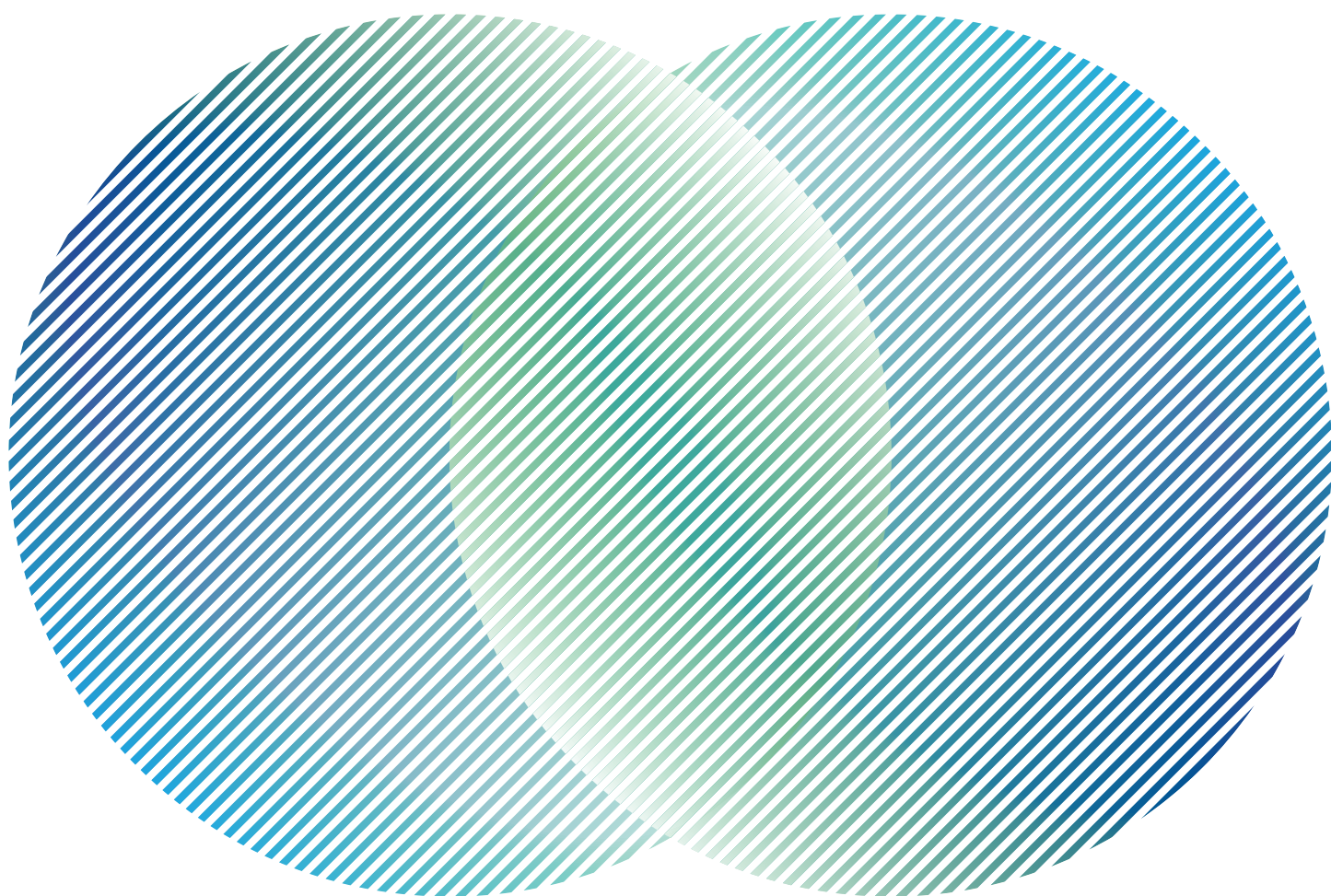


# Next Generation Power and Fibre Solutions for Data Centres



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## About Us

Ervia is a government-owned, commercial company employing over 1,700 people and providing natural gas, water and telecoms infrastructure and services to 1.7 million customers in Ireland. Gas Networks Ireland, Aurora Telecom and Irish Water are all part of the Ervia Group.

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## Our Networks

### Natural Gas

Gas Networks Ireland owns and operates one of the safest and most reliable natural gas networks in the world with abundant capacity for additional connections to the network. Our highly modern transmission and distribution networks consist of over 14,000km of gas pipelines supplying 700,000 customers.

Supply is secure, with gas coming into the network via twinned sub-sea interconnectors connecting Ireland to the UK natural gas market and from the indigenous Corrib gas field.

### Telecoms

Aurora Telecom is a carrier and enterprise service provider that operates the most modern, carrier grade, backhaul dark fibre network in Ireland, which has been constructed using the latest fibre optic technology.

Our network is highly secure and resilient and is particularly suitable for high capacity data transportation and international connectivity.

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## Our Commitment to You

Both Gas Networks Ireland and Aurora Telecom are committed to supporting the development and growth of data centres in Ireland by providing power and fibre to customers through our world-class infrastructure.

As part of a multi-utility organisation, we will work with you to develop a customised, combined gas and telecoms solution for your business. This joint approach will help to maximise efficiencies and reduce costs for the development of your data centre, as well as, providing time-to-market and environmental benefits.

With a proven track record, we offer solutions that are tailored to meet your reliability and time-to-market needs, ensuring constant connectivity, security of supply and fast turnaround connection to our networks – supporting the development and operational continuity of your data centre.

## Gas Networks Ireland

50%

Currently over 50% of Ireland's electricity is generated using Natural Gas.\*

700,000

We have approximately 700,000 natural gas customers, in 160 population centres, across 21 counties in Ireland.

74 TWh

In 2017, we transported circa 74 TWh of energy through our system, over double the energy transported by the electricity grid.

20%

Our aim is to have 20% renewable gas in the network by 2030, circa 11 TWh.

## Aurora Telecom

885km

885km of fibre network with an additional 270km under construction.

G652D Corning

Best-in-class cable system coupled with the most modern, lowest latency fibre infrastructure in Ireland.

Connectivity

Our fibre network extends across 15 counties in a ring topology and interconnects with all the major urban centres in Ireland, as well as, subsea interconnectors.

99.9999%

99.9999% uptime, with a best-in-class service level agreement.

\* Source: SEAI Energy-Related SEAI CO<sub>2</sub> Emissions In Ireland 2005-2016, 2018 Report

# Powering Data Centres with Natural Gas



## Cost Savings

Electricity from on-site generation can deliver cost savings over grid electricity.

The opportunity also exists to fix gas prices to achieve price certainty.



## Low Carbon Energy Source\*

Natural gas has a low emission factor of 204.7gCO<sub>2</sub>/kWh, which can be used to generate on-site electricity\*\* and provide carbon emission savings versus grid electricity, which has an emission factor of 482.8gCO<sub>2</sub>/kWh.



## Capacity

There is abundant capacity for additional connections on the gas network in Ireland.

We will work with you to provide a solution that aligns with your data centre construction programme.



## High Efficiency

On-site generation solutions can include gas reciprocating engines, gas turbines or fuel cells and can offer an electrical efficiency of up to 65%.



## Reliability

Natural Gas is a proven reliable energy source, which currently delivers over 50% of Ireland's electricity needs.

We offer turnkey, scalable, on-site generation solutions that comply with 99.999% availability standards to ensure operational continuity.



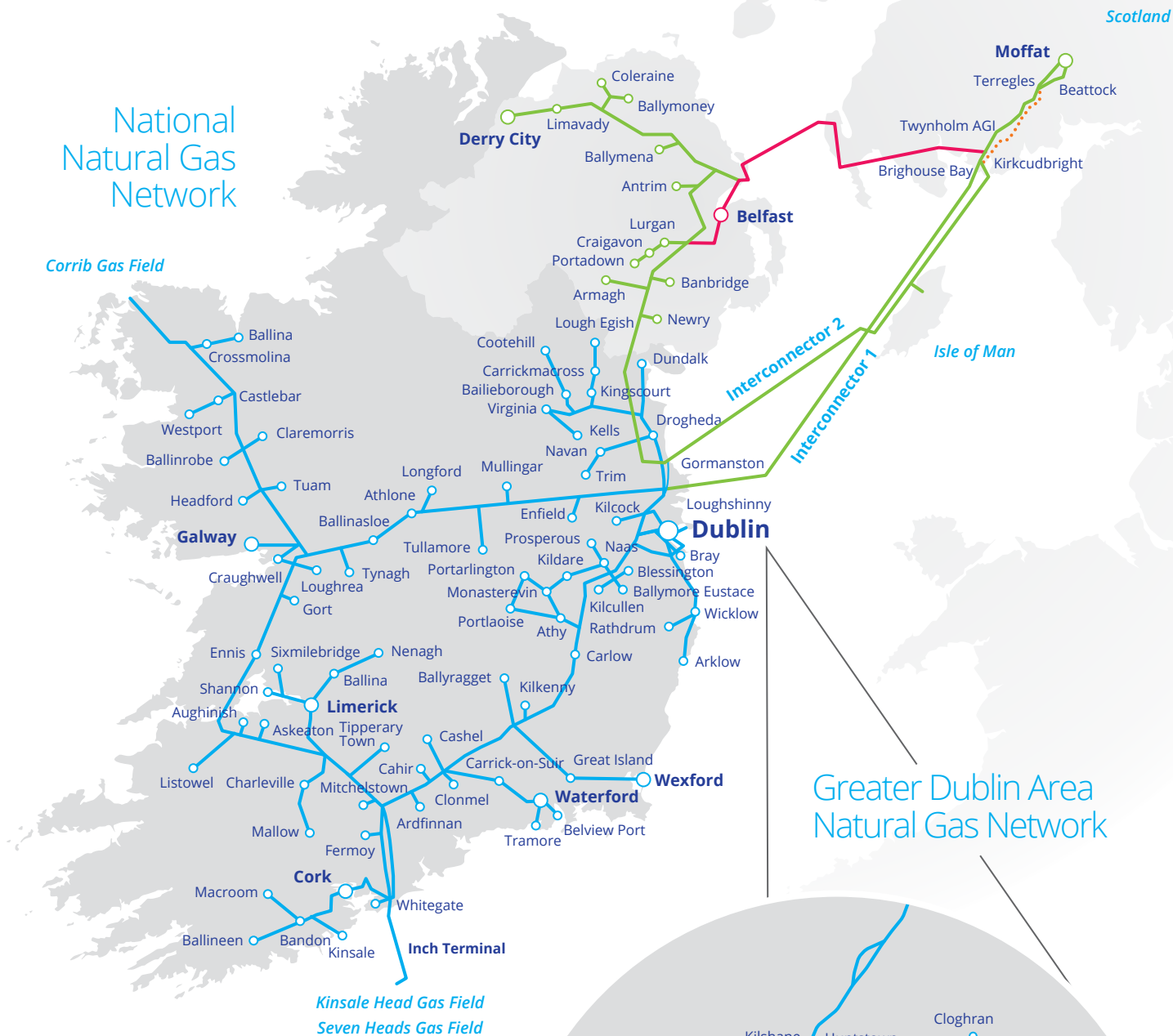
## Renewable Gas

We can provide renewable or 'green' gas to help you meet your decarbonisation targets.

Renewable gas is an indigenous, sustainable, carbon neutral fuel.

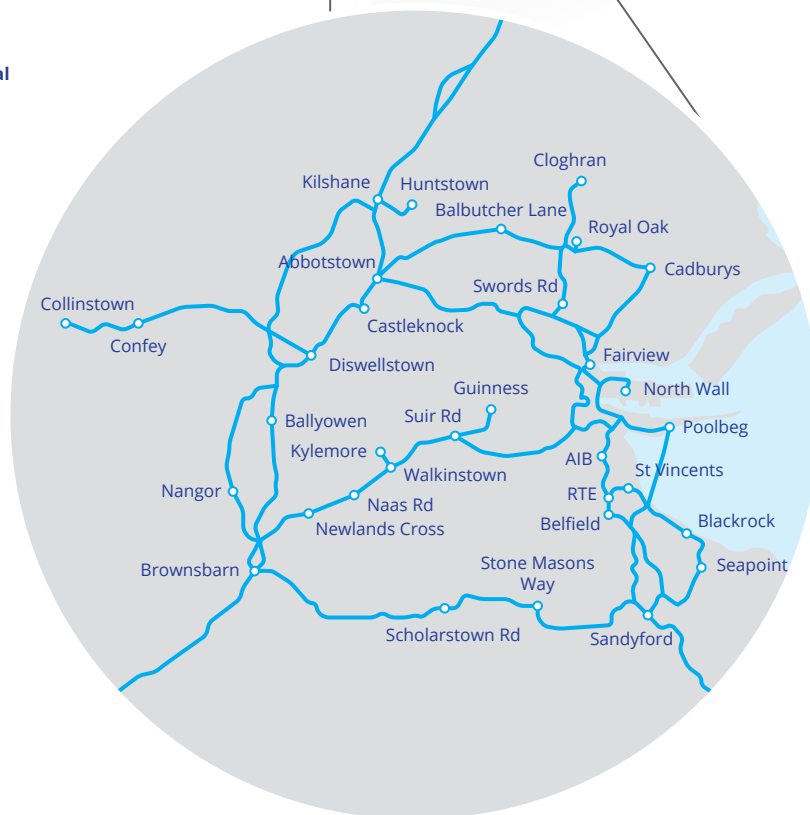
\* Source: Energy-related CO<sub>2</sub> Emissions in Ireland 2005–2016, 2018 Report

\*\* Carbon emission factor of electricity generated onsite depends on the solution implemented on-site.



- Existing Pipelines
- GNI (UK) Limited Pipeline
- Pipelines Owned by Others

**Greater Dublin Area Natural Gas Network**





# Connecting Data Centres to a world-class Fibre Network



## Cutting-Edge Technology

Aurora Telecom owns and operates the most modern fibre network in Ireland, built with the highest quality, low latency Corning G652D fibre optic cable. It is particularly suitable for high capacity data transportation and international connectivity.

We also provide carrier-grade, multi-carrier colocation and regeneration facilities, spaced approx. every 70km.



## Bespoke Data Centre Network Design

We will work with you to develop a fully flexible and scalable solution with bespoke network design, to migrate from managed bandwidth to dark fibre, supporting the future capacity requirements of your data centre.

Aurora Telecom's ultra high-count dark fibre network eliminates pinch points and offers near-infinite capacity, which is further enhanced by our ring topology ensuring resilient/dual feed connections.



## Customer Focus

We recognise that our customers have varying service and commercial requirements and facilitate this by offering long-term contracts with Indefeasible Right of Use (IRU) and other licence options.

Our dedicated team of account and network managers will work with you to understand your core business activities and connectivity requirements including:

- backhaul services between hubs and high fibre count cluster/campus networks
- dual-feed connections
- bespoke interconnections



## Security

As a dedicated private network, our customers benefit from highly-secure fibre connectivity.

Aurora Telecom's network largely benefits from the regular aerial and on-the-ground surveillance applied to safeguarding the gas pipeline.

We also offer 24/7 active monitoring with best-in-class service level response times.



## International & Subsea Connectivity

Ireland has one of the most advanced transatlantic subsea cable systems in the world. The available capacity and data transfer speeds provide opportune support for global data centres.

Aurora Telecom are connected to all leading sub-sea cable carriers and are the backhaul dark fibre carrier-of-choice for subsea infrastructure projects.



## Reliability

Aurora Telecom's high-speed dark fibre network is highly reliable and resilient. Regular aerial and on-the-ground surveillance ensures the highest levels of operational continuity.

Our network design topologies include point-to-point or ring configurations with dual network feeds into each site ensuring full resilience.

We offer first-rate service level agreements with the demonstrated ability to meet 99.999% availability standards.

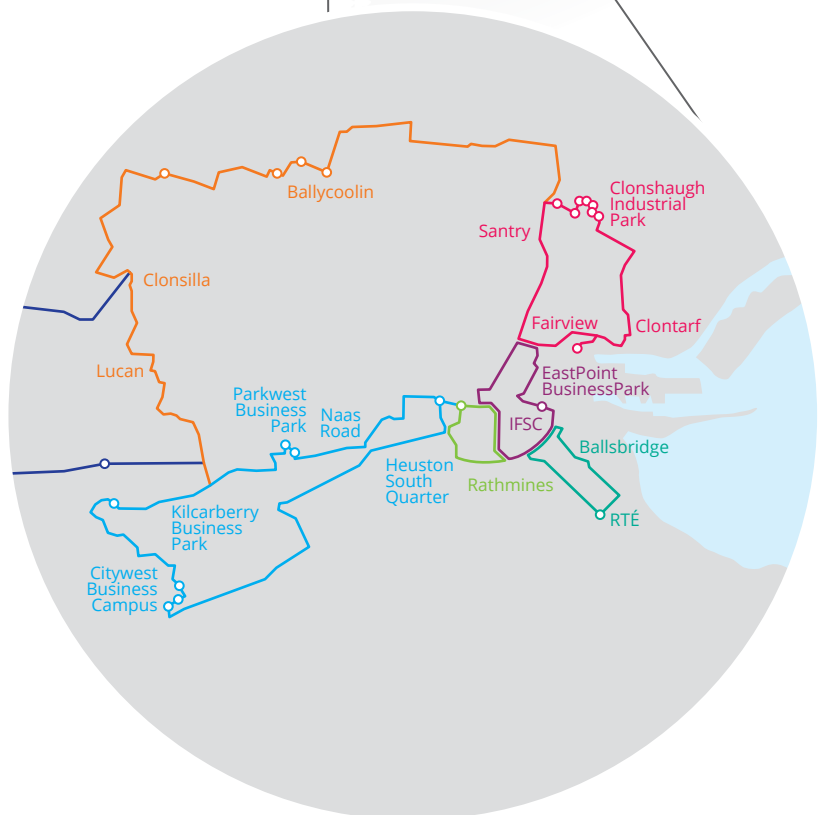
# National Fibre Network



## Greater Dublin Area Fibre Network

— National Network  
 - - - New route under construction

- Area 01
- Area 02
- Area 03
- Area 04
- Area 05
- Area 06
- National Network



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Contact us to discuss your  
Power & Fibre needs.



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