Availability of transmission capacity in the Nordics

Q3/2017

Report description

This report provides aggregated information about available electricity transmission capacities between Nordic bidding zones and neighboring countries.

The figures show the average share of available capacity on the day ahead market (ATC) to the maximum capacity (max NTC) on each border and direction.

Calculation formula

- Average(ATC_H/max NTC_H) for H=1,…,n

max NTC = Maximum net transfer capacity :

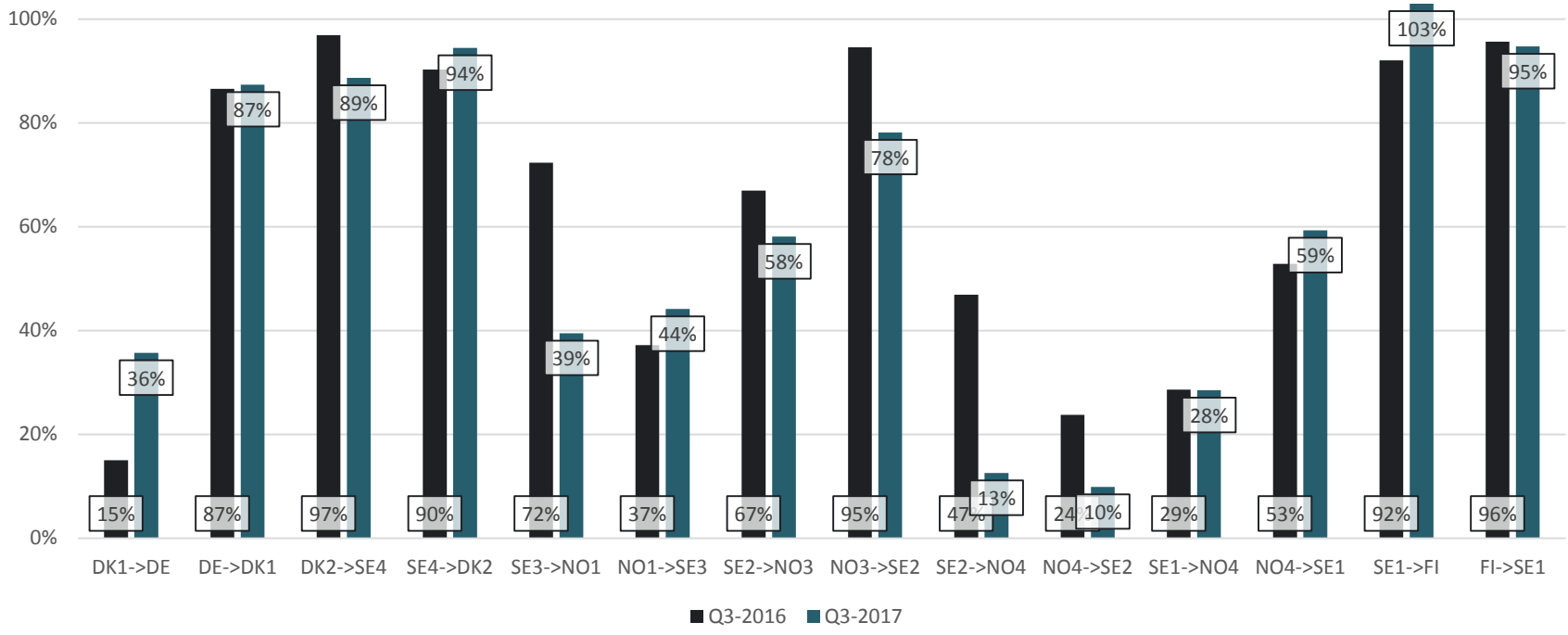
- The capacity that can be given to the market when there are no outages taking into account system reliability issues, and the power flows are favorable.

ATC= Available transfer capacity :

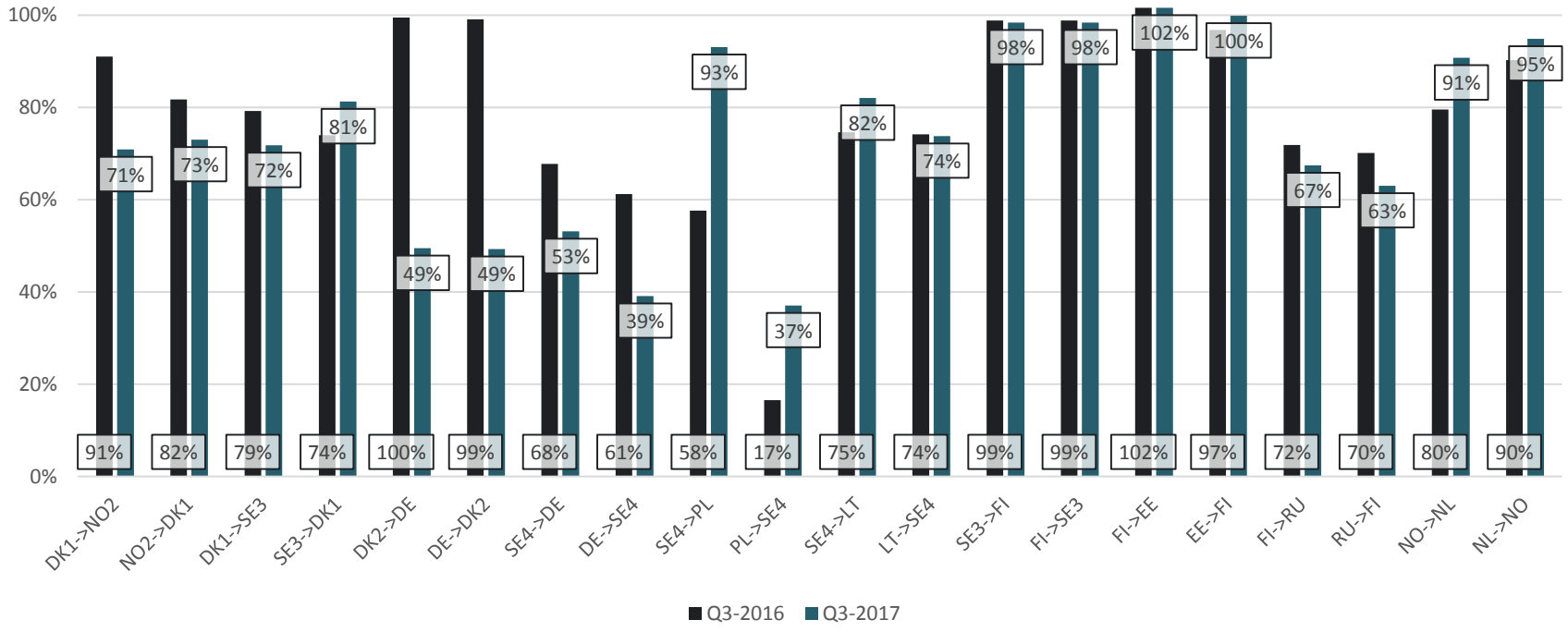
- The capacity given to the day-ahead market in the specific hour calculated based on the TSOs grid models and taking possible outages into account.

Q3/2016 & Q3/2017

AC-interconnectors - quarterly



DC-interconnectors - quarterly



Reasons for reduced* availabilities

* Availability below 75 %

Q3/2016

- NO4-SE1 (North Norway-Sweden)
  - Planned outages in the Norwegian grid.
- NO4-SE2 (North Norway-Sweden)
  - Planned outages in the Norwegian grid.
- NO3-SE2 (Middle Norway-Sweden)
  - Planned outages in the Norwegian grid.
- NO1-SE3 (South Norway-Sweden)
  - Fault on 420kV cable Sylling-Tegneby; congestion in the Swedish grid and maintenance on the interconnector.
- DK1-SE3 (Western Denmark-Sweden)
  - Planned maintenance on the interconnector and close to the interconnector, and congestion in the Swedish grid
- DK1-DE (Western Denmark- Germany)
  - The capacity from West Denmark (DK1) to Germany (DE) was very low in Q3-2016. The reason is the stressed German grid. The German TSO, TenneT is doing a lot of grid enforcements to relieve the stressed grid. This results in the capacity having to be reduced especially in the periods where TenneT is working on the gird.
- SE4-PL (Sweden-Poland)
  - The main reason for reduction were found in Poland. The reason on the Swedish side were planned maintenance on the interconnector and congestion in the Swedish grid.
- SE4-DE (Sweden-Germany)
  - The main reason for reduction were found in Germany. The reason on the Swedish side were planned maintenance on the interconnector and congestion in the Swedish grid.
- SE4-LT (Sweden-Lithuania)
  - The main reason for reductions were maintenance on the interconnector.
- FI-EE (Finland-Estonia)
  - The losses for the connection are purchased 50/50 by Fingrid and Elering and ATC is adjusted to that. NTC should be updated accordingly.
- FI-RU (Finland-Russia)
  - Yearly maintenance of Vyborg HVDC link

Reasons for reduced* availabilities

* Availability below 75 %

Q3/2017

- DK1-SE3 (Western Denmark-Sweden)
  - Planned maintenance on the interconnector and close to the interconnector, and congestion in the Swedish grid.
- NO4-SE1 (North Norway-Sweden)
  - Planned outages in the Norwegian and Swedish grid and thermal overload.
- NO4-SE2 (North Norway-Sweden)
  - Planned outages in the Norwegian grid and thermal overload on the interconnector.
- NO1-SE3 (Southern Norway-Sweden)
  - Planned outages in the Norwegian grid, congestion in the Swedish grid and planned maintenance on the interconnector and close to the interconnector.
- NO3-SE2 (Middle Norway-Sweden)
  - Planned outages in the Norwegian and Swedish grid.
- DK1-NO2 (Western Denmark – Norway)
  - Fault on SK2, planned outages of the SK pole(s) and outages in the Norwegian grid.
- FI-SE1 (Finland – North Sweden)
  - Reason for the ATC exceeding max NTC is the handling of transit flow from Norway via Finland to Sweden.
- DK1-DE (Western Denmark-Germany)
  - The capacity is higher than the previous year but the German grid is still stressed. During the quarter the German TSO, TenneT have done a lot of planed work in the grid.
- SE4-PL (Sweden-Poland)
  - The main reason for reduction of capacity from Poland to Sweden was found in Poland.
- SE4-DE (Sweden-Germany)
  - The reasons for reduction in capacity between Germany and Sweden (SE4) were found on both sides as well as planned maintenance on the interconnector. The reason on the Swedish side were congestion in the Swedish grid and maintenance close to the interconnector.
- SE4-LT (Sweden-Lithuania)
  - The main reason for reduction were found in Sweden; maintenance on the interconnector and close to the interconnector, cable fault on the interconnector and congestion in the Swedish grid.
- FI-EE (Finland-Estonia)
  - The losses for the connection are purchased 50/50 by Fingrid and Elering and ATC is adjusted to that. NTC should be updated accordingly.
- FI-RU (Finland-Russia)
  - Yearly maintenance of Vyborg HVDC link.