofoil louvre systems which are often used in commercial projects. Control systems enhance the portfolio to deliver highest efficiency with automated solar control. These products can reduce the energy used for cooling or heating buildings significantly and therefore they are a substantial contribution to sustainable construction.

Warema is also supplier to the medical technology sector and automotive industry. A state-of-the-art machinery and plastic moulding department designs and manufactures parts for well-known cars and surgery equipment.

R&D for all product areas is in house to make sure the products meet the client´s demand and Warema's high quality expectations.

Warema‘s trade partners are spread globally which provide their solar shading solutions to the market.



WILO Ireland

Reference Project: Central Bank of Ireland

North Wall Quay Dublin, North Dock, Dublin, D01 F7 X3

Year of Implementation

Project was completed in 2017. It took 5 years from purchase of site to completion.

Key Characteristics

- High efficiency IE4 rated pumps for heating and cold-water applications as well as drainage pumps
- One of the first office buildings in Ireland to achieve the Building Research Establishment's Environmental Assessment Method (BREEAM) ‘outstanding’ rating

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In 2012, the Central Bank of Ireland bought a partially constructed building at North Wall Quay, which was completed in 2017. The existing structural frame was largely maintained, with some structural additions and alterations to accommodate a new design. The total floor space of the building is circa 22,000 m².

The building provides a modern workplace facilitating open communication, promoting teamwork and interaction at every level. The heart of the North Wall Quay is the atrium. It features collaboration spaces and its design allows easy access throughout the building and the floors. The building has more than 250 internal meeting rooms and collaboration spaces.

Technology made in Germany

Wilo was involved in the energy saving concept at design stage to supply high efficiency IE4 rated pumps for heating and cold-water applications as well as drainage pumps all manufactured by their parent Company at Wilo SE Dortmund Germany.

Energy Efficiency was a design prerequisite by the Consulting Engineers so as the BREEAM certification could be achieved. Wilo-Stratos GIGA, Wilo-SiBoost Smart Helix VE, Wilo-Drain TP65 pumping equipment were selected to meet the criteria.

Energy Efficiency Achieved

North Wall Quay is one of the first office buildings in Ireland to achieve the Building Research Establishment's Environmental Assessment Method (BREEAM) ‘outstanding’ rating at design stage. The building has been shortlisted for a number of awards and won Green Project of the Year at the Irish Construction Industry Awards in 2018. The building energy rating (BER) is targeted at A2 - one of the first commercial projects in the state to aim for such a rating. This equates to a 72% improvement in energy consumption over previous building regulation baselines. The high efficiency pumping equipment (90% plus ratings) contribute significantly to the overall energy performance of the building.

Overall Environmental Impact

Effective use of insulation reduces energy consumption and using energy from renewable sources also reduces environmental impact. The annual energy saving due to the BER A2 rating is 209 tonnes of CO2. Materials used in the fit-out were chosen for their low environmental impact including the pumping equipment. All timber used in construction and fit-out was Forest Stewardship Council (FSC) certified.

Low volatile organic compound (VOC) materials were used throughout the building. Internal spaces contain CO2 sensors to monitor and address increased carbon dioxide levels. The building has a dedicated recyclable waste storage area at basement level and recycling stations are provided throughout each floor.

About WILO Ireland

The Wilo SE Group is one of the world's leading premium providers of pumps and pump systems for the building services, water management and industrial sectors. In the past decade, they have developed from a hidden champion into a visible and connected champion. Today, Wilo has around 8,000 employees worldwide and a turnover of €1.5 Billion on over 70 countries.

Their innovative solutions, smart products and individual services move water in an intelligent, efficient and climate-friendly manner. They are also making an important contribution to climate protection with their sustainability strategy and in conjunction with their partners. They are systematically pressing ahead with the digital transformation of the Group and are already the digital pioneer in the industry with their products and solutions, processes, and business models.

Founded in 1872 as a copper- and brassware factory in Dortmund, Wilo has evolved from being a local specialist to a global player with a new €300M investment in Wilo Headquarters in Dortmund including an Industry 4.0 standard smart factory.

The Wilo Group has been selected this year to participate together with 49 other worldwide operating companies in the global sustainability and climate protection initiative called "50 Sustainability & Climate Leaders" of the United Nations and Bloomberg. The participating companies act on the basis of the 17 sustainability goals of the United Nations.

As a climate protection company, sustainability is an integral part of the Wilo Group's corporate strategy. By 2025, for example, 100 million people should have better access to clean water. Besides, pumps account for about ten percent of global energy consumption. By replacing outdated technology alone, Wilo high-efficiency pumps could save up to 246 terawatt hours of electricity – the equivalent output of 80 coal power plants.

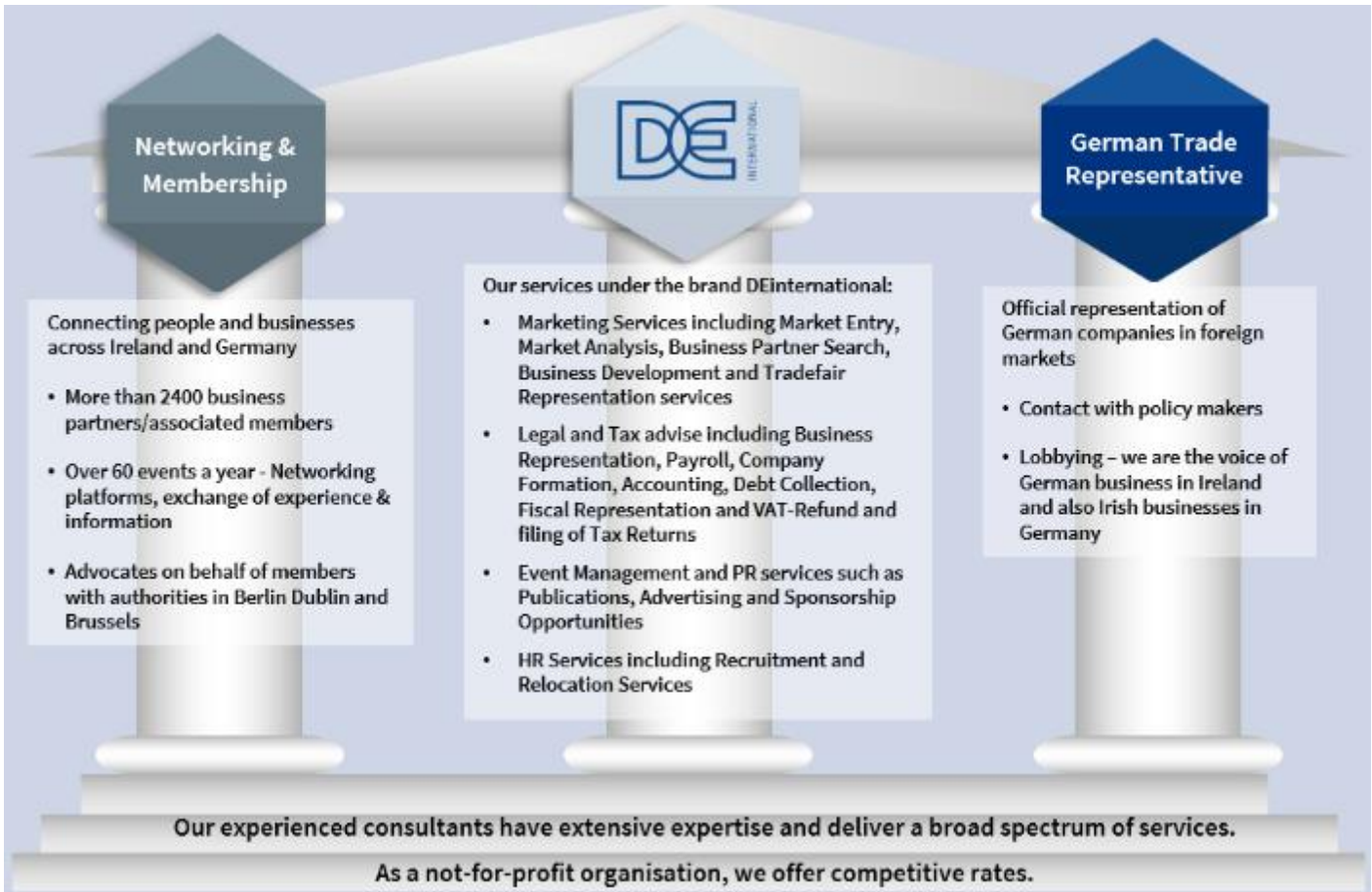
The German-Irish Chamber of Industry and Commerce

At 140 locations in 92 countries around the world, the members of the German Chamber Network (AHKs) offer their experience, connections, and services to German and foreign companies. AHKs are located in all countries which are of special interest for German companies.

Founded in 1980 in order to promote bilateral trade and investment between Germany and Ireland, the German-Irish Chamber of Industry and Commerce has become an Organisation whose 2400 associated member companies from various industries benefit from the services and network. It is our objective to best represent your economic and political interests in Ireland and Germany.

3 Pillar Structure - Synergies for Our Customers

Thanks to our network of members, partners, and clients, we connect people and “open doors” for companies in new markets in Ireland, Germany and worldwide.



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