Scottish & Southern Electricity Networks

TRANSMISSION

# North of Scotland Industrial and Commercial Demand

January 2019

# Introduction

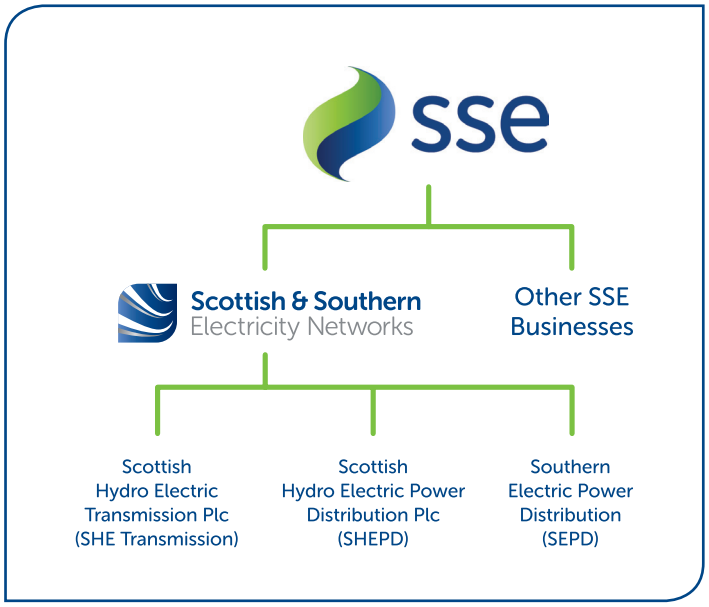
As the energy landscape continues to evolve, it is important that we continue to assess the expected energy trends that will shape our future network, along with their related assumptions, so that we can build a clearer picture of what challenges and opportunities lie ahead. The energy industry is constantly transitioning as a result of technological advances, policy changes and consumer behaviour – and we need to be responsive to this.

In our North of Scotland Future Energy Scenarios which were published in August 2018, we outlined that we would be looking to understand the industrial and commercial sector in more depth, particularly how industrial and commercial demand may change in the future. This was an area which we did not tackle in the 2018 release of our North of Scotland Future Energy Scenarios but we are planning to include this within our 2019 North of Scotland Future Energy Scenarios publication.

This brief paper provides a summary of the research that we have carried out on energy trends in the industrial and commercial sector on which we are seeking feedback from stakeholders to better understand future trends in industrial and commercial energy demand.

# About us

**We are Scottish Hydro Electric Transmission (SHE Transmission), part of the SSE Group, responsible for the electricity transmission network in the north of Scotland. We operate under the name of Scottish and Southern Electricity Networks, together with our sister companies, Scottish Hydro Electric Power Distribution (SHEPD) and Southern Electric Power Distribution (SEPD), who operate the lower voltage distribution networks in the north of Scotland and central southern England.**




As the Transmission Owner (TO) we maintain and invest in the high voltage 132kV, 275kV and 400kV electricity transmission network in the north of Scotland. Our network consists of underground cables, overhead lines on wooden poles and steel towers, and electricity substations, extending over a quarter of the UK's land mass crossing some of its most challenging terrain.

We power our communities by providing a safe and reliable supply of electricity.

We do this by taking the electricity from generators and transporting it at high voltages over long distances through our transmission network for distribution to homes and businesses in villages, towns and cities.

# Our research

We undertook research into energy trends in the industrial and commercial sector from 2005 to 2015 which we published in our first Energy Trends document in August 2017. Recently, we published our second and updated Energy Trends report for 2018 which contained an update to include the 2016 industrial and commercial consumption figures. We have also utilised information from Scottish Government, Highlands and Islands Enterprise and the Feed-in Tariffs (FIT) scheme to supplement our analysis.

## Industrial and commercial sector growth

In the Scottish Government's recent State of the Economy publication[1], gross domestic product (GDP) grew by 0.5% in the second quarter of 2018 and 1.7% over the year. The retail & wholesale, financial & insurance services, manufacturing and food & drink sectors all contributed to the growth in GDP this year.

The UK and Scottish Governments have been supportive of establishing city deals in Scotland as an innovative way for all levels of government to work together and create sustainable economic growth and jobs through long-term investment in local projects. City deals such as the Aberdeen City Region Deal and the Tay Cities Deal will enable and facilitate growth in all sectors with a focus on particular growth areas such as agriculture, fishing, food & drink, digital & technology, life sciences, oil & gas and renewables.

The Aberdeen City Region Deal, signed in 2016, is the catalyst for a 10 year programme of investment worth in excess of £800 million to the area[2]. The deal will cover both the Aberdeen City and Aberdeenshire Council areas, as collaboration between both Council's will be key to driving investment into the region. Projects that are currently underway include the expansion of the Aberdeen Harbour to allow the port to grow its core oil and gas activities whilst attracting renewable energy and cruise industry activity.

The Tay Cities Deal will cover several local council areas, Angus, Dundee City, Perth & Kinross and the North East area of Fife, with £350m being provided by the UK and Scottish Governments[3]. Driving investments across the biomedical, food & drink, tourism, manufacturing and renewables sectors will be the focus of the cities deal.

The final city deal currently agreed in the north of Scotland is the Inverness and Highland City Region Deal with £315m of funding being committed to the deal. Key themes that run through the deal include building additional homes to support economic growth in the region, the creation of the Northern Innovation Hub which will provide tailored support for high growth small and medium sized businesses as well as encouraging start ups and enhancing tourism activities.

The Rural Growth Deal being developed by Argyll and Bute Council will focus on attracting investment into the food & drink, defence, tourism, marine science, business innovation sectors[4]. It is expected that the Head of Terms of the deal could be agreed by September 2019.

- What sectors do you think will see increased growth in the north of Scotland?
- Where in the north of Scotland do you expect to see increased industrial and commercial growth?
- What other drivers will influence industrial and commercial growth?

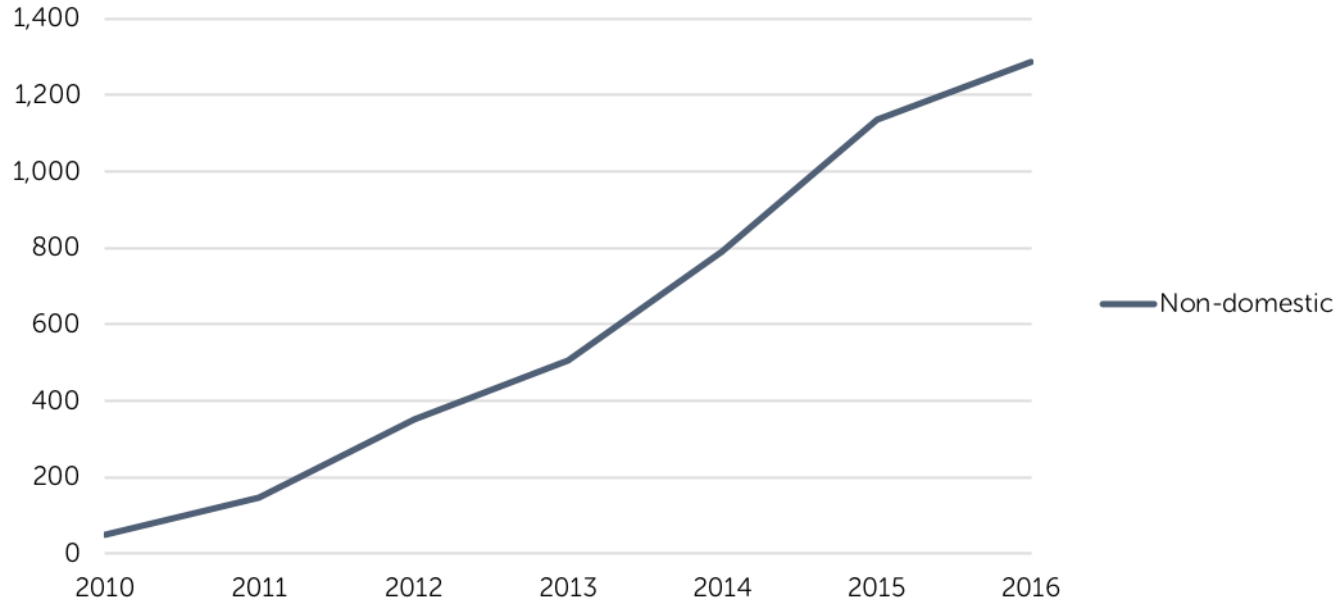
[1]https://www.gov.scot/publications/state-economy/
[2]http://investaberdeen.co.uk/success-stories/business-insights/the-aberdeen-city-region-deal-so-far
[3]https://www.taycities.co.uk/sites/default/files/tay_cities_deal_2018_heads_of_terms.pdf
[4]https://www.argyll-bute.gov.uk/rgd/approach

## Industrial and commercial electricity demand

**In the analysis that we carried out in our 2018 Energy Trends paper, we found that average industrial and commercial electricity consumption decreased from 70,969kWh to 53,744kWh, a reduction of 24.3% from 2015 to 2016. This is in contrast to what we found in our 2017 Energy Trends paper which showed that average industrial and commercial electricity consumption in the north of Scotland had increased by 13.5% from 2005 to 2015, rising to 70,969kWh. We attributed this to increases in production in the food & drink industry in the north of Scotland based on stakeholder feedback.**

In our stakeholder engagement last year, some stakeholders signalled an increase in industrial and commercial customers using on-site generation to supply their own energy needs. To validate this, we carried out additional research into Ofgem's Feed-in Tariffs (FIT) scheme to identify if there had been an increase in the number of non-domestic properties installing on-site generation technologies. Figure 1 shows that there has been a year-on-year increase in the number of hydro, solar PV and wind generation technologies being installed at non-domestic properties in the north of Scotland. By the end of 2016, the number of installations rose to 1,286 installations in the north of Scotland.

**Figure 1: Hydro, solar PV and wind installations at non-domestic properties in the north of Scotland**




Source: Ofgem Feed-in-Tariff Installation Report 31 December 2017

Do you think that average industrial and commercial electricity consumption will increase or decrease in the next decade?

What factors influence the decision to invest in on-site generation technologies?

What are your views on industrial and commercial companies continuing to install generation technologies to meet and manage their energy consumption?

## Industrial and commercial electricity demand

**We found that in the north of Scotland, average industrial and commercial gas consumption increased from 834,144kWh to 919,301kWh, a rise of 10.2% from 2015 to 2016.**

There are some specific local authorities where there have been significant increases in average industrial and commercial gas consumption from 2015 to 2016; Aberdeen City (47.7%) and Dundee City (22.5%). The remaining local authorities saw a reduction in average industrial and commercial gas consumption from 2015 to 2016, with two of the Islands being excluded as no industrial and commercial customers are connected to the gas grid.

Our analysis also highlighted that from 2015 to 2016 the number of MPRNs[5] in the north of Scotland increased by 418 to 5,534 non-domestic MPRNs, the first increase in the number of MPRNs since 2012. This could indicate that more industrial and commercial companies are connecting to the gas grid.

Do you think that average industrial and commercial gas consumption will increase or decrease in the next decade?

## Additional considerations

The Scottish Government's Climate Change Plan includes an energy efficiency reduction target for non-domestic buildings stating that by 2032, improvements to the building fabric of non-domestic buildings will result in a 20% reduction in non-domestic heat demand[6]. This will be supported by Scotland's Energy Efficiency Programme (SEEP) which aims to improve the energy efficiency of buildings in the industrial and commercial sector as well as Scottish homes. The Scottish Government is expected to give further details on how it will support industrial processes as well as premises through SEEP. The Scottish Government's Climate Change Plan outlines that support for industrial and commercial companies could include support for investment in energy efficiency equipment, or in heat recovery to district heating networks.

Do you think a 20% reduction in non-domestic heat demand is likely to be achieved in the north of Scotland by 2032? If not, what would be a more appropriate range or figure?

## What next?

In 2019, we will be releasing two further consultations, Low Carbon Heat and Hydrogen & Energy Storage which will feed into the development of our 2019 North of Scotland Future Energy Scenarios publication.

[5]Meter Point Reference Number
[6]https://www.gov.scot/publications/climate-change-plan-third-report-proposals-policies-written-statement-9781788516778/

# Responding to this paper

We are inviting responses to this paper by 1st February 2019. If you have any queries on the content of this paper then please get in touch with Imran Mohammed at: **imran.p.mohammed@sse.com**.

Information provided in response to this consultation may be used in future documents related to our North of Scotland Future Energy Scenarios. Responses will be generalised and not attributed to specific respondees. If you would prefer the information that you provide to be treated as confidential, then please make us aware of this when responding to the consultation.

To allow us to complete our assessment, we would be grateful to receive your comments on the following areas:

**Where in Scotland do you expect to see increased industrial and commercial growth?**

**What sectors do you think will see increased growth in the north of Scotland?**

**What other drivers will influence industrial and commercial growth?**

**Do you think that average industrial and commercial electricity consumption will increase or decrease in the next decade?**

**What factors influence the decision to invest in on-site generation technologies?**

**What are your views on industrial and commercial companies continuing to install generation technologies to meet and manage their energy consumption?**

**Do you think that average industrial and commercial gas consumption will increase or decrease in the next decade?**

**Do you think a 20% reduction in non-domestic heat demand is likely to be achieved in the north of Scotland by 2032? If not, what would be a more appropriate range or figure?**

This paper will be hosted on:
**www.ssen-transmission.co.uk/information-centre/industry-and-regulation/future-energy-scenarios**

An online feedback form is available on our website. Alternatively, please use the following contact methods to send in your responses:

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**Post:** Imran Mohammed, Scottish and Southern Electricity Networks, Inveralmond House, 200 Dunkeld Road, Perth, PH1 3AQ