



Norwegian Ministry
of Petroleum and Energy

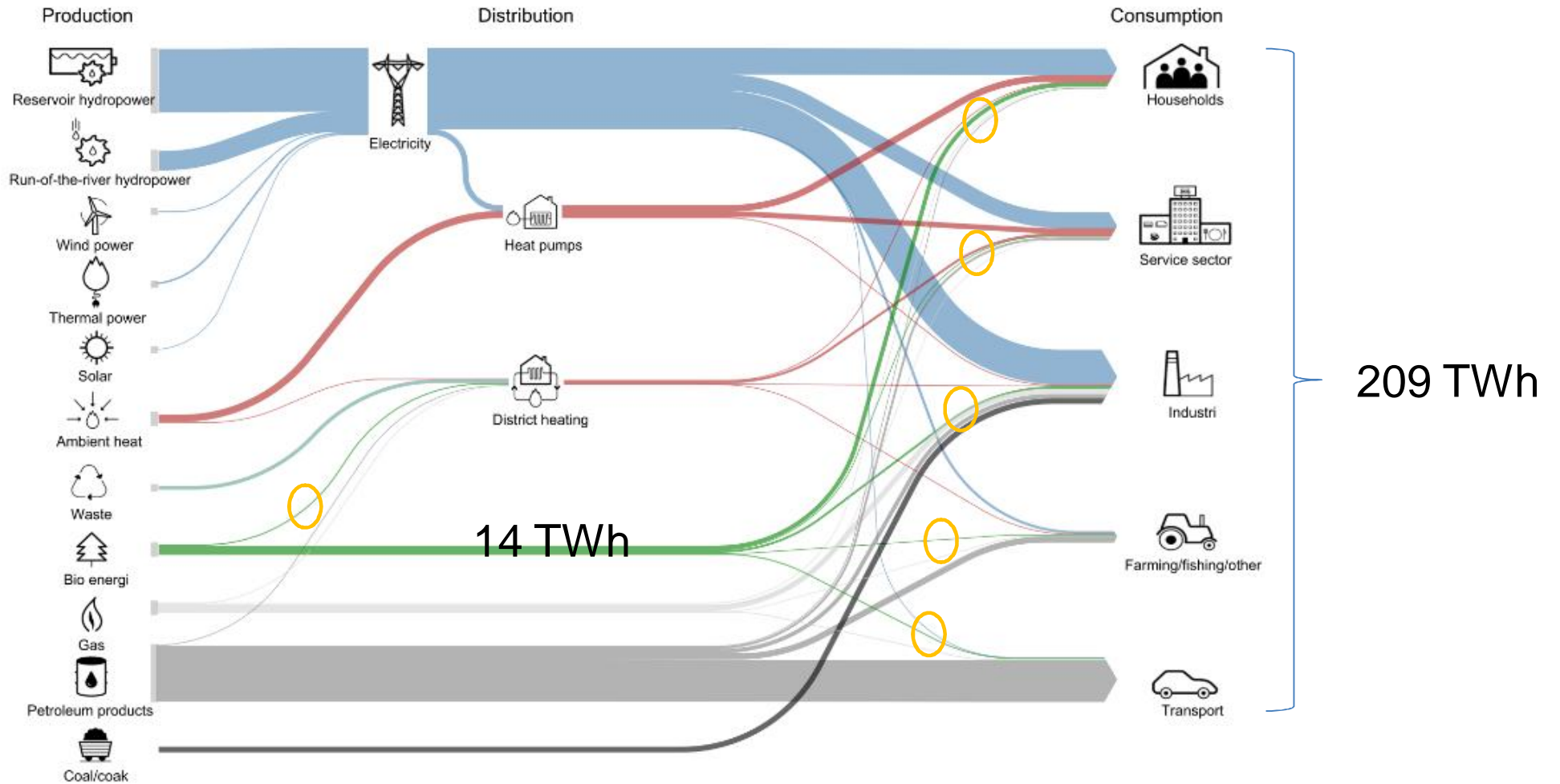
Norway – the role of bioenergy in meeting climate and energy objectives

Advisor Jon Audun Kvalbein

Brüssels October 7, 2016

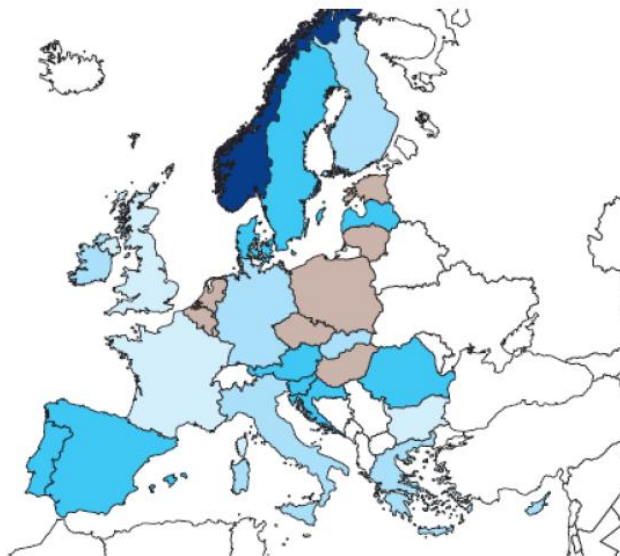


The Norwegian Energy System

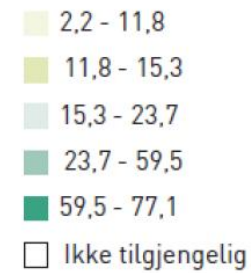
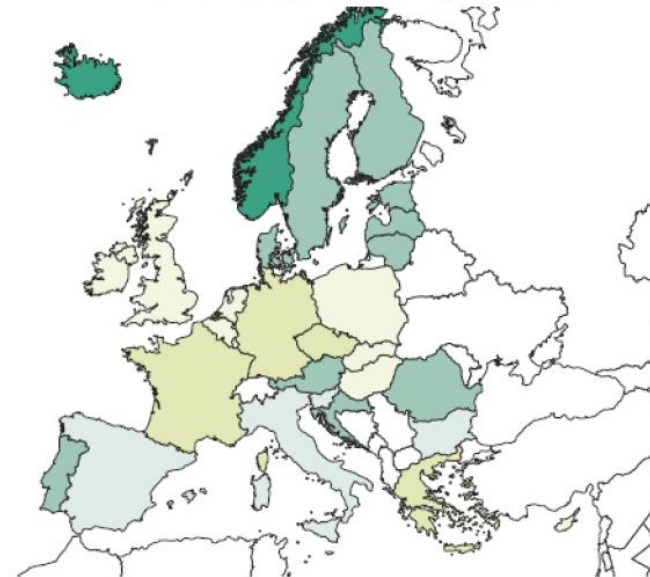


Norway compared to other European countries

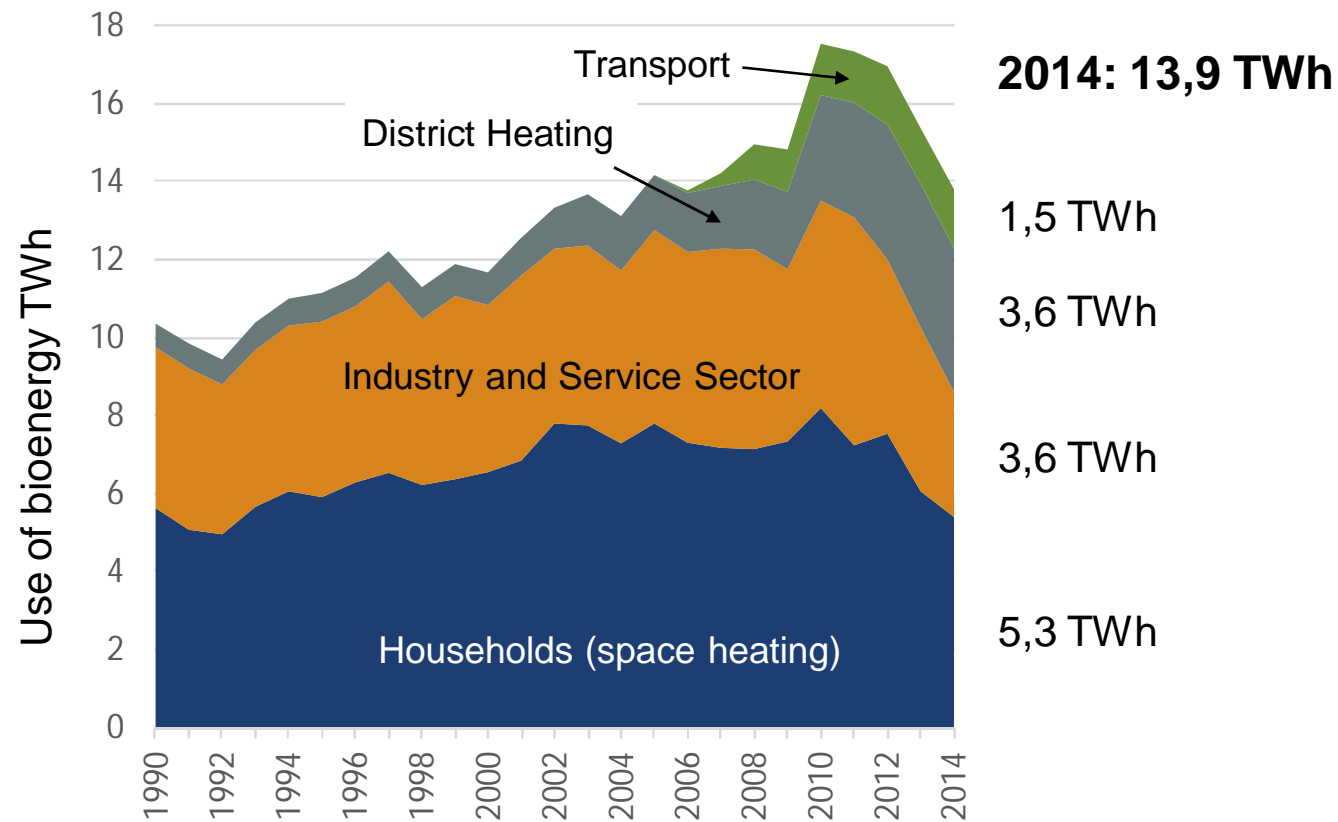
Percentage renewable power production



Percentage renewable final energy use



Use of bioenergy in Norway 1990-2014



Source: NVE



Why not more bioenergy for heating?



- Dominance of electric heaters, electric heating cables and electric water heaters
- Electricity is renewable in Norway – no climate effect by converting to bioenergy
- Price competition from electricity
- Limited central heating systems in buildings

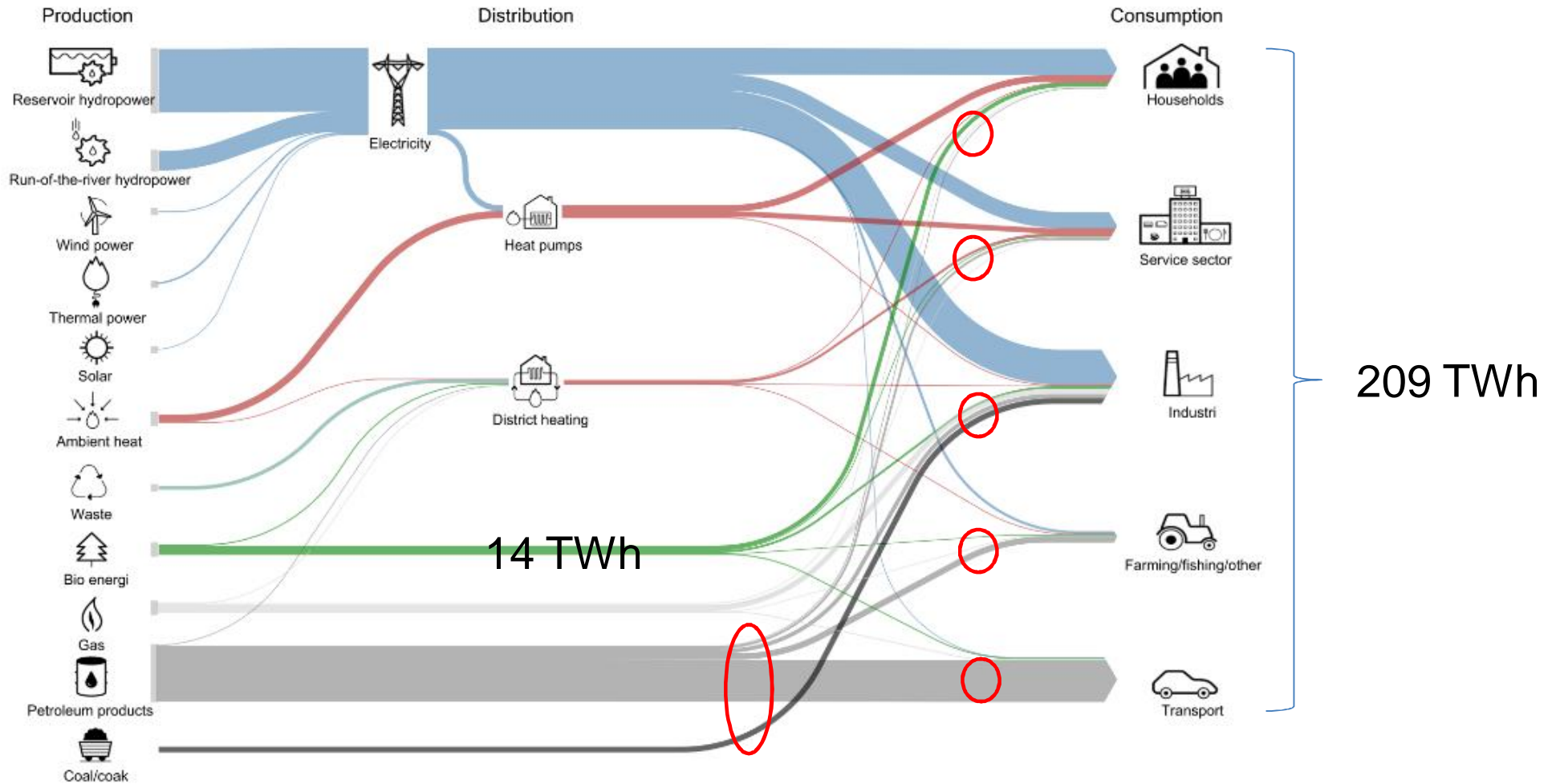


Energy and climate objectives

- Renewable (RES) target 2020: 67,5 %
- White paper on energy policy 2016: Continued efforts on transition from fossil fuels to renewable energy
 - phasing out oil heating
 - transport
 - industry
- 2030: reducing GHG emissions by at least 40 percent compared to 1990 levels.
 - Norway intends to fulfil this commitment through a collective delivery with EU and its member states,

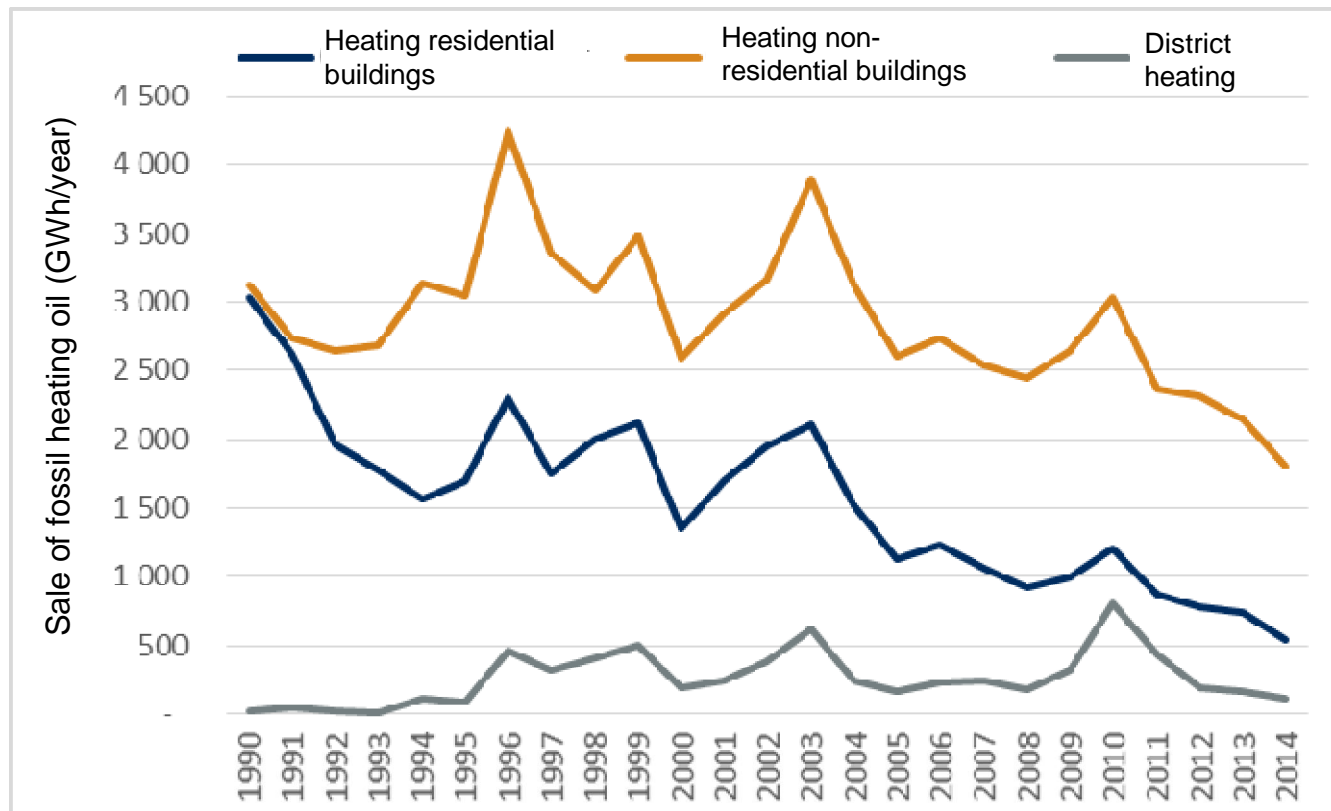


The role of bioenergy – climate and energy goals - potential



Buildings - sale of fossil heating oil, 1990-2014

Ban on fossil heating oil from 2020



Development in sale of fossil heating oil, 1990 – 2014, adjusted for temperature. Source: Statistics Norway (2016)



Enova and The Energy Fund

- Enova is a State Enterprise owned by MPE
- *Goal: “Enova promotes environmentally friendly restructuring of energy end-use and energy production, and contributes to development of energy and climate technology.”*
- Enova’s funding comes from the Energy Fund which is owned by the MPE.
- Approximately 2.2 billion NOK (€250 million) added annually
- Enova manages the Energy Fund based on a 4-year agreement with the MPE.



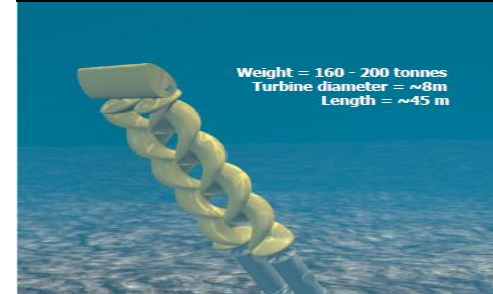
Enova and The Energy Fund

- The Agreement stipulates an overall energy target expressed in TWh that Enova must meet within the expiry of the agreement period.
 - Combined energy and climate results of minimum 7 TWh by 2016
 - Energy and climate technology, shall contribute to a reduction in GHG emissions and support the development of energy diversification in the long run.



Enovas Programme Areas

- Industry
- Buildings
- Renewable heat production
- Demonstration of new energy and climate technologies



Enovas Programme Areas

- Transportation
- Energy measures in private households
- Advisory and information services



Bioenergy and sustainability

