



# Case Study

## A cleaner energy future for your new home

Over 680,000 homes in Ireland enjoy the performance of natural gas for heating, cooking and hot water. Homeowners will continue to enjoy these benefits as we lead the transition to a cleaner energy future with renewable gas.

Best of all, no future changes will be required for home heating systems connected to the gas network, as renewable gas is already compatible with the existing gas infrastructure and boilers.

### Natural gas and solar photovoltaic (PV) panel system:

Lower energy costs for homeowners

Meets Part L (NZEB) building regulations

PV panels provide renewable energy

Renewable gas ready

Compatible with modern heating controls

Warm, energy efficient A2 BER homes



### A home heating system ready for the renewable future

Carroll Estates is a family business that has been constructing quality homes across Dublin for over 45 years. Brookfield is their latest development in Dublin, combining the very latest building standards with quality construction to meet the demanding requirements of modern living.

Carroll Estates employ the best possible building practices, while always keeping up to date on all current and future sustainable building trends. Using a combination of gas and solar PV panels, each home is a BER 'A' rated build, which ensures the homeowner will benefit from reduced energy consumption, lower bills and increased comfort levels.

Natural gas provides over 680,000 homes in Ireland with an affordable option to reduce their carbon footprint immediately. By gradually replacing natural gas with renewable gases, such as biomethane and hydrogen, homeowners will continue to reduce their carbon footprint without having to change any appliance, all while continuing to enjoy the traditional benefits

of gas, including instantaneous heating and hot water, increased versatility and control for cooking and reliability of service and supply.

### NZEB and Part L compliance

Every new home built in Ireland must meet Part L (conservation of fuel and energy) of the building regulations, commonly referred to as nearly zero energy buildings (NZEB), as set out by the Department of Housing, Local Government and Heritage.

The combination of gas, solar PV panels and high standards of insulation ensures each new home in the Carroll Estates build surpasses all of the Part L Building Regulation requirements (NZEB).

### Home heating benefits

- Greater than 90% efficient gas boiler
- Reliable and established gas boiler service sector
- Solar PV panels provide clean renewable energy
- High levels of insulation with double glazed windows

## Greater than 90% efficient gas boiler

A greater than 90% efficient gas boiler provides warmth, comfort, efficiency and long-term performance. Modern gas boilers include heating zone controls, providing increased efficiency and control over the home heating system.



## What are PV panels?

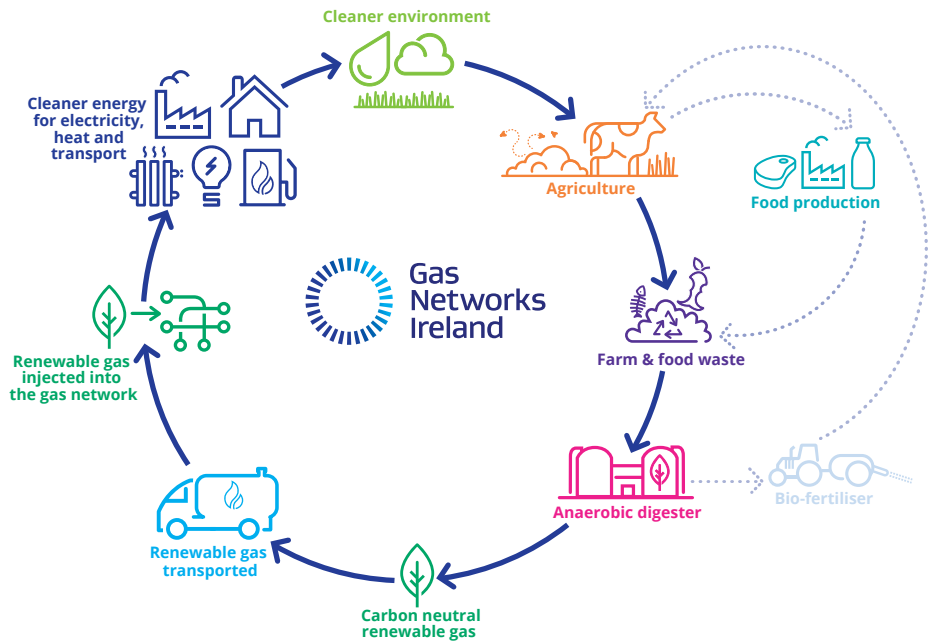
Photovoltaic panels that produce renewable electricity are known as PV panels.

PV panels capture the light from the sun and convert it into electricity that can be used in your home to power your television, kettle, toaster, phone and other household appliances.

With the proposed introduction of micro-generation feed-in tariffs, homeowners with PV panels are able to generate electricity on their roof tops and potentially sell it back to the national electricity grid allowing them to reduce their energy costs.

*This information is only a guideline to the different products available for use with natural gas in new development construction. Users should ensure that products are suitable for the specific circumstances in which they seek to apply them. Contact the supplier or manufacturer directly for specific information on building requirements and materials needed for installation. Professional advice specific to the project should always be sought. The current Irish Gas Standards and Technical Guidance Documents (Building Regulations) override all contents. Users should ensure they always have the most up to date information.*

## What is renewable gas and how does it work?

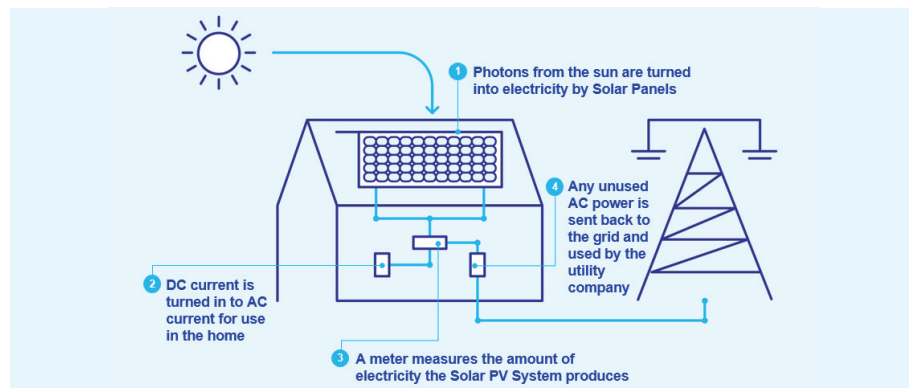


Ireland's gas network is a vital national asset that generates over 50% of Ireland's electricity. Today, more than 680,000 Irish homes rely on the gas network to provide safe, reliable, flexible and affordable energy to meet their heating, cooking and power needs. By gradually replacing natural gas with renewable, carbon neutral and ultimately zero carbon gases, such as biomethane and hydrogen, these same homes and more will be powered by increasingly cleaner energy.

Biomethane, which began flowing on the network in 2019, is the first step on this journey. Produced from agricultural and food waste, this renewable gas is structurally identical to natural gas and can be used in exactly the same way through the existing infrastructure, boilers and appliances, meaning homeowners will transition to this carbon neutral energy and play their part in progressing Ireland towards a cleaner energy future, without changing a thing.

By connecting new homes and developments to the gas network today, you are ensuring that each homeowner will have reliable, affordable and increasingly clean energy keeping them and their families safe, warm and comfortable for generations to come.

## Benefits of solar PV panels



### Lower energy bills

On average, a solar PV system can save between €200 - €300 per year on a domestic electricity bill (SEAI 2020).

### Operate all year

Modern, high efficiency solar PV panels operate all year round, ensuring the benefits to the homeowner are not restricted to the summer period.

### Reduced emissions

Generating renewable electricity will mean the energy consumed will be clean therefore reducing greenhouse gas emissions.