

Nordic Winter Power Balance Forecast 2013-2014

Approved in RGN 19th November 2013



Reliable Sustainable Connected

POWER BALANCE 2013-2014

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

NORDIC MARKET	TOTAL
P = Available capacity for market TSO reserves excluded	*) 71 900
C = Peak demand	**) 72 320
B = Balance without power exchange	-420
R = Reserves available for the TSOs (FCR, FRR in generation)	5 950

Remarks :

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

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

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

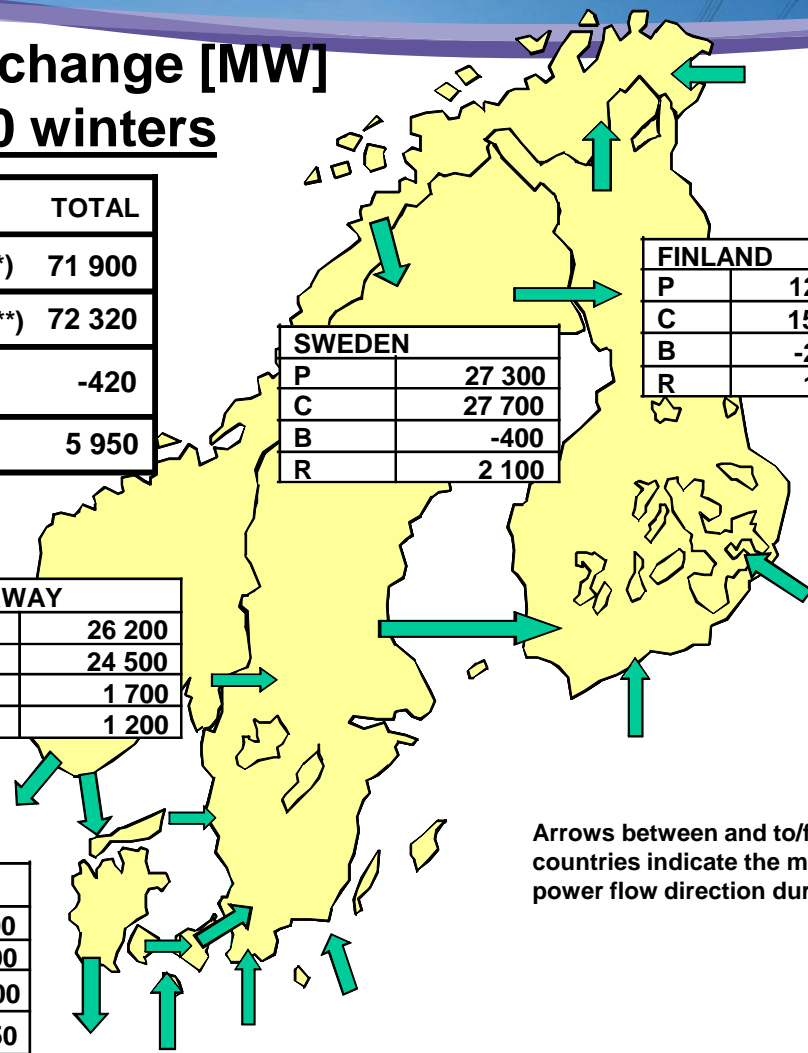
FCR=Frequency Containment Reserves
FRR=Frequency Restoration Reserves

DENMARK	
P	5 600
C	6 600
B	-1 000
R	1 050

NORWAY	
P	26 200
C	24 500
B	1 700
R	1 200

SWEDEN	
P	27 300
C	27 700
B	-400
R	2 100

FINLAND	
P	12 800
C	15 000
B	-2 200
R	1 600



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 2013/2014 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, but is expected to be met with import from neighbouring systems. New Estlink 2 connection will increase the import capacity by 650 MW from Estonia during the winter. The total import capacity to Finland will then be 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 capacity 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.
- If considering the contracted load reduction part of the peak load reserves (531 MW), Sweden will have a slightly positive power balance also during the severe winter scenario.

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Summary

- The total Nordic power system is for the winter 2013-2014 expected to have a negative power balance -420 MW in peak hours in severe winter situations, given that production units are available as predicted.
- It is expected to be possible to transfer power to deficit areas, although the transmission capacity may be reduced to keep the transmission system within agreed limits for operational security.
- Under severe conditions, occurring 1 out of 10 winters:
 - Norway has a positive power balance
Norway 1700 MW
 - Sweden, Denmark and Finland have negative power balances,
Sweden -400 MW, Denmark -1000 MW, Finland -2200 MW
- 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.