



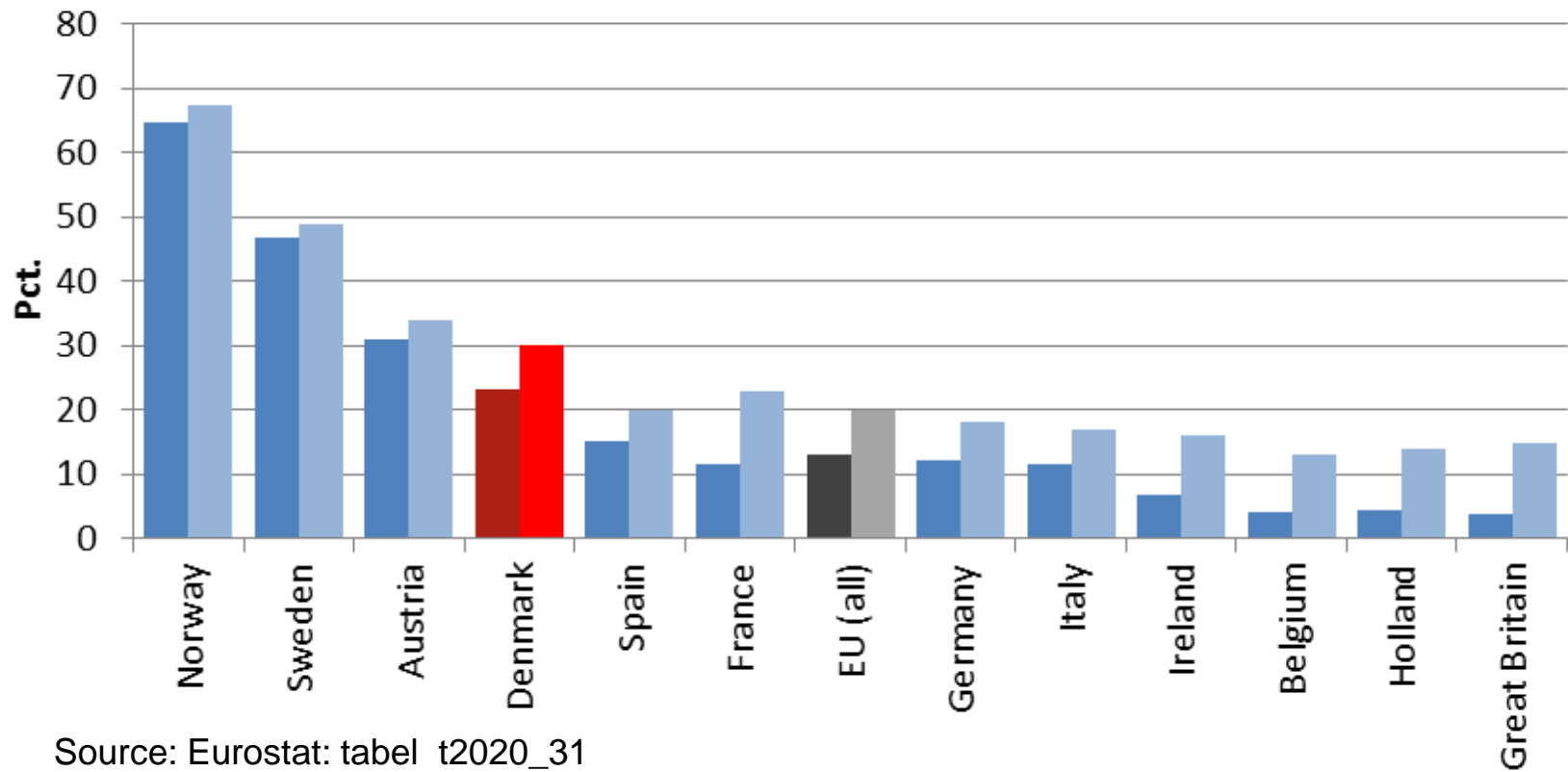
Expectations to Cities

Peter Meibom
2014

 **DANISH
ENERGY ASSOCIATION**

Green transformation of the European energy systems

Share of renewable energy (percentage) in the energy consumption
2011 (left) and 2020-target (right)



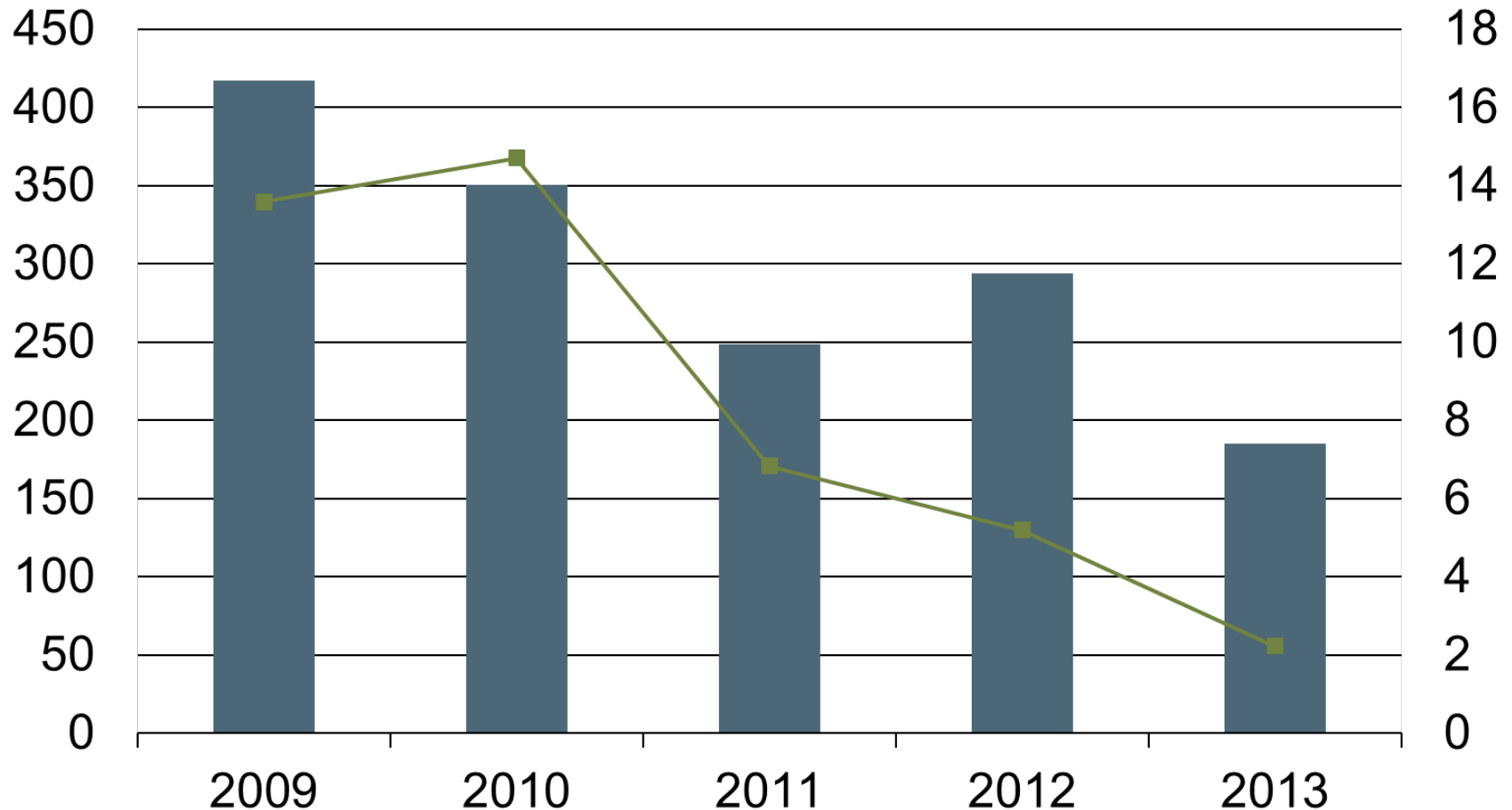
Source: Eurostat: tabel t2020_31

Value of selling flexibility not increasing

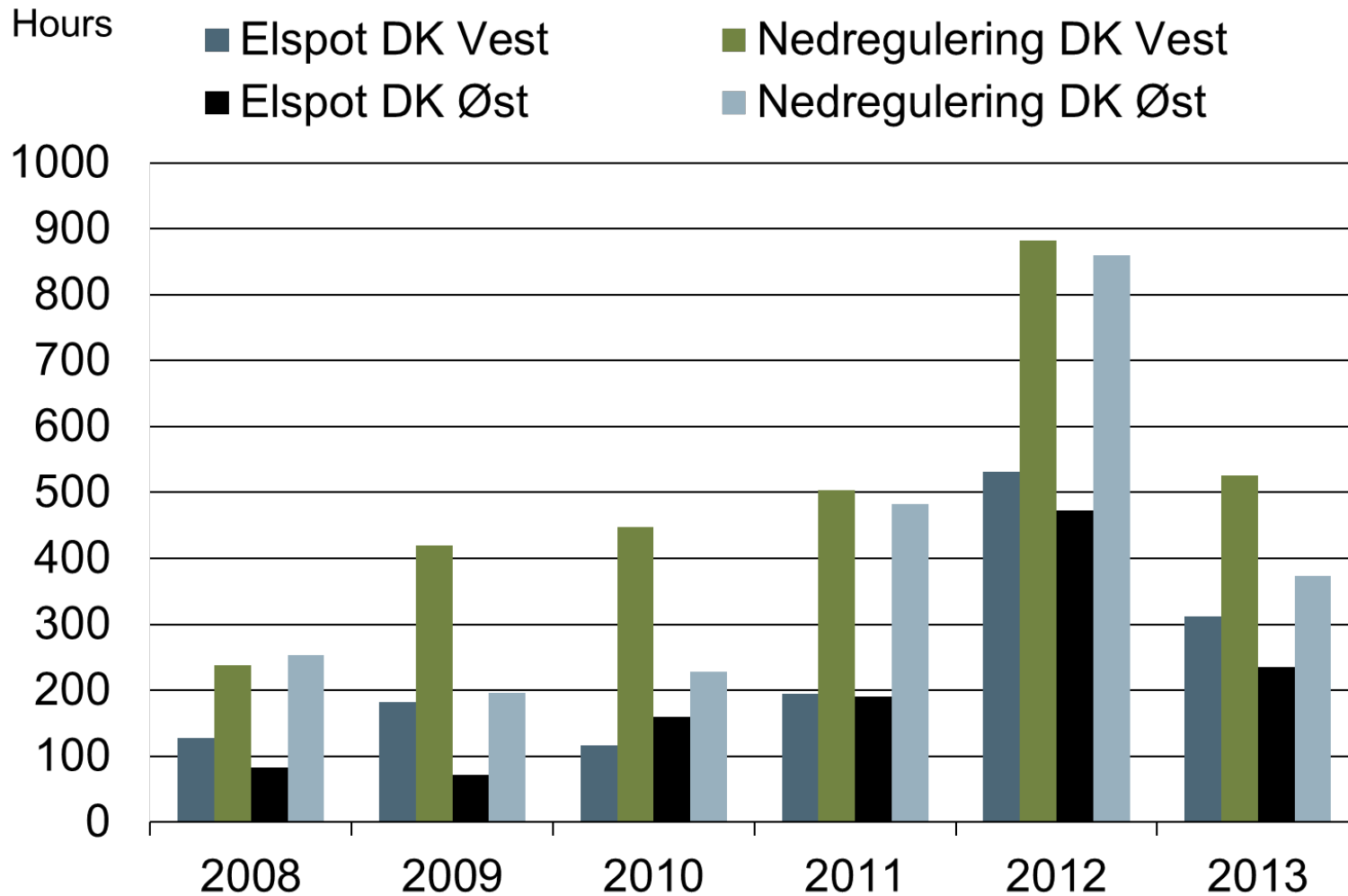
MW
per hour

Manuel opregulation reserve in DK Vest

DKK/MW
per hour



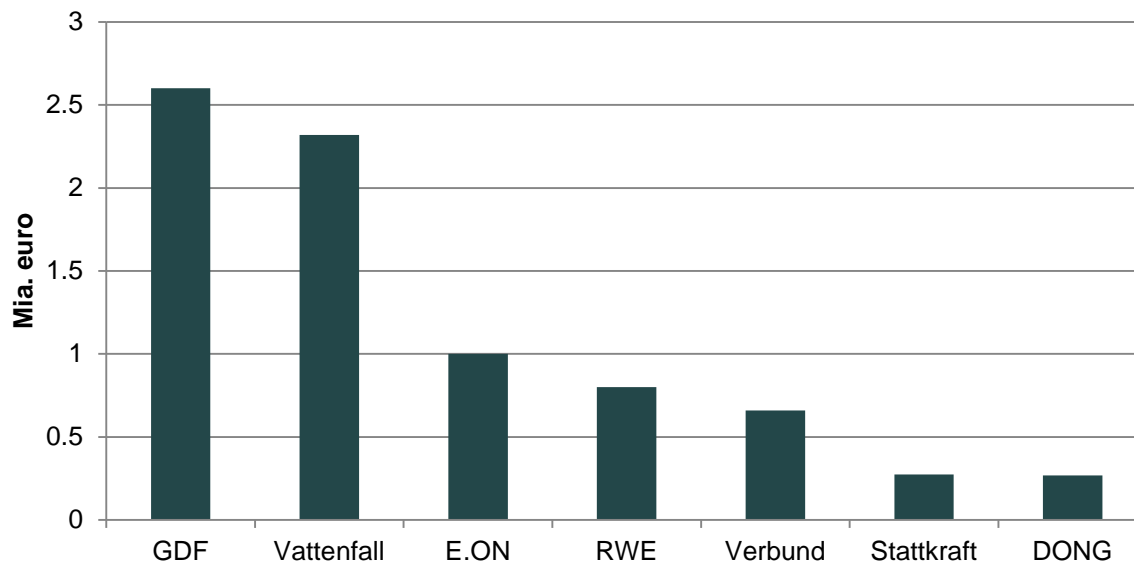
Number hours with prices below 100 DKK/MWh





Lower earnings of traditional power producers

Impairments of coal and gas power plants of selected Energy companies in 2012



Source: Announcements from the companies, Reuters and different market analyses
E.ONs relatively small impairments in 2012 might be explained by very high impairments in 2011

Stort fald i DONG-resultat

Berlingske Business, 10. august 2012

Slut på en epoke: Danmark mister 250 decentrale kraftværker

Ingeniøren, 28. januar 2013

Vattenfall i Danmark skal skrumpes til en fjerdedel

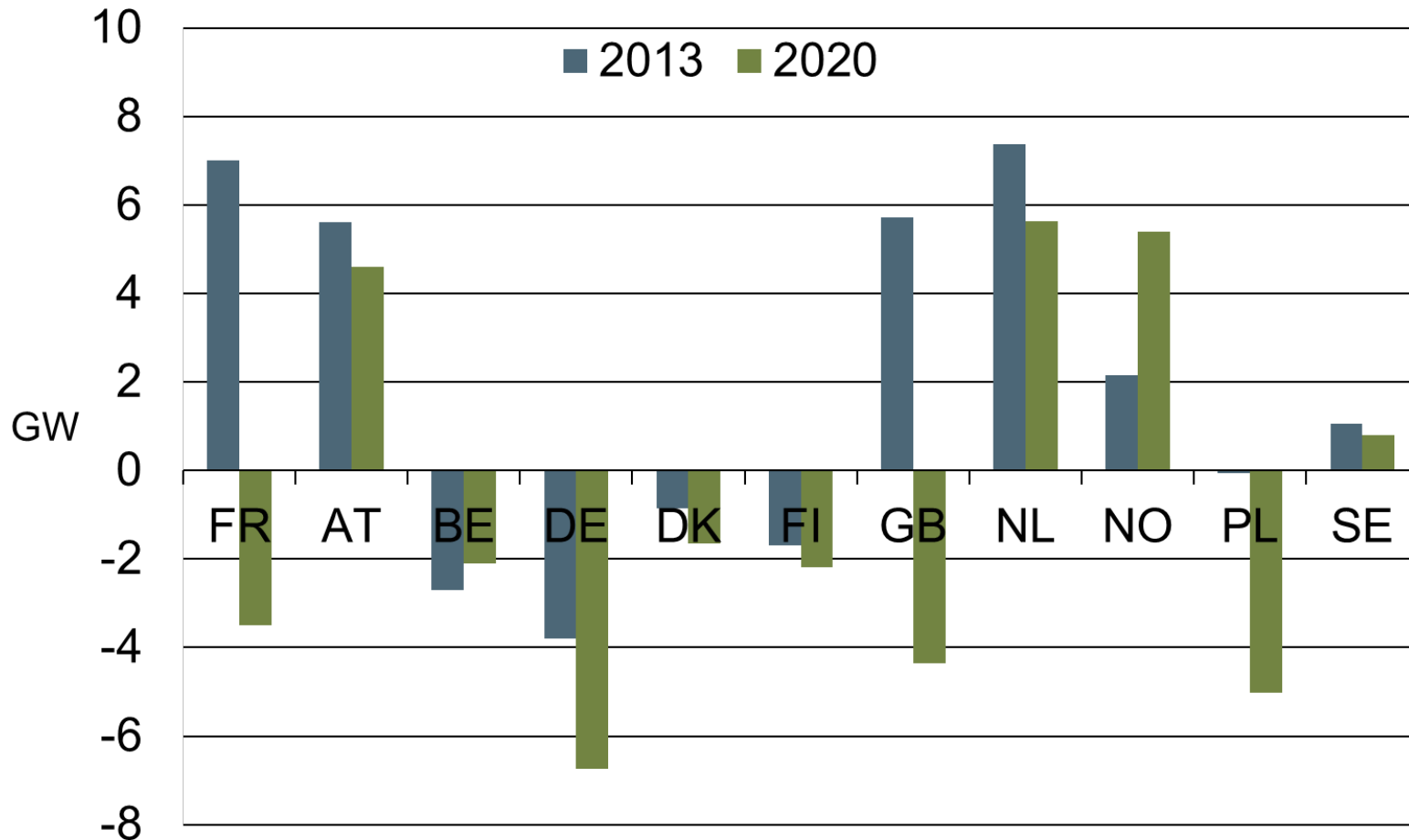
Energiwatch, 23. juli 2013

E.ON vil sende kraftværker ud af Europa

Energiwatch, 26. juli 2013

Scenarios for national capacity balances

Surplus capacity in ENTSO-E Scenario "Conservative"



Source: ENTSO-E Scenario Outlook and Adequacy Forecast 2013-2030

What do we need?

- Flexible electricity demand in peak load periods
 - Possible solutions in homes and industry?
- Smart electrification of heat supply – heat pumps in district heating and individual heating
- Smart electrification of transport
- Flexible electricity demand when distribution grids are overloaded
- Longer term: Electricity to gas

Show me the money!

- Socio-economic value
 - Develop Planning tools

- Business cases:
 - Specific examples
 - Distribution on market participants
 - Influence of framework conditions

New market designs

- Trading of flexible demand
- Starting point in existing EU Target models for electricity markets