

Nordic Winter Power Balance Forecast 2014-2015

Approved in RGN 21st November 2014



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POWER BALANCE 2014-2015



With estimated power exchange [MW]
Cold winter day in 1 of 10 winters

NORDIC MARKET	TOTAL
P = Available capacity for market, TSO reserves excluded	*) 72 000
C = Peak demand	**) 71 500
B = Balance without power exchange	500
R = Reserves contracted for the TSOs (FCR-N/D, FRR-A/M in generation)	5 750

Remarks :

*) Nuclear power 100 % in Finland, 90 % in Sweden

Wind power 6 % in Finland and Sweden, 5 % in Norway, 0 % in Denmark

**) Nordic peak demand 2 % lower than sum of national peaks.

FCR=Frequency Containment Reserves

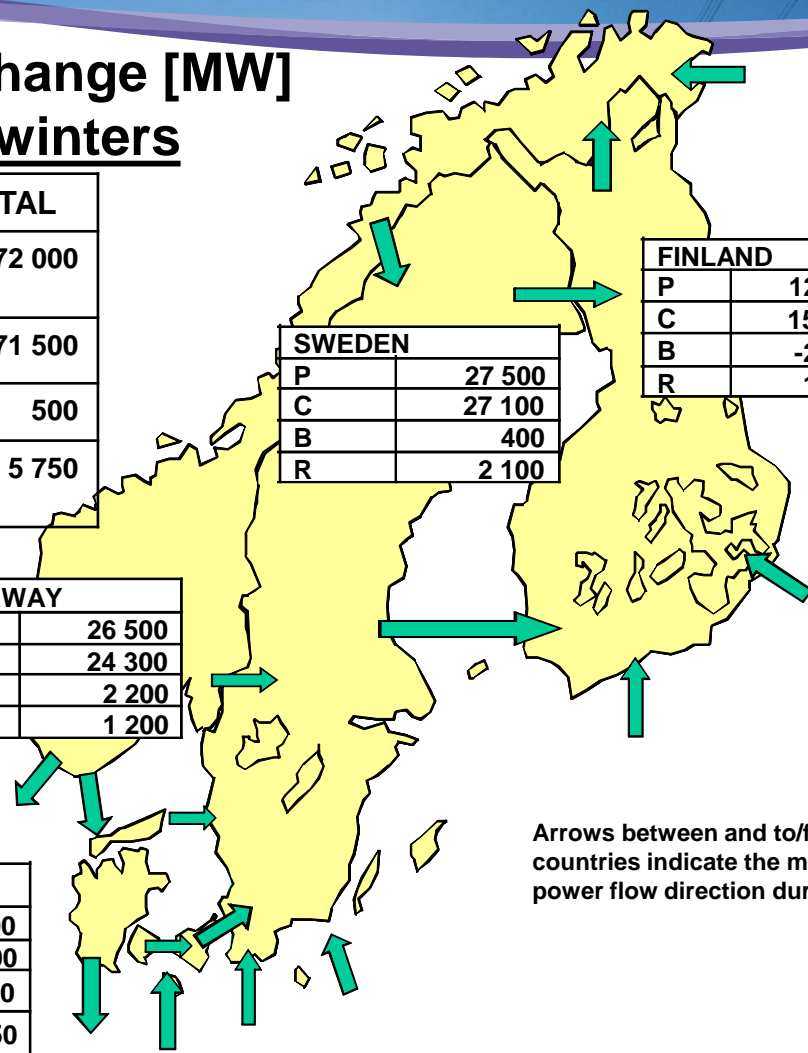
FRR=Frequency Restoration Reserves

NORWAY	
P	26 500
C	24 300
B	2 200
R	1 200

DENMARK	
P	5 500
C	6 600
B	-1 100
R	1 050

SWEDEN	
P	27 500
C	27 100
B	400
R	2 100

FINLAND	
P	12 500
C	15 000
B	-2 500
R	1 400



Arrows between and to/from the Nordic countries indicate the most probable power flow direction during peak hours.

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Comments

Denmark

- The winter 2014/2015 is expected to be normal with no particular problems, even if Denmark is a deficit area in severe winter conditions. The critical point in the Danish system is the power balance in Denmark East, which is weaker compared with Denmark West. The balance on Denmark East is dependent on interconnectors to Denmark West, Sweden, and Germany. The wind power in Denmark is not taken into account, but there might be some amount depending on wind conditions.

Finland

- Finland is a deficit area in the power balance during peak hours. The power balance is a bit more severe than previous winters because few more thermal plants were mothballed. The deficit is expected to be met with import from neighbouring systems. The total import capacity to Finland is around 5000 MW.

Norway

- The power balance in Norway is expected to be positive during peak hours, with export to Denmark, Sweden and the Netherlands. The export to Sweden from Southern Norway is expected to be low or zero on a cold winter day.

Sweden

- Outdoor temperatures and availability of the Swedish nuclear power are the main factors impacting on the balance. If nuclear availability is above 80 % then Sweden will probably be self-supporting during a normal winter scenario.
- Nine out of ten Swedish nuclear reactors are expected to be in operation during the entire winter.
- In addition, there are 626 MW available in Sweden as load reduction, which is part of the peak load reserve.

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Overall assessment

- The Nordic power balance is highly dependent on the availability of transfer capacity within the Nordic countries, import from other synchronous areas and high availability of nuclear power plants.
- The total Nordic power system is for the winter 2014-2015 expected to have a positive power balance 500 MW in peak hours, which is less than 1 percent of the available production capacity.
- The transmission capacity may be reduced to keep the transmission system within agreed limits for operational security.
- During high-price periods, the price elasticity of consumption might reduce the peak demand compared to the presented values. This will improve the power balance.
- Available capacity on interconnectors into the Nordic system is not included in this Nordic winter balance forecast.