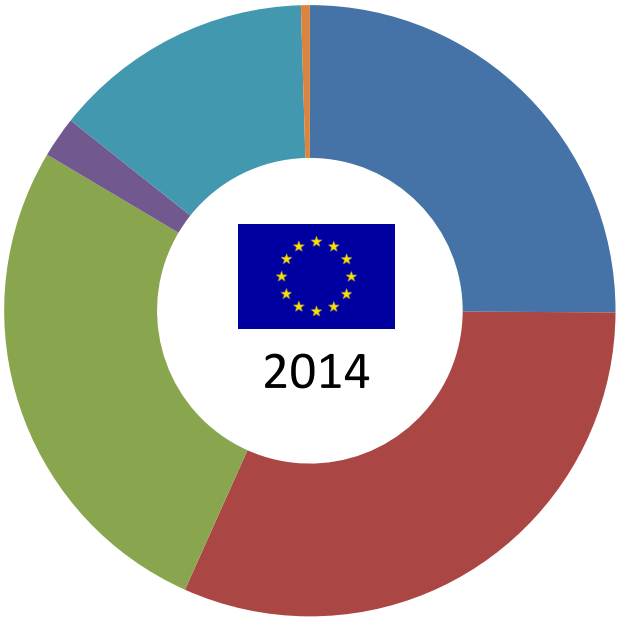
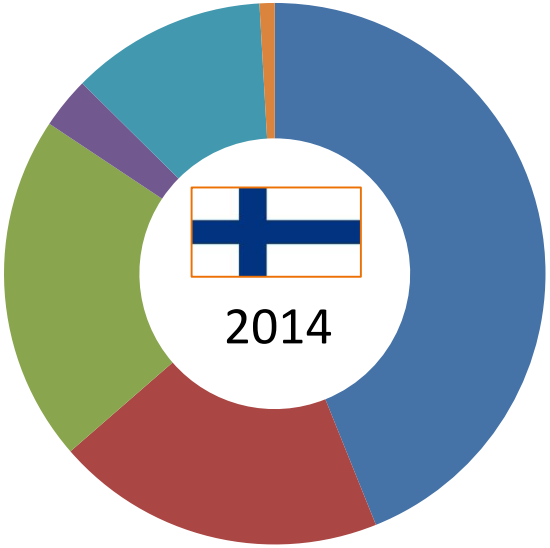
WORLD ENERGY COUNCIL | FINLAND

Finnish Energy Policy - WEC Estonia Energy Academy

End use of energy in EU and in Finland



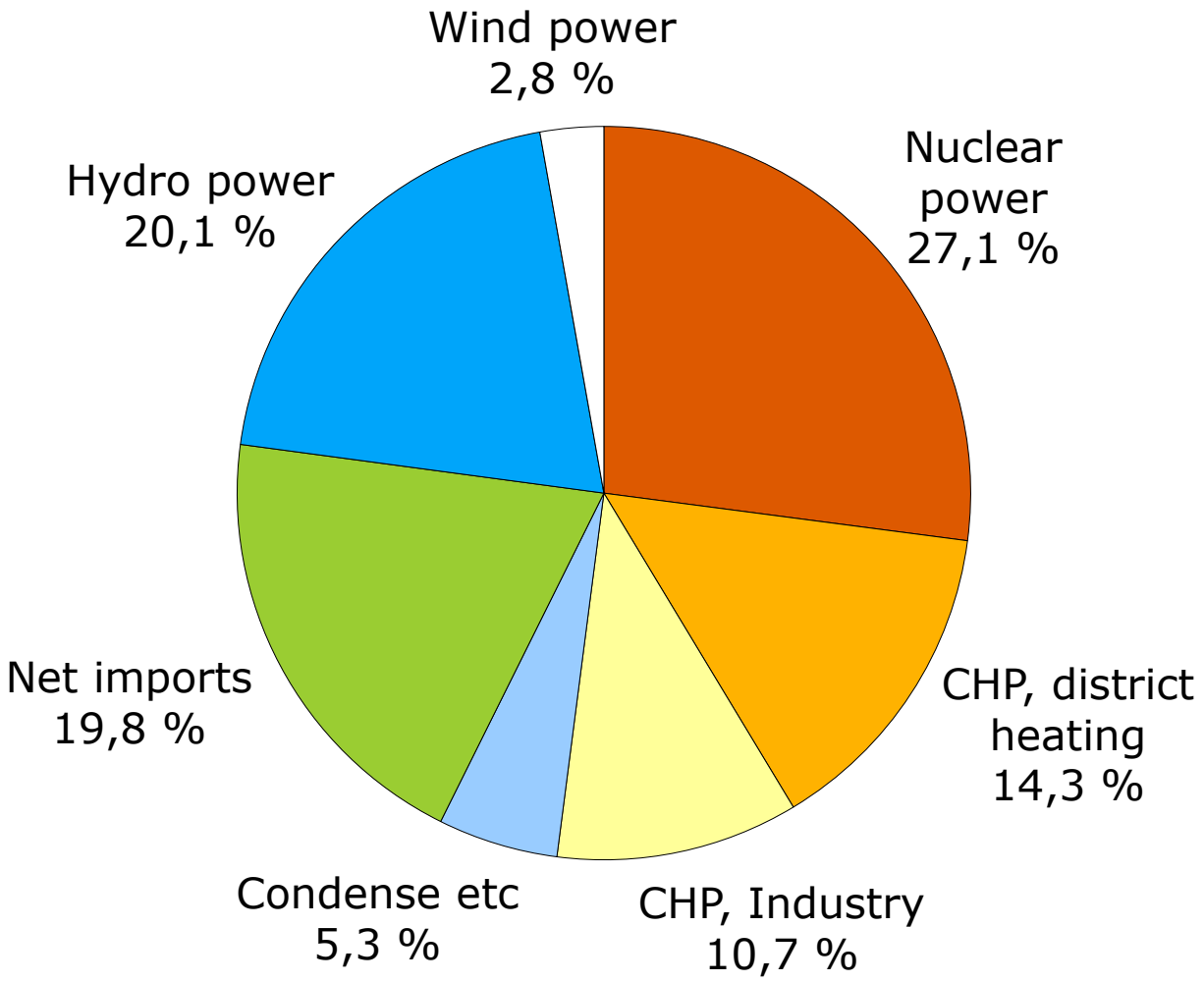
Industry
Traffic
Households
Agriculture and forestry
Services



Total: 18 677 TWh
Per Capita: 37 354 kWh

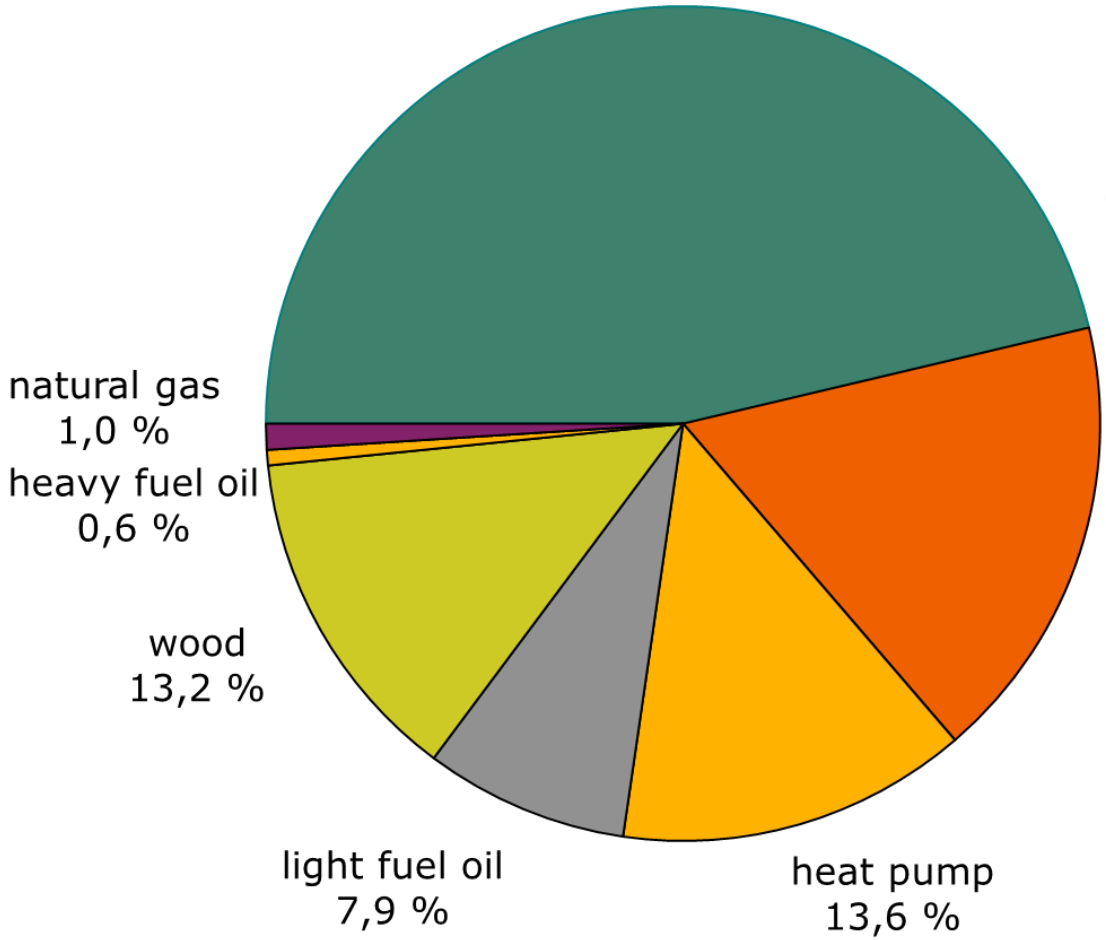
Total: ~ 300 TWh
Per capita: 55 000 kWh

Net Supplies of Electricity 2015 (82.5 TWh)



Market share of space heating

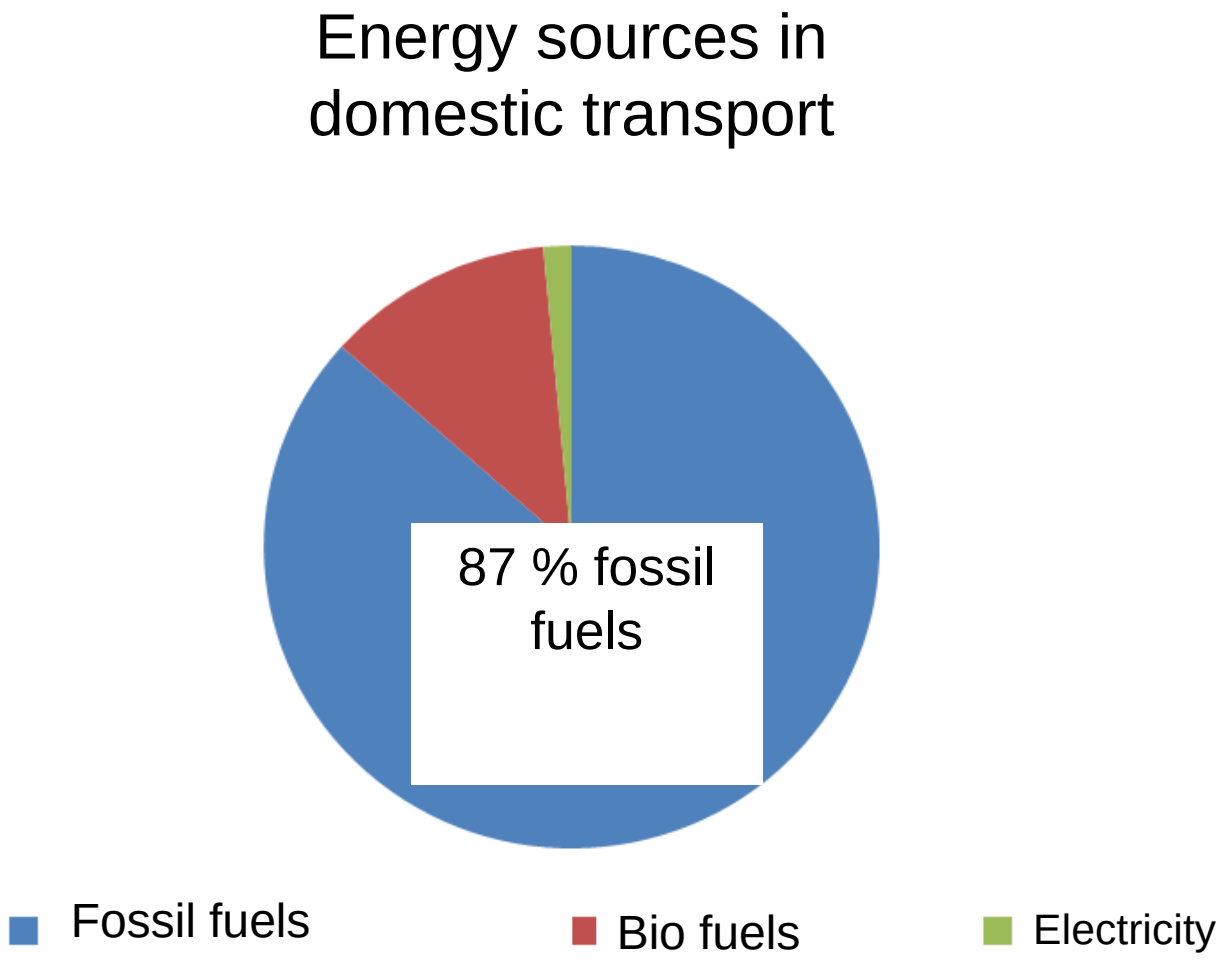
Residential, commercial and public buildings



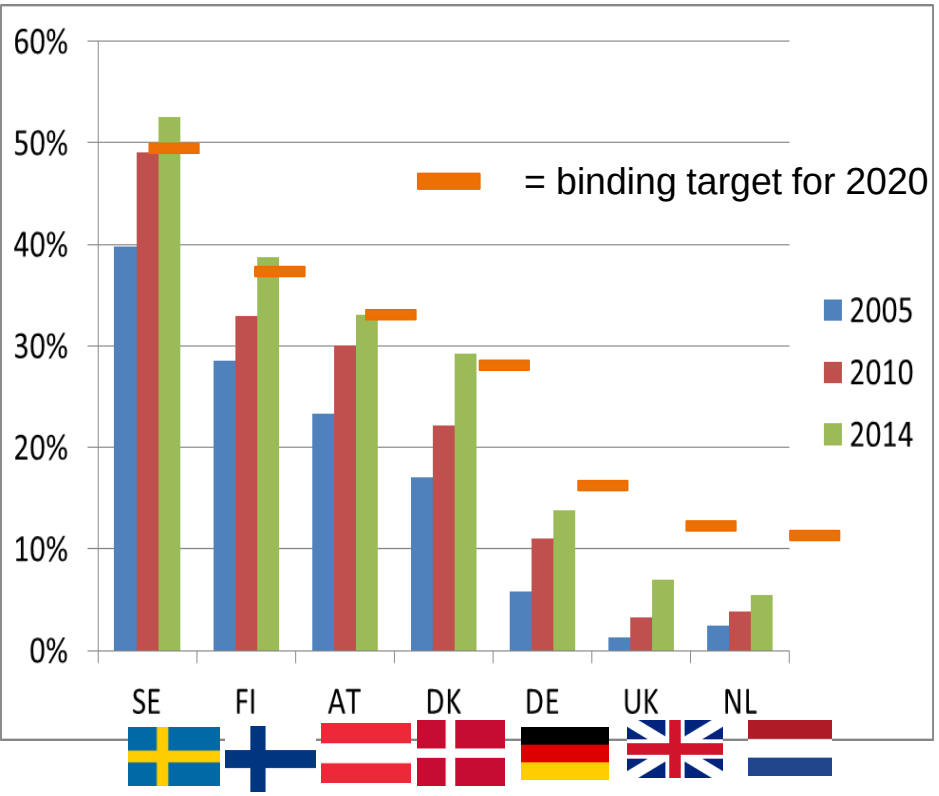
Source: Statistics Finland
Net effective heating energy, 2014

Heat pump: includes the electricity consumption of heat pumps
Electricity: includes the electricity consumption of heat distribution equipment and electric sauna stoves
Wood: includes the wood used by sauna stoves

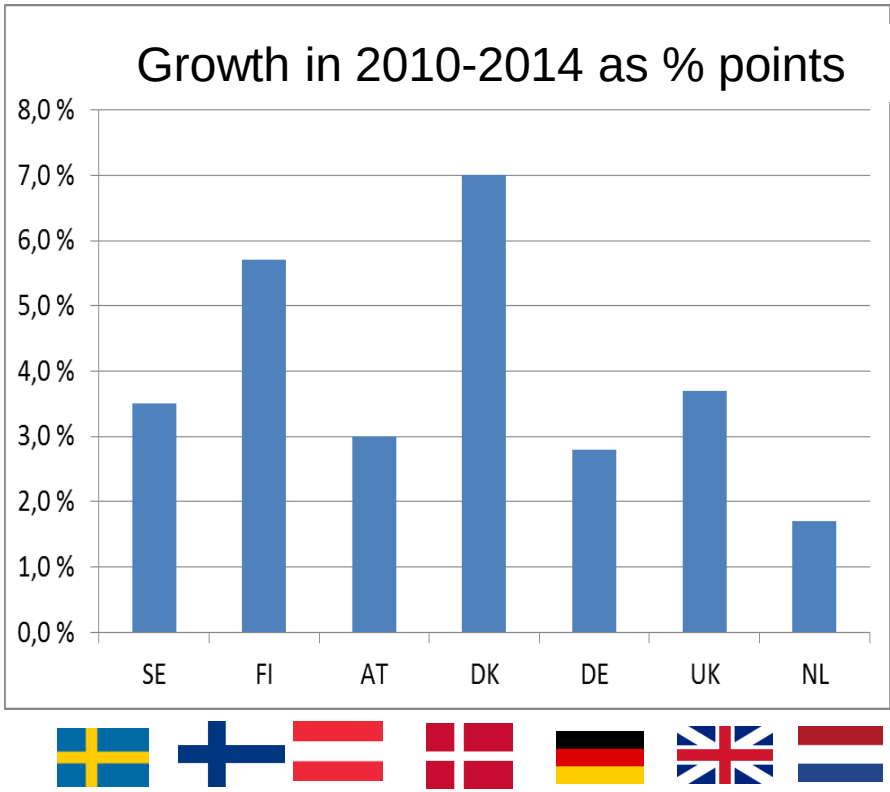
Energy sources of traffic in Finland



Share renewables and growth of Renewable energy



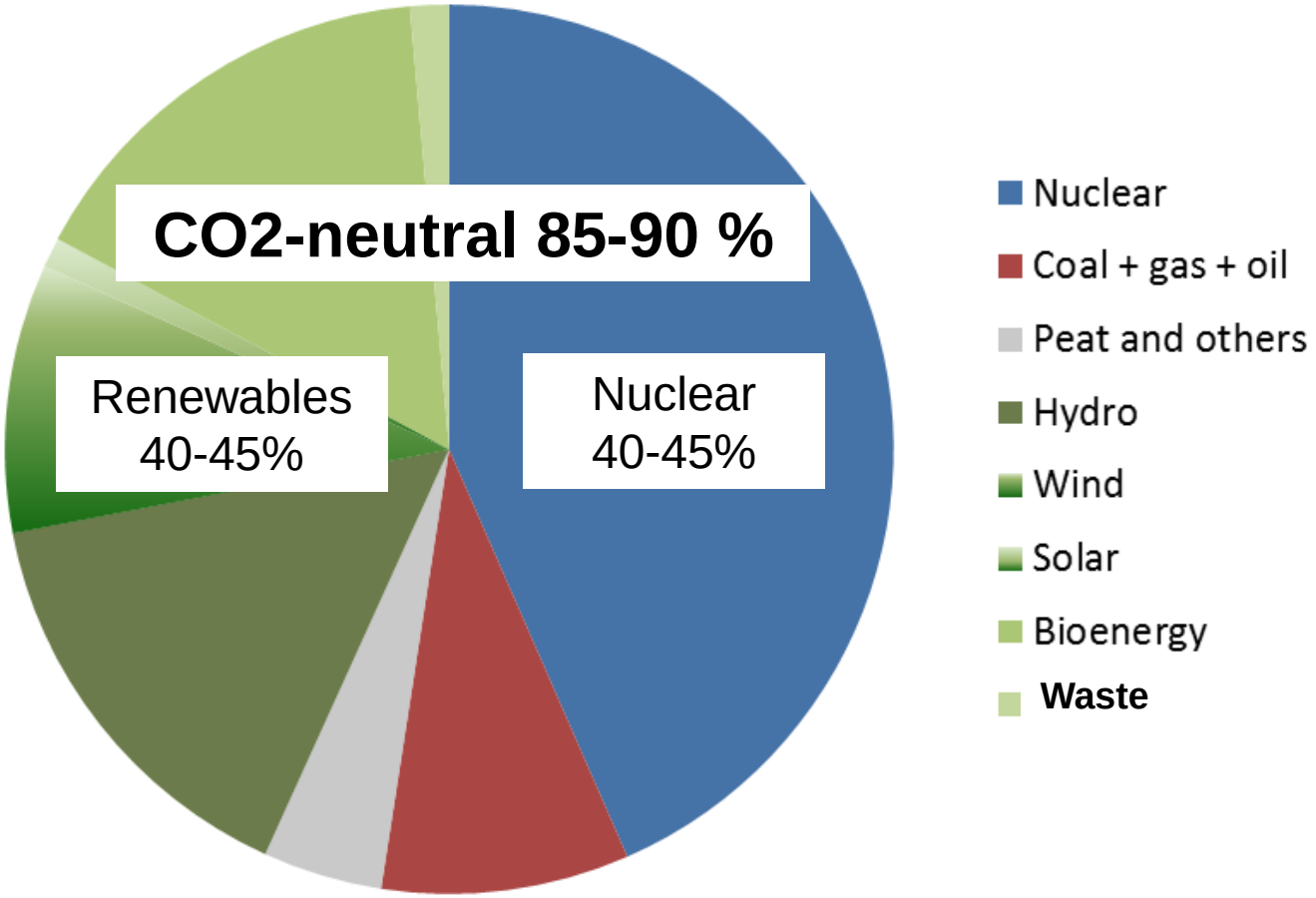
Share of renewables



Increase of renewables

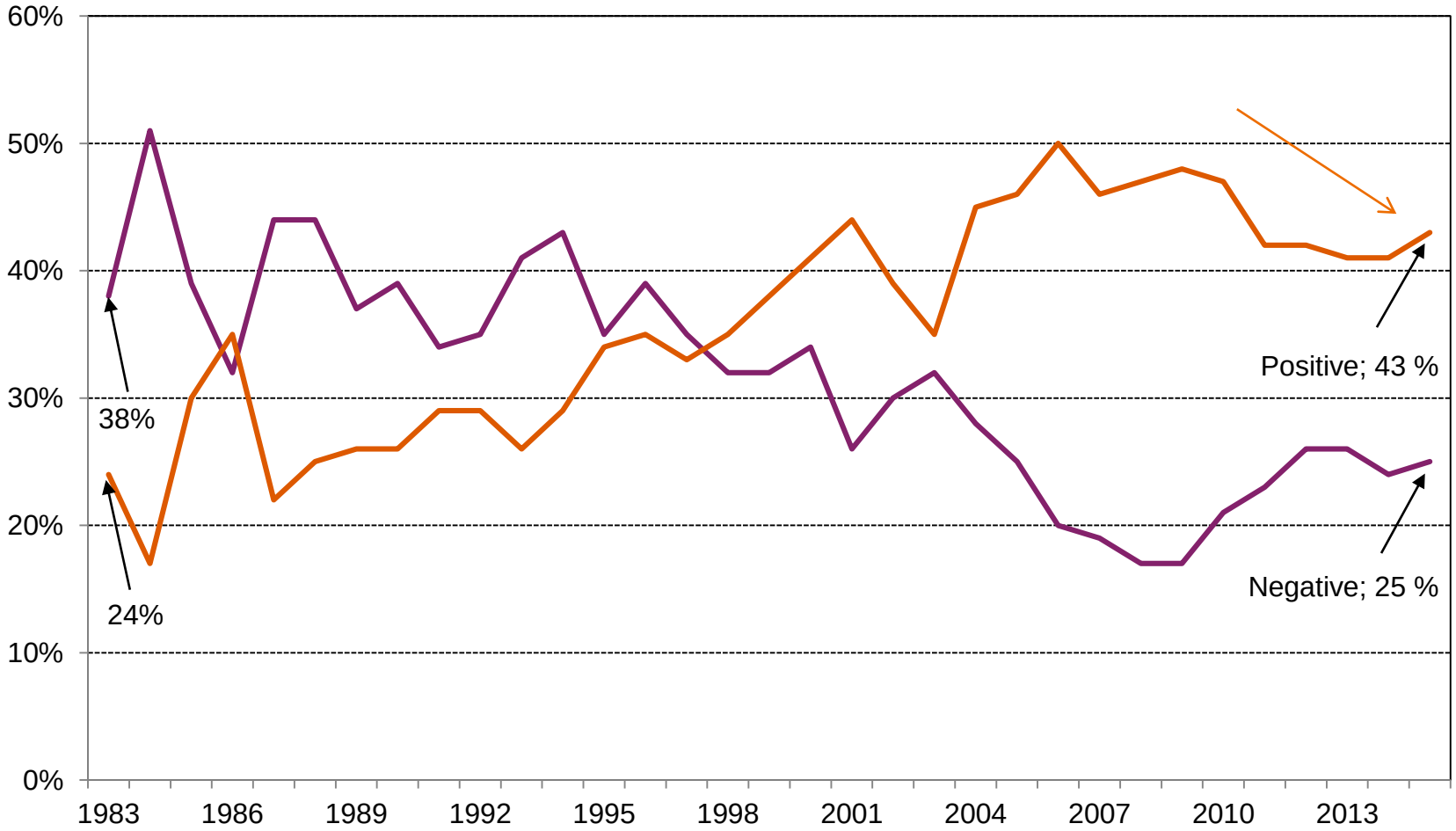
Source: Eurostat (2016)

Expected power generation mix in Finland in 2030



Why nuclear?

Development of the acceptance of nuclear power 1983 - 2015



TNS Gallup

Why nuclear

- Industrial policy – TVO and Fennovoima (partly) owned by industry – paper, pulp, metals, chemical…
  - Predictable cost of electricity
  - Wide onwership structure and widely distributed risk – local utilities involved (shares as small as 1 MW!)
  - High per capita energy use is NOt seen as a problem if it is industrial use

- Lack of domestic energy resources

- Credible climate policy
- Credible plans for long term disposal of nuclear waste

- Nuclear energy in Finland under the current government – ”The rich but socially awkward uncle who pays for it all but no one ever talks about..”

Prime minister Sipilä´s governmental programme on energy

- Commitment to EU climate and energy objectives
  - 2020 targets to be fulfilled prematurely (renewables share 38 % of end-use of energy)
- Renewable energy increased to 50 % of final energy until 2030
- Phase-out of coal in energy generation by 2030
- At least 50 % reduction of use of fossil oil by 2030
- 30 % share for biofuels in transportation by 2030
- Support to new technology and clean tech solutions