

Imports, exports and transfers of electricity

Introduction

DECC collect half-hourly readings from National Grid¹ on the volume of electricity imported and exported between Great Britain and France; Great Britain and Netherlands; and Wales and Ireland. Similar data is also collected from the Single Electricity Market Operator², for trade between Northern Ireland (NI) and the Republic of Ireland. Currently, DECC uses this information to publish aggregate statistics on overall UK electricity trade. From September 2014, DECC will publish this information by interconnector, and will separately show, in the same table, any transfers within the UK. The statistics will be published as quarterly totals in a new online table 'ET5.6' at www.gov.uk/government/statistics/electricity-section-5-energy-trends in line with the Energy Trends publication timetable.

Background

The interconnectors allow imports and exports of electricity between countries in order to help meet industrial and customer demands for electricity.

The first of the four interconnectors, which went into service during 1986, was the France and UK interconnector, with a capacity of 2,000MW, representing 49 per cent of the total capacity available through the UK interconnectors to date. The next significant change occurred during 2011, when the Netherlands and UK interconnector opened with a capacity of 1,000MW, representing 24 per cent of the total UK interconnector capacity. The remaining 27 per cent were from the Ireland and NI cable (600MW), which opened in 1995 and the Ireland and Wales cable (500MW), which opened more recently in 2012.

There are also two additional interconnectors within the UK, to facilitate the transfer of electricity within the UK, between Scotland and NI; and England and Scotland.

Latest Statistics

Since Q1 2010, the UK has been a net importer of electricity. Total net imports in Q2 2014, were 5.1 TWh, the highest levels reported in the quarterly time series and accounted for 6 per cent of total electricity supply. Net imports accounted for their greatest share of electricity supply reflecting both higher imports and lower UK generation. In Q2 2014, 78.8 TWh of electricity was generated in the UK, this was 6 per cent lower than the levels in the same period during 2013, and the lowest levels recorded in the quarterly time series.

The UK temporarily became net exporters of electricity for 6 months, between Q4 2009 and Q1 2010 (Chart 1), with higher levels of electricity being exported to France as during this period, there were higher levels of home produced electricity (208 TWh), and slightly lower levels of UK electricity demand in comparison (205 TWh)³.

¹ Figures are taken from the demand data available on the National Grid website at www.nationalgrid.com/UK/Industryinformation/Electricity-transmission-operational-data/Data-Explorer/

² Figures are taken from data available on the SEMO website at www.semo.com/marketdata/pages/energysettlement.aspx.

³ Figures are taken from ET5_2 at www.gov.uk/government/statistics/electricity-section-5-energy-trends.

Chart 1: UK Net Electricity Trade

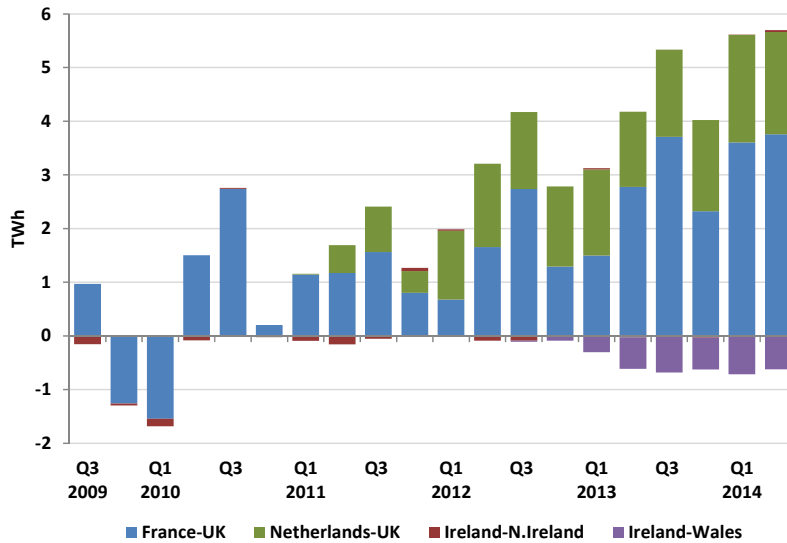


Table 1: Imports by interconnector

| Interconnector | Imports Q2 2013 (GWh) | Share of total imports in Q2 2013 (%) | Imports Q2 2014 (GWh) | Share of total imports in Q2 2014 (%) | Change between Q2 2013 and Q2 2014 (%) |
|----------------------|-----------------------|---------------------------------------|-----------------------|---------------------------------------|--|
| France-UK | 2,818 | 65% | 3,761 | 65% | 33% |
| Netherlands-UK | 1,469 | 34% | 1,906 | 33% | 30% |
| Ireland-Wales | 19 | 0% | 36 | 1% | 89% |
| Ireland-N.Ireland | 35 | 1% | 68 | 1% | 94% |
| Total Imports | 4,341 | 100% | 5,771 | 100% | 33% |

Imports in Q2 2014 were 5.8 TWh, 33 per cent higher than the same period a year earlier. Imports from continental Europe (France and the Netherlands) represented 98 per cent share (5.7 TWh) of this total, with the French interconnector providing 65 per cent of this share (3.8 TWh) and the Netherland interconnector providing 33 per cent (1.9 TWh) (Table 1).

Since the Ireland and Wales interconnector came into service during 2012, it has continued to be a net exporter of electricity and in Q2 2014, represented 95 per cent of total UK exports (0.7 TWh).

Transfers

The electricity transfer statistics cover electricity trade within the UK. Scotland and NI began transferring electricity in early 2002 in order to incorporate NI into the larger electricity systems in Great Britain and to help increase security of electricity supply.

Table 2: Transfers by interconnector

| Interconnector | Transfers Q2 2013 (GWh) | Share of total transfers in Q2 2013 (%) | Transfers Q2 2014 (GWh) | Share of total transfers in Q2 2014 (%) | Change between Q2 2013 and Q2 2014 (%) |
|------------------------|-------------------------|---|-------------------------|---|--|
| Scotland-England | 3,772 | 90% | 3,044 | 91% | -19% |
| England-Scotland | 12 | 0% | 6 | 0% | -53% |
| Scotland-NI | 415 | 10% | 295 | 9% | -29% |
| NI-Scotland | 3 | 0% | 9 | 0% | (+) |
| Total Transfers | 4,202 | 100% | 3,354 | 100% | -20% |

The vast majority of the transfers within the UK involve transfers out of Scotland. In Q2 2014 transfers from Scotland to England represented 91 per cent share (3.0 TWh) of the total transfers compared with transfers from England to Scotland, which were negligible. Transfers from Scotland to NI also represented 9 per cent share of the total in Q2 2014 (Table 2).

User feedback

We welcome all feedback from users; therefore, if you have any comments or queries regarding this new monthly table, please contact Kayley Vanlint or Mita Kerai using the contact details below.

Kayley Vanlint

Energy Statistics

Tel: 0300 068 5046

E-mail: electricitystatistics@decc.gsi.gov.uk

Mita Kerai

Energy Statistics

Tel: 0300 068 5044

Email: electricitystatistics@decc.gsi.gov.uk