

Country report of Norway 2012

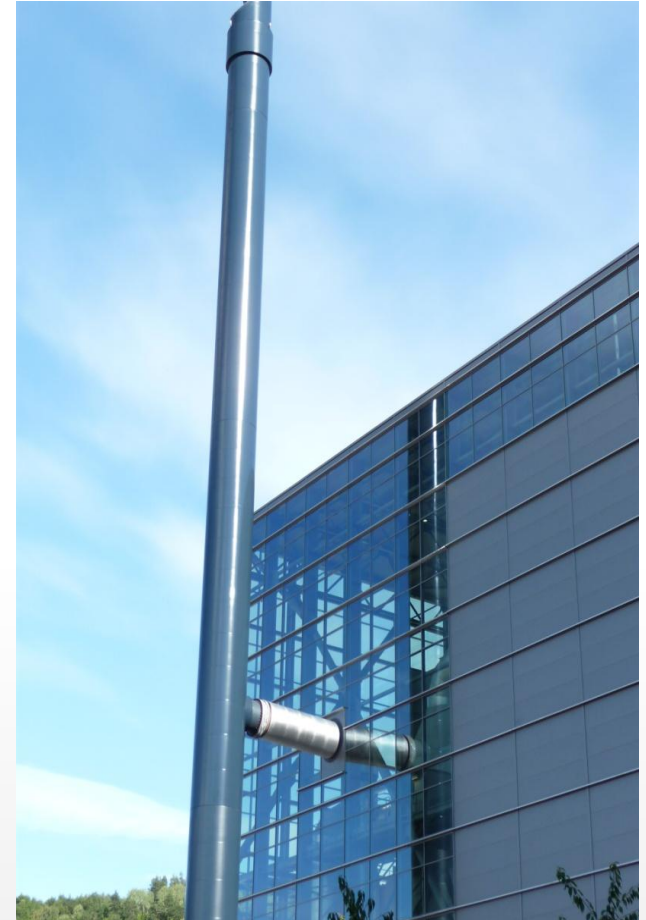
Original presentation from Roy Ulvang
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SINTEF Energy Research, Norway



Content

- General information about WtE in Norway
- Overview of incineration plants in Norway
- Status of incineration capacity in Norway
- Status of treated amounts in Norway



National waste management plan

- Ministry of Environment of Norway will work on a new national waste management plan
- Direction for wastes related industries in Norway
- Role of Incineration plant in future for waste management



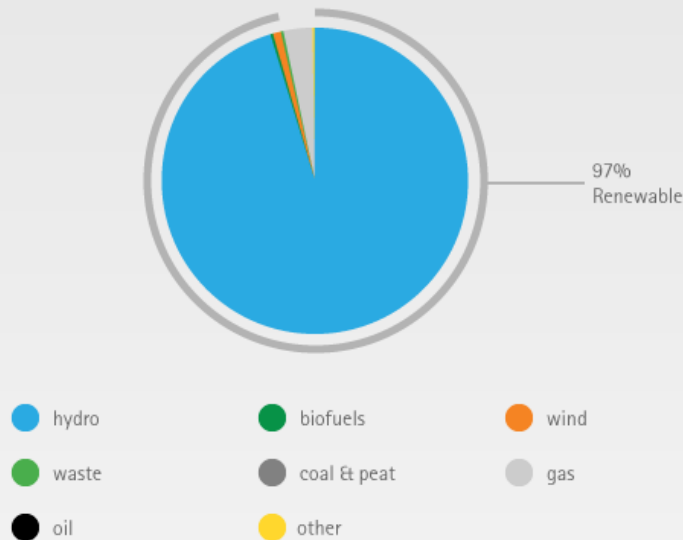
A new light from WtE to public concern

- Trouble maker or part of solution
- Reduction of pollutants vs source of emissions
- Complementary to material recycling



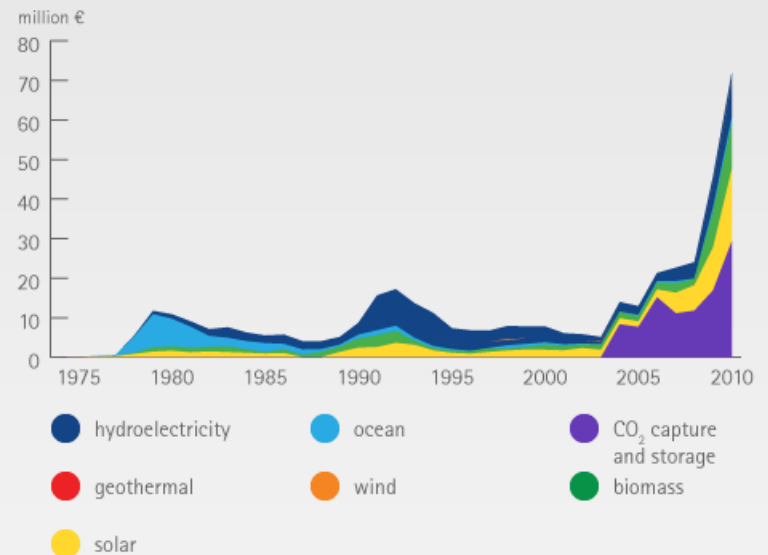
A new light from WtE to public concern

Norwegian electricity production 2011



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Norwegian low-carbon RD&D budgets



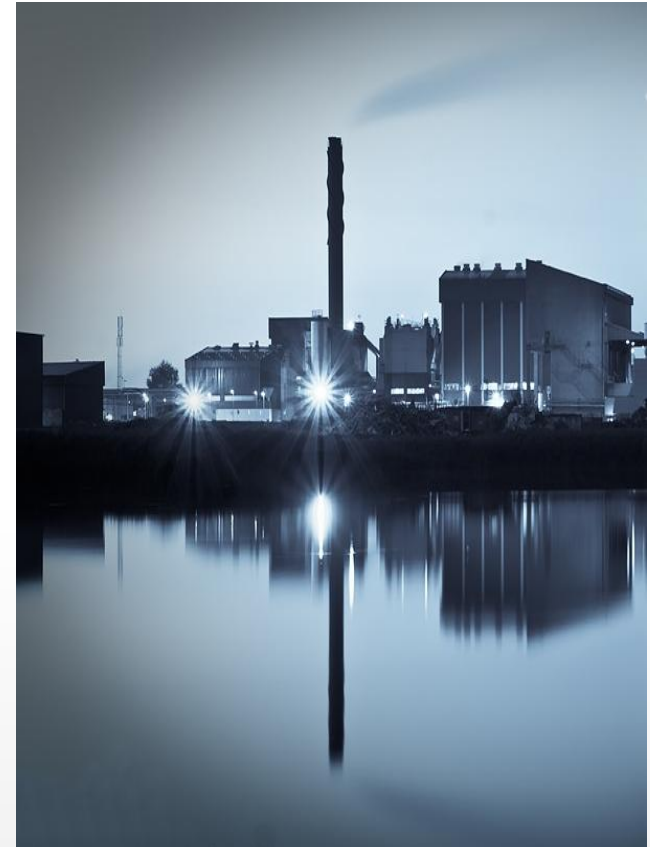
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<http://www.nordicenergy.org/thenordicway/country/norway/>



Waste Incineration- part of solution

- Waste remaining after material recycling must be treated
- Management and energy recovery from wastes
- Material recycling after incineration (concentrated in the ash)
- Environment protection



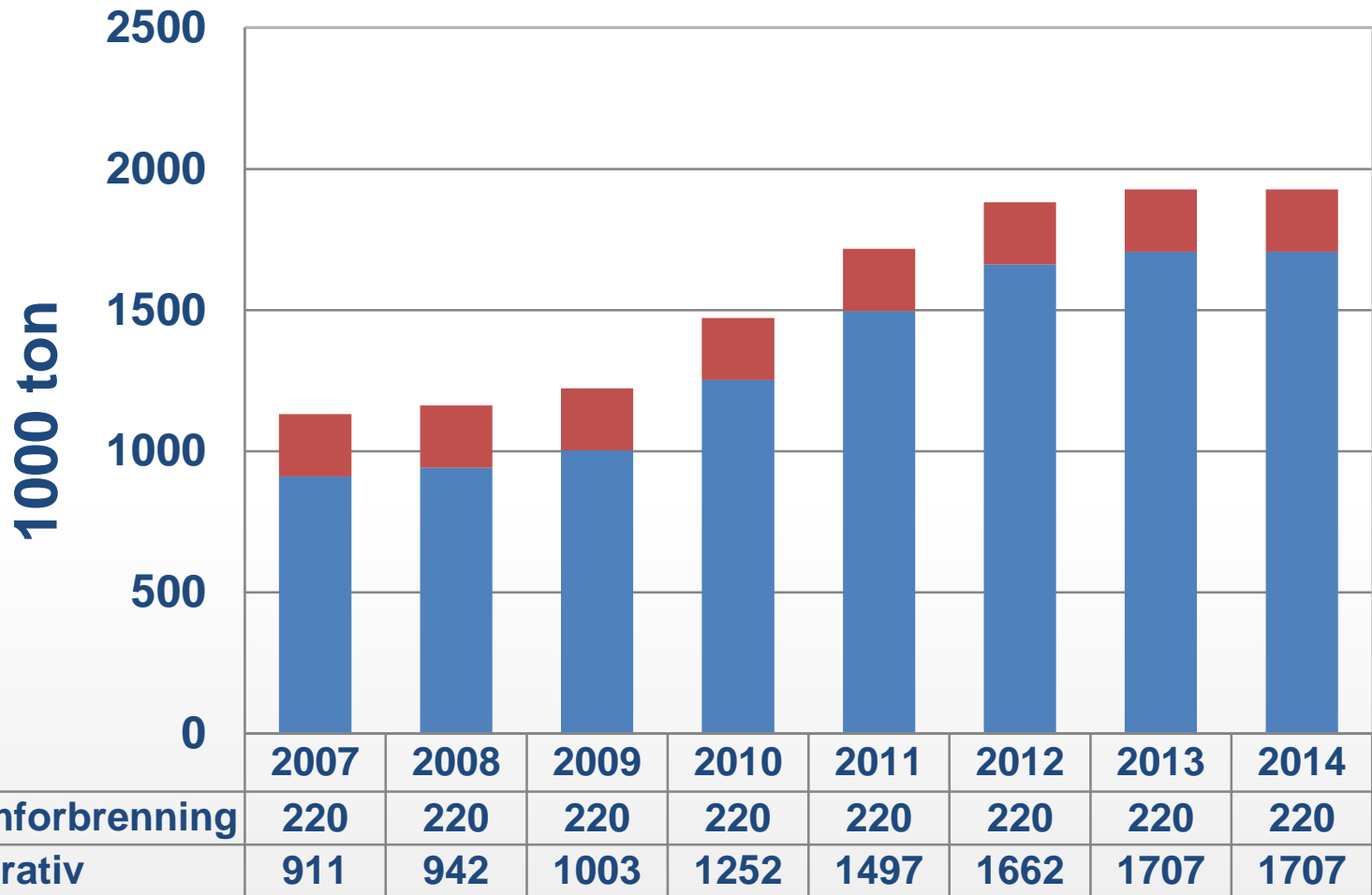
Waste incineration plants in Norway (2012)



- 15 Waste incineration plants (MSW)
- 3 Co-incineration plants (MSW + other wastes)
- 3 Shutdown
- Plans in coming years



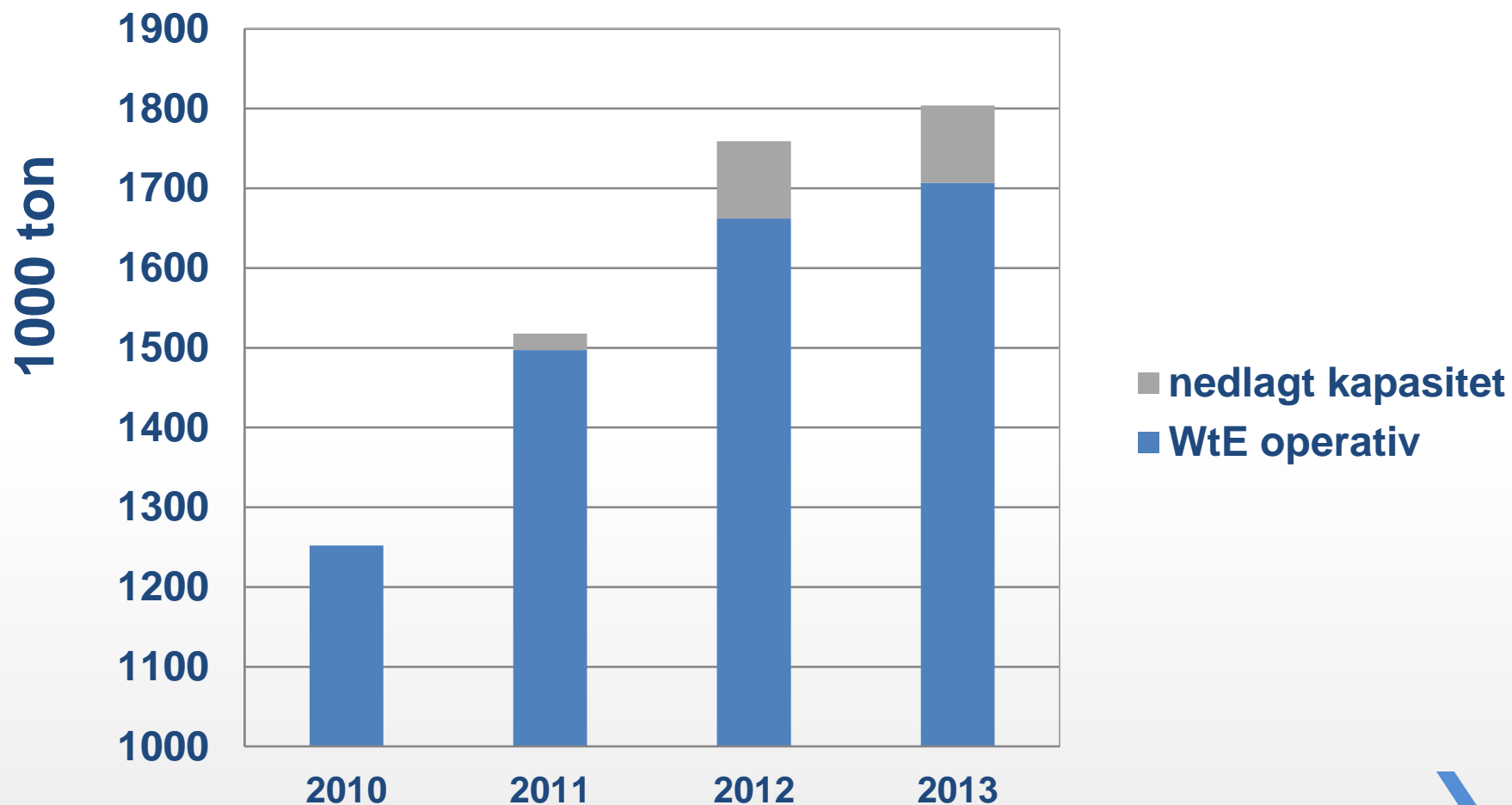
Developing of incineration capacity of waste in Norway



Samforbrenning-co-incineration
Operativ- operative



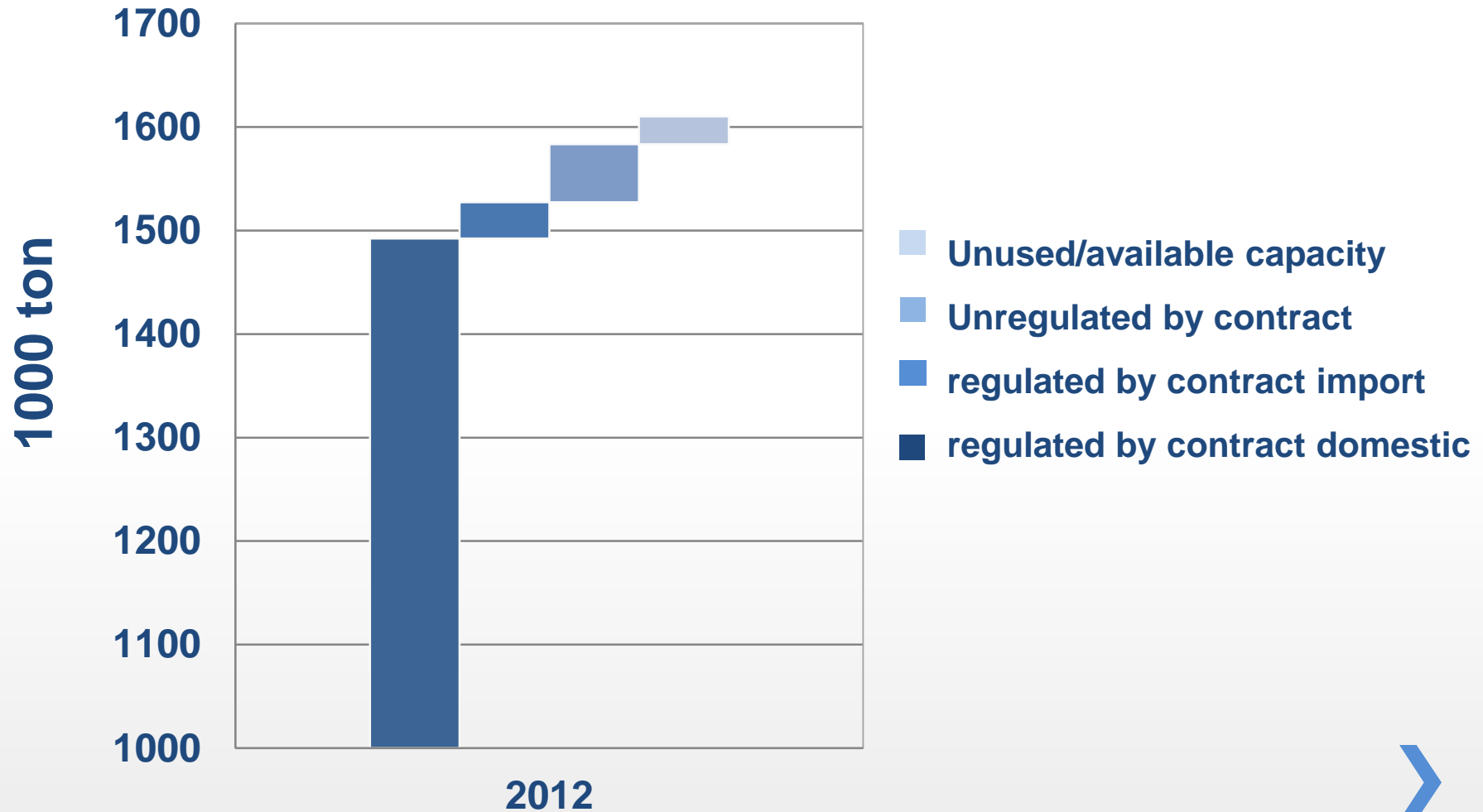
Available capacity of waste incinerators in Norway



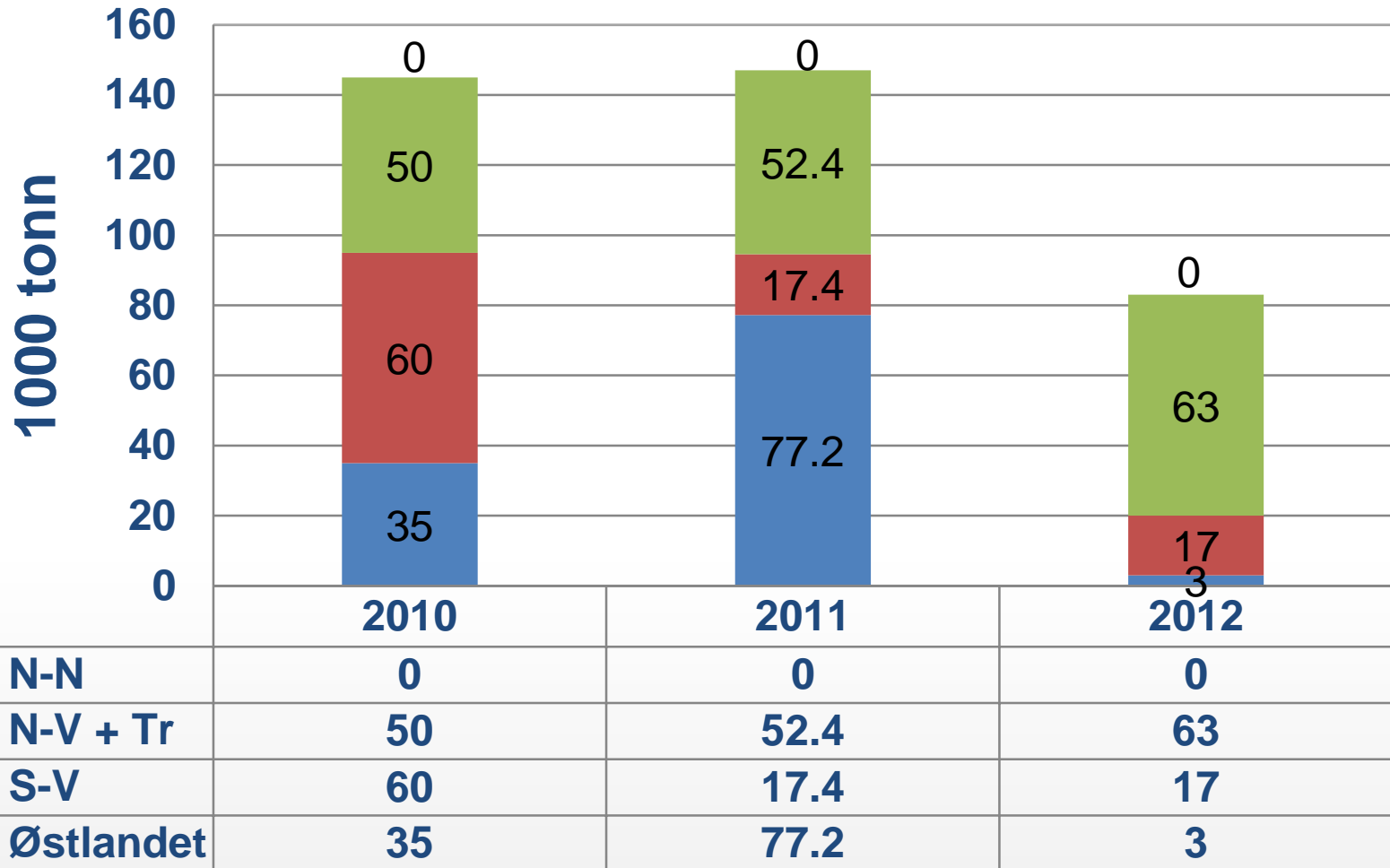
Nedlagt kapasitet-preserved capacity
WtE operativ: WtE operative



Waste incineration capacity and operative availability



Available Capacity by Region



- N-N: Northern Norway
- N-V+ Tr: North west Norway+Trøndelag
- S-V: South West Norway
- Østlandet: East Norway

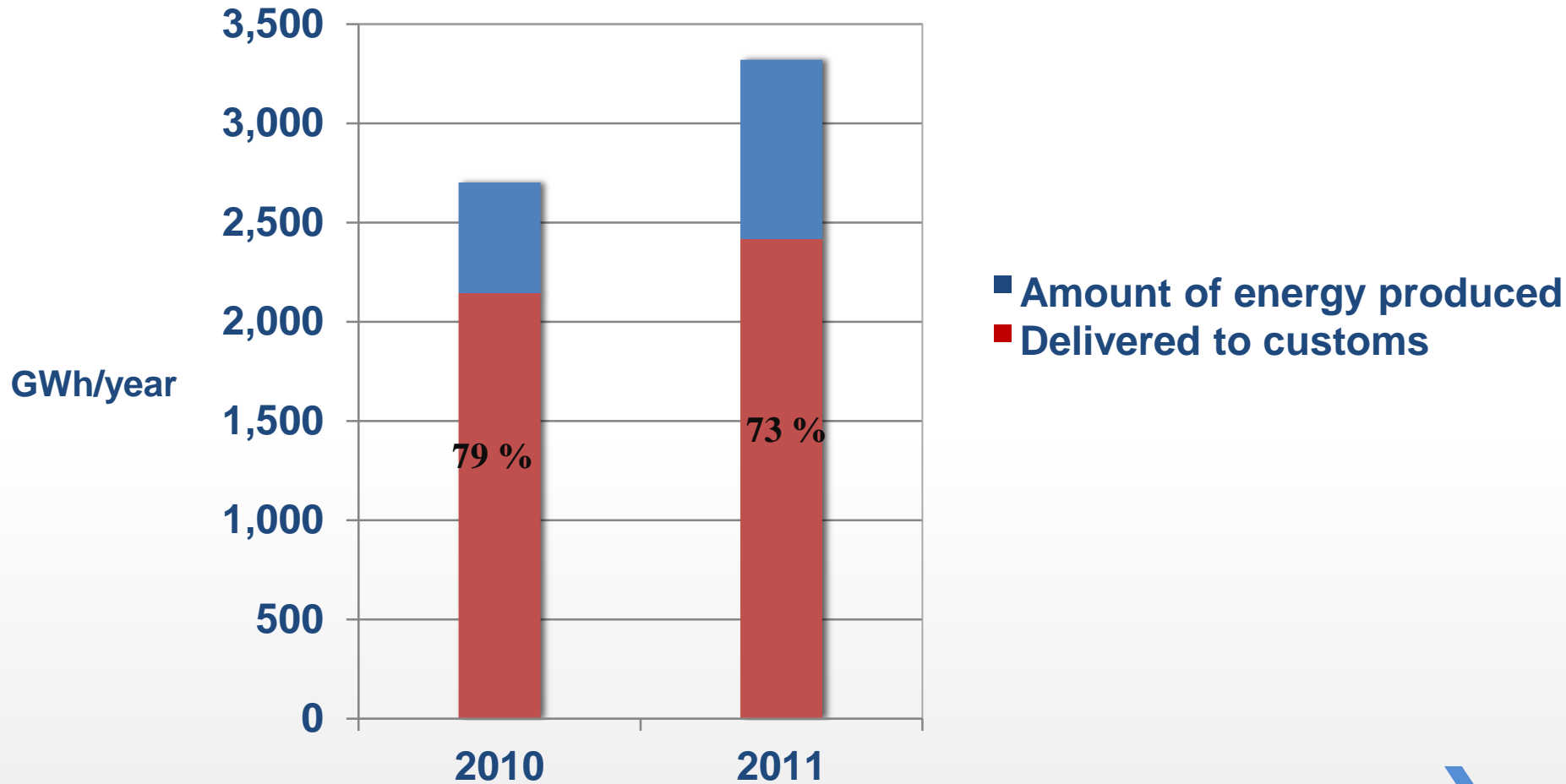


Utilized capacity in 2011

- » Total capacity energy utilization 2011:
 - 1,477,697 tons
- » Treated waste 2011:
 - 1,345,321 tons
- » 91% of the incineration capacity is utilized.
 - 132,000 tons availability

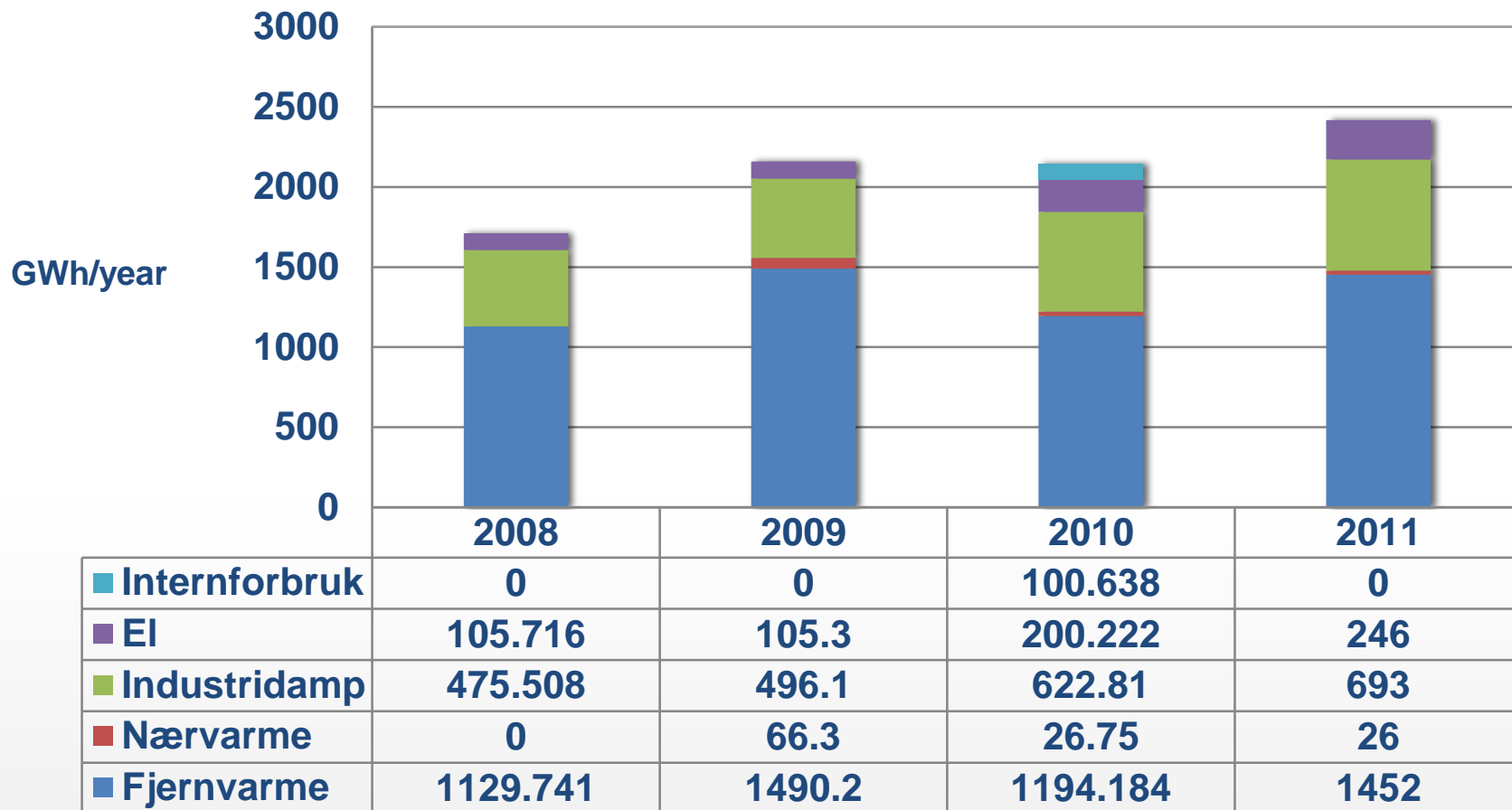


Energy Utilization



Energy Production 2008-2011

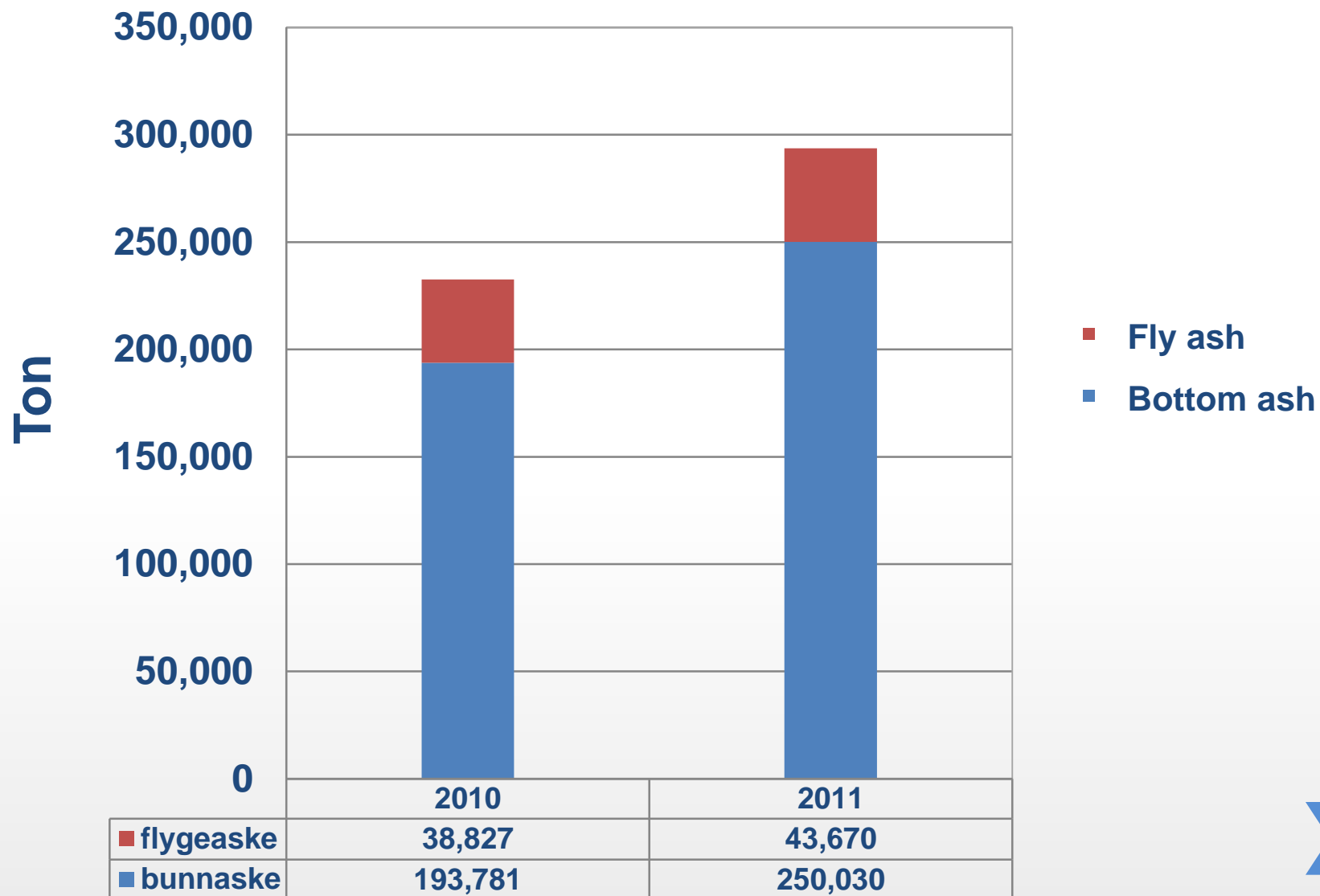
Energy delivery to customers



- Internforbruk: consumption for fuel drying and plant internal use
- EI: electricity
- Industridamp: industrial steam
- Nærvarme: local heating
- Fjernvarme: district heating



Final products 2010 and 2011





Thank you for your attention !