

# A common certificate market between Sweden and Norway

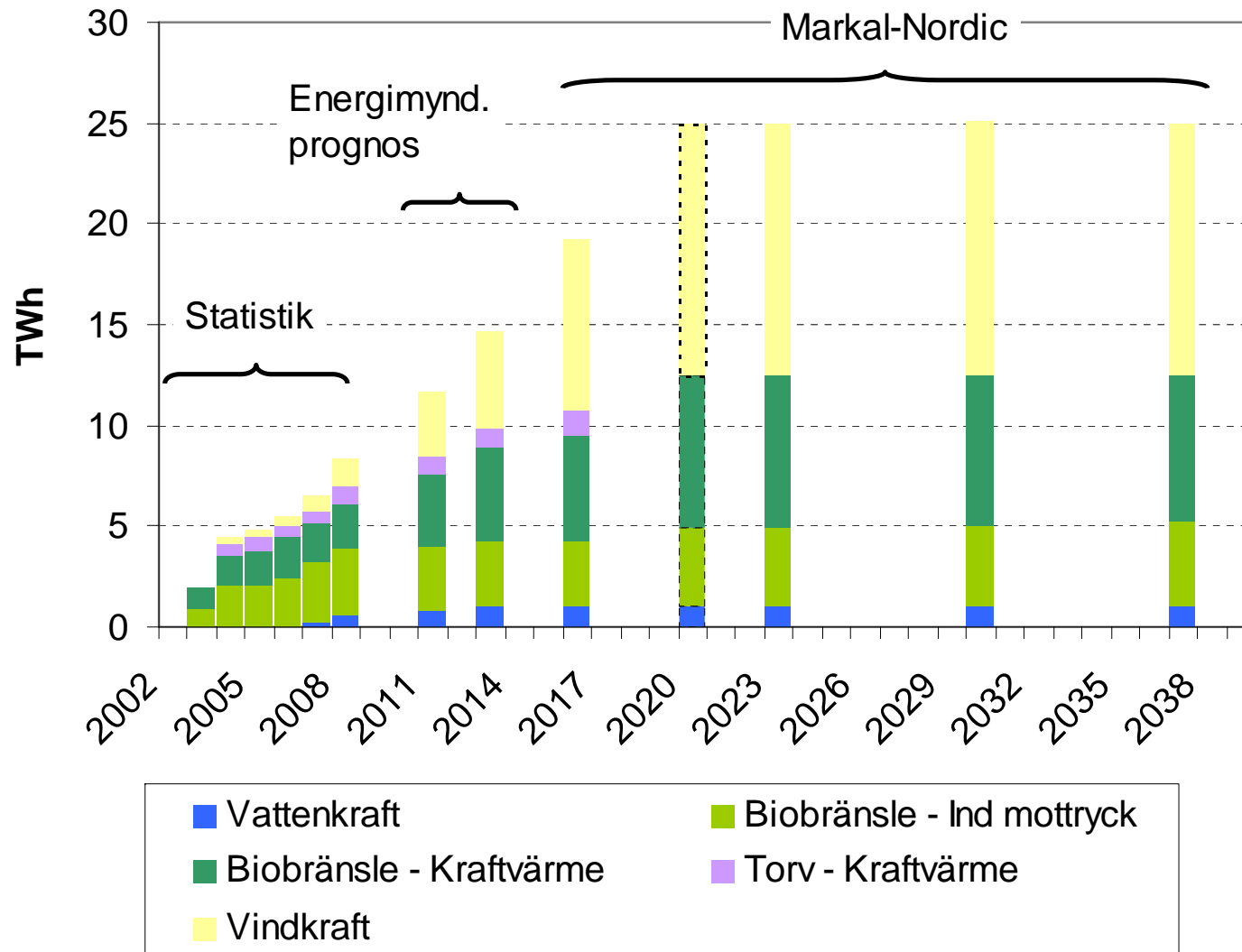
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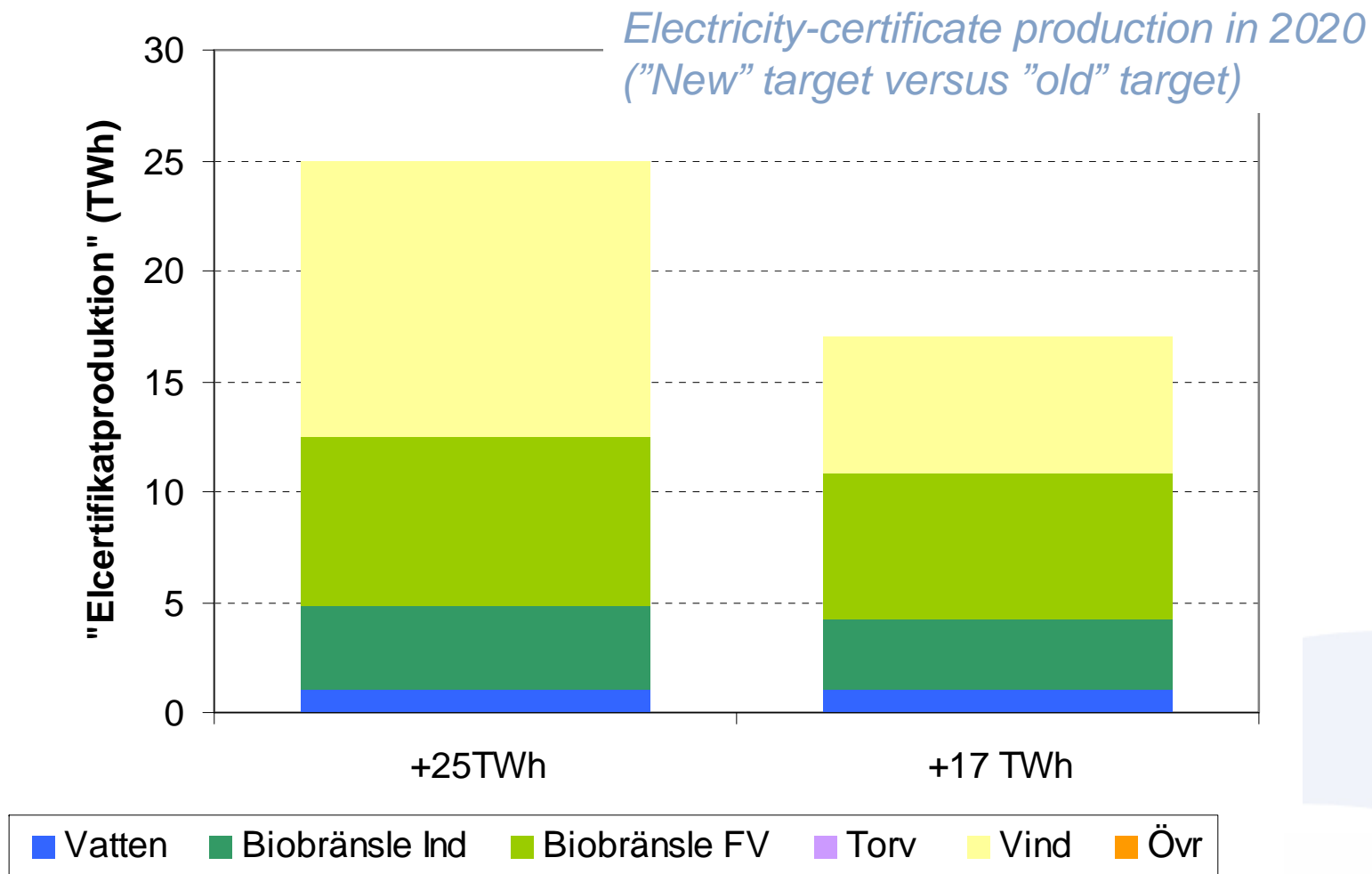
Nordic Energy Perspectives  
Helsinki, January 21, 2010



# Development of the Swedish electricity-certificate scheme according to the new proposal (2009)



# Wind power accounts for the lion's share of the expansion from the "old" target to the "new" target



# September 2009: Agreement on expression of intention on a common certificate scheme with Norway



- More concrete than when negotiations broke down in 2005
  - Norway will join the Swedish market
  - Equal burden sharing from 2012 to 2020: 12,5 TWh each
  - The scheme will be technology neutral: all new hydro eligible to issue certificates
- The common market is seen as an important instrument to fulfil the EU 2020 targets
  - Sweden has already signalled that the target will be increased and the scheme extended
    - National renewable energy action plans to be handed in to the Commission by June 30 next year
    - Target is 49,5 % renewable *energy*
    - 2005 share is 39,8%
  - Norway is currently negotiating its target
    - Current share of renewable *energy* is 57,5%
    - The minimum target will be 63%
- Elcert target (obligation) set as a volume in TWh

## Calculation of RES share:

Electricity produced by RES  
+ RES consumption in heating/cooling  
+ RES consumption in transport  

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*= Total RES consumption*

*Divided by*

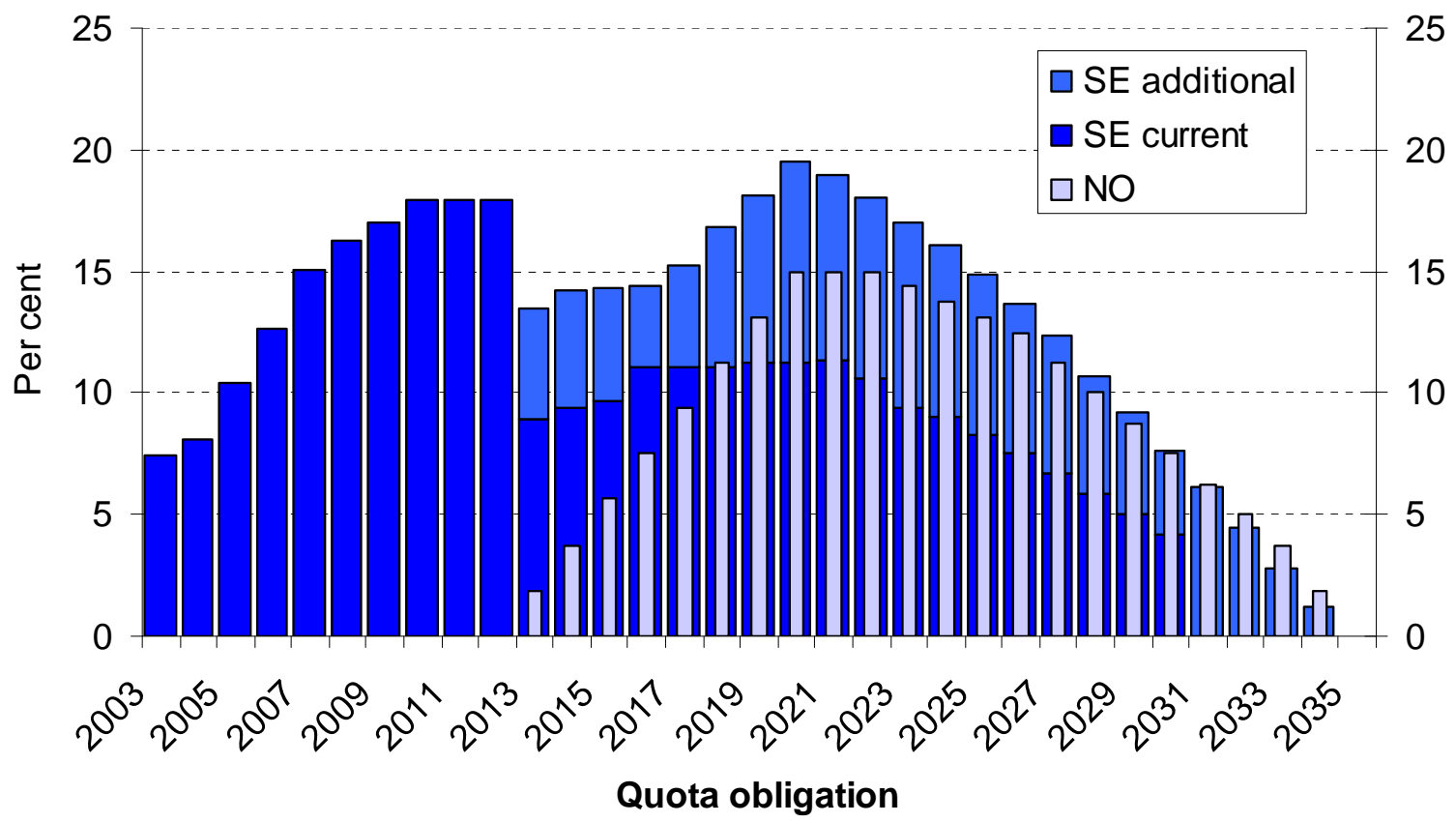
Net domestic final energy consumption  
+ energy used in the energy sector  
+ distribution losses  

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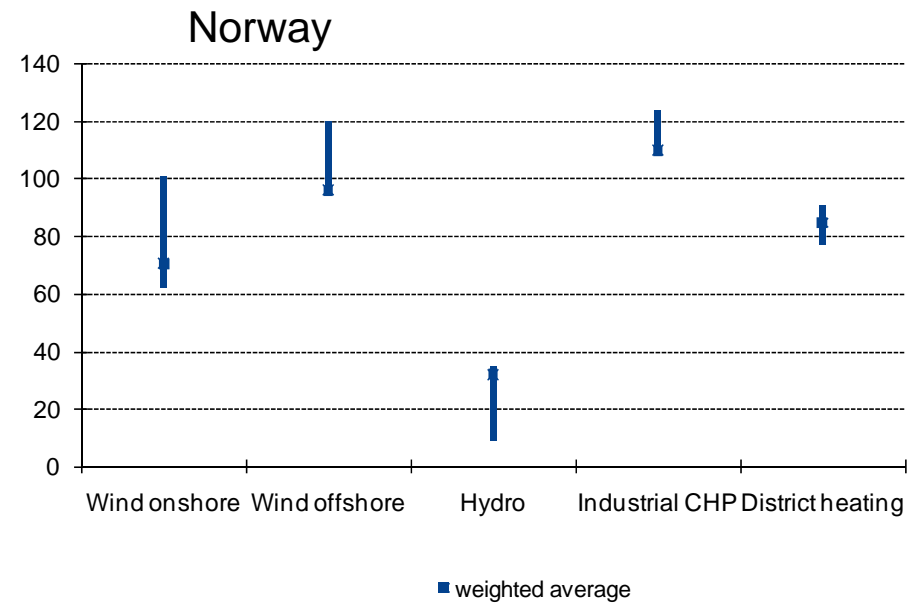
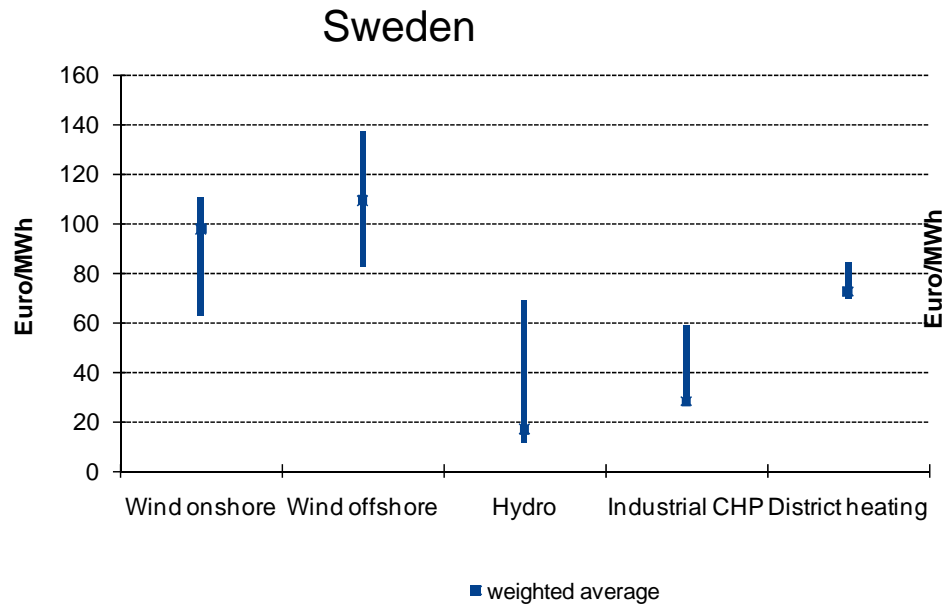
*= Total final energy consumption*

# Increased Swedish quota obligation plus new Norwegian demand

- Quota obligation in per cent for eligible consumers
  - Higher percentage for Swedish consumers
  - ... but higher average consumption for e.g. Norwegian households

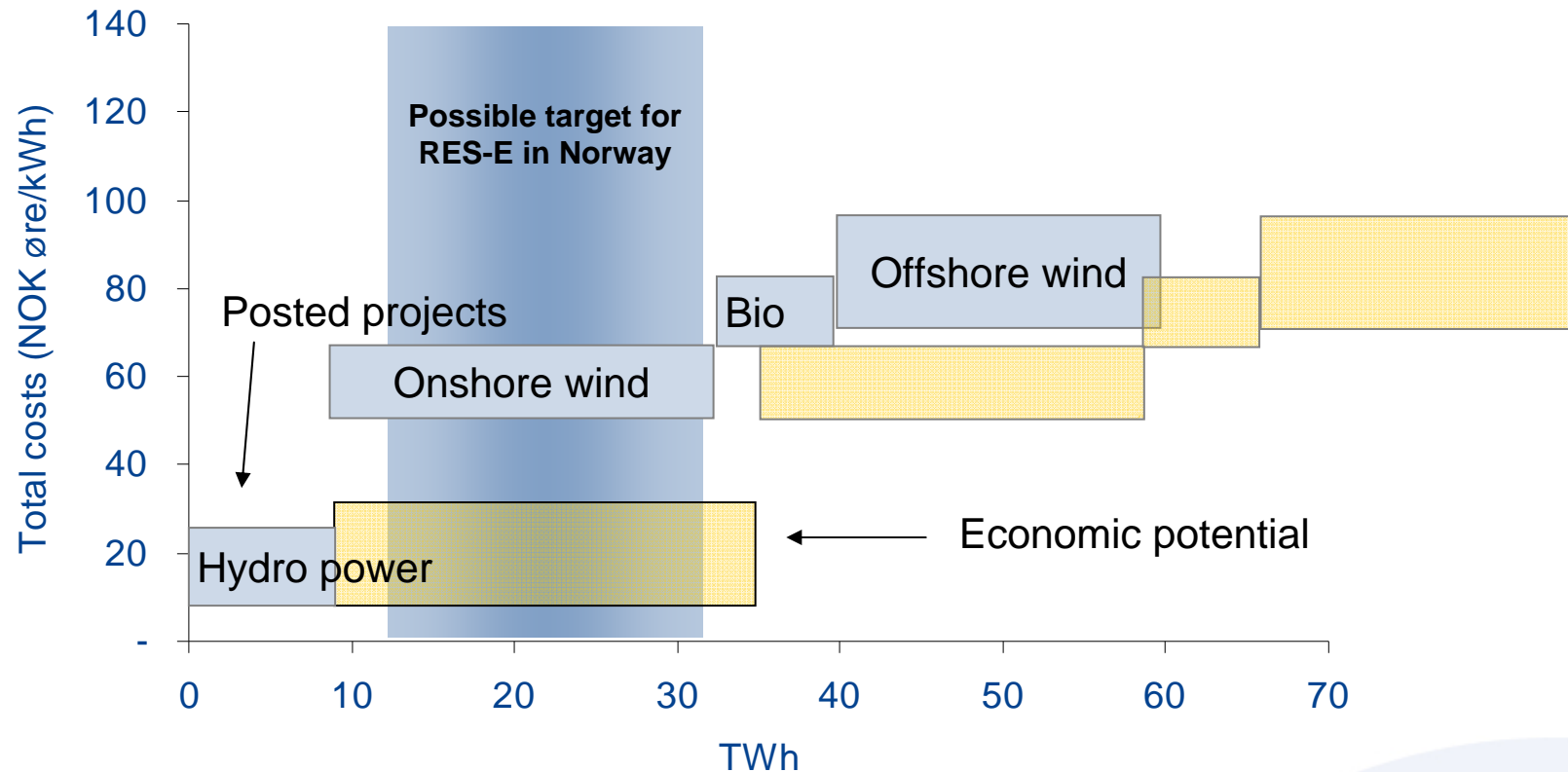


# Costs for renewable generation vary



- Wind and hydro cheaper in Norway
- CHP cheaper in Sweden

# Large potential for hydro and wind in Norway



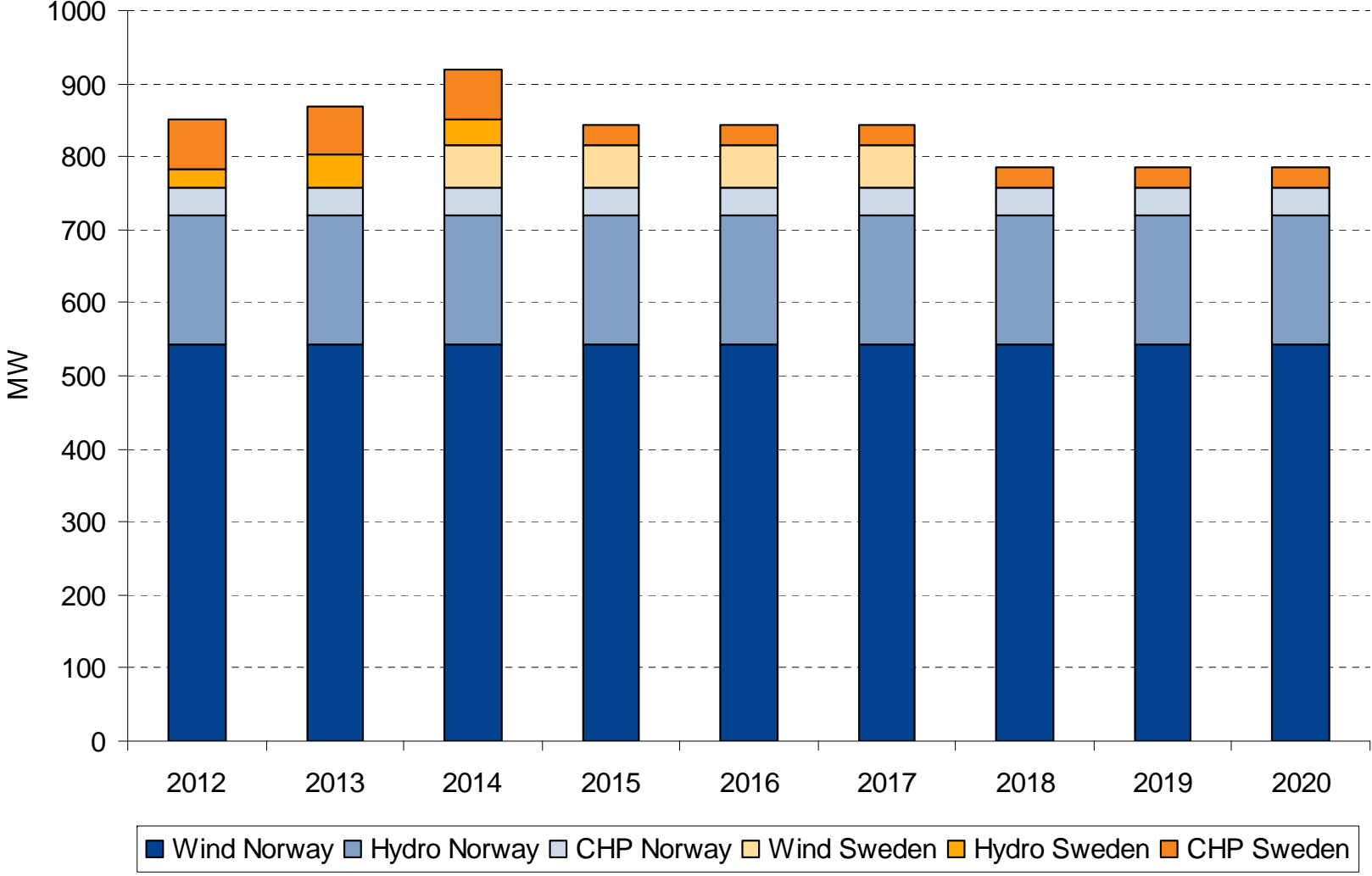
## Estimates are very uncertain

**Hydro power:** much is small scale

**Wind power:** competing projects

**Bio heat and power:** depends on infrastructure, longterm agreements

# Norwegian wind and hydro replace Swedish wind





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