

How to reach the new target for renewables

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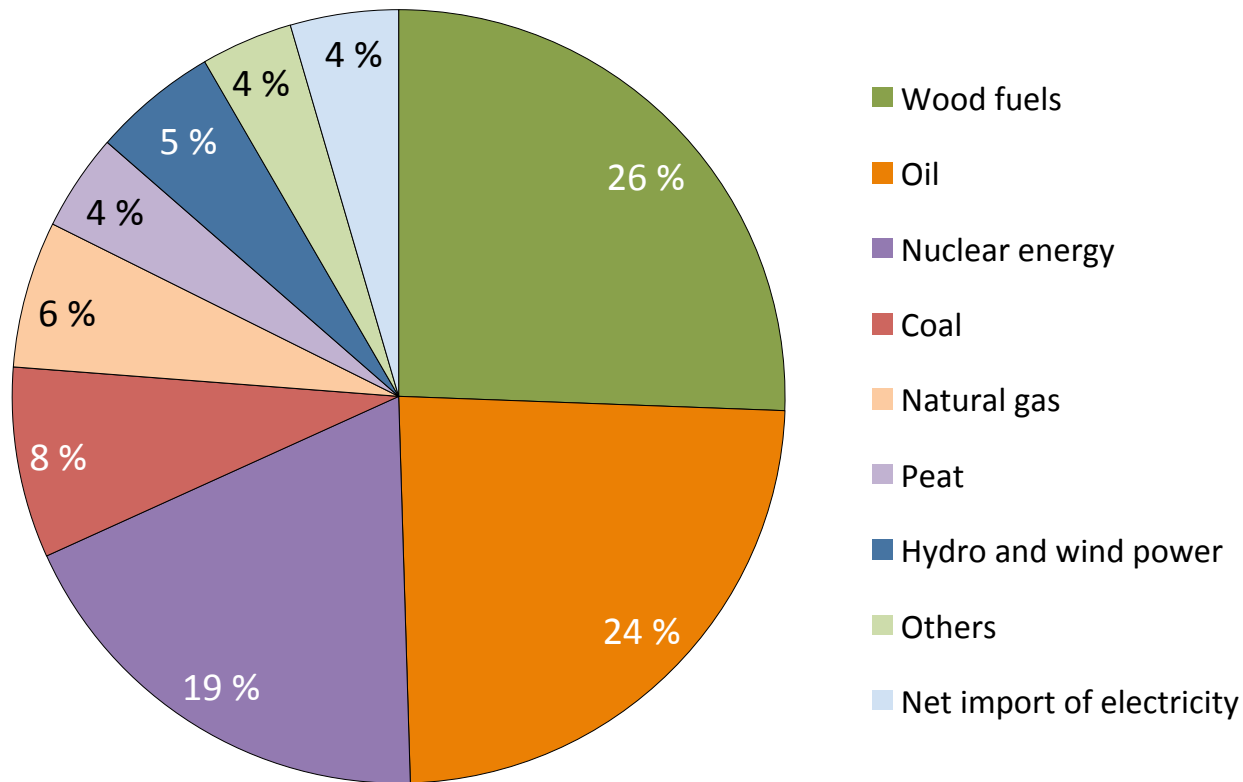
Topics

- **The starting point in Finland**
- **EU targets**
- **Finnish Government's goals**
- **National Energy and Climate Strategy 2030 under preparation**
- **Instruments for increasing renewables**

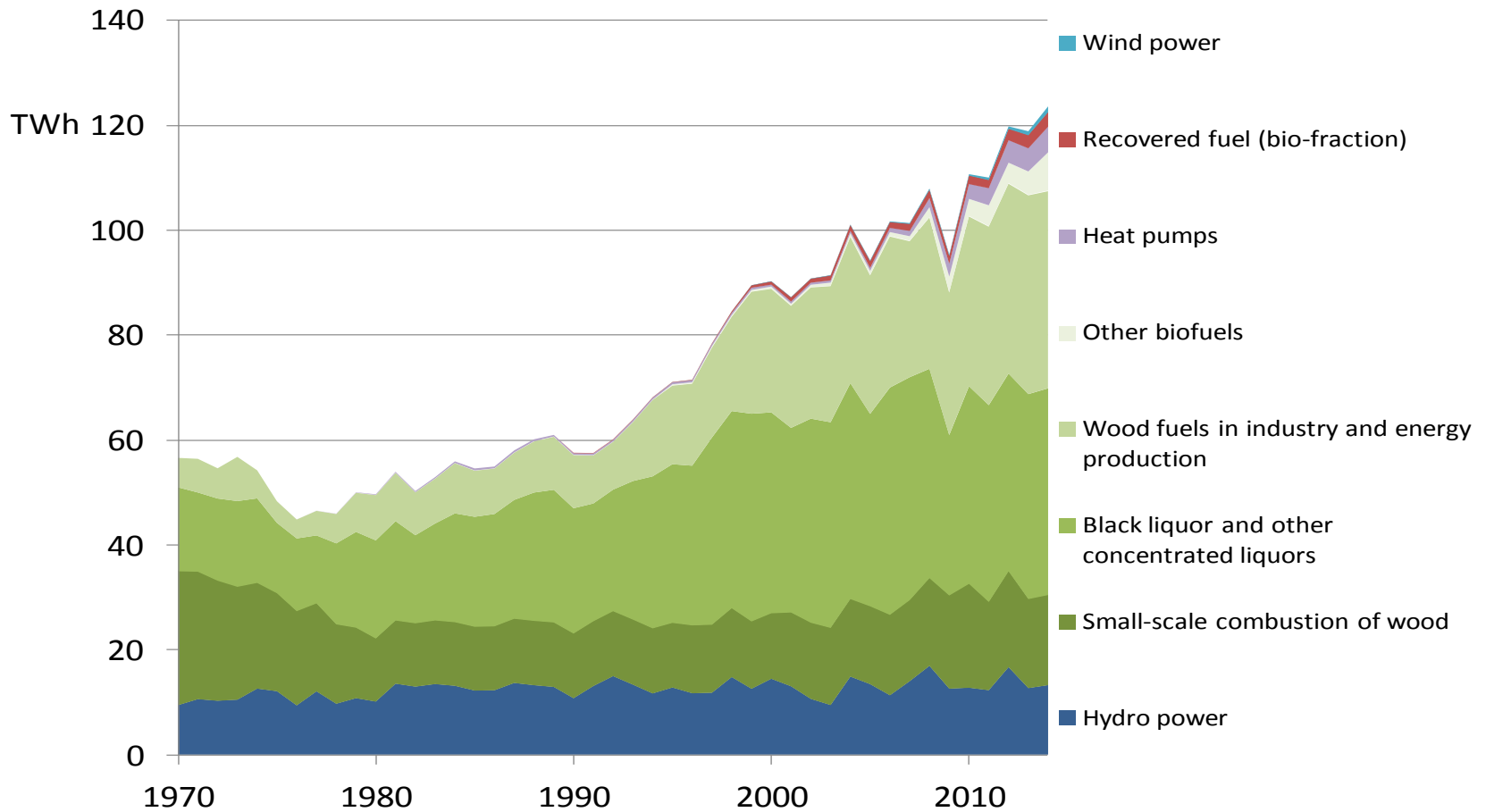
Big picture: Renewables progressing nicely



Primary energy consumption 2015 (362 TWh)



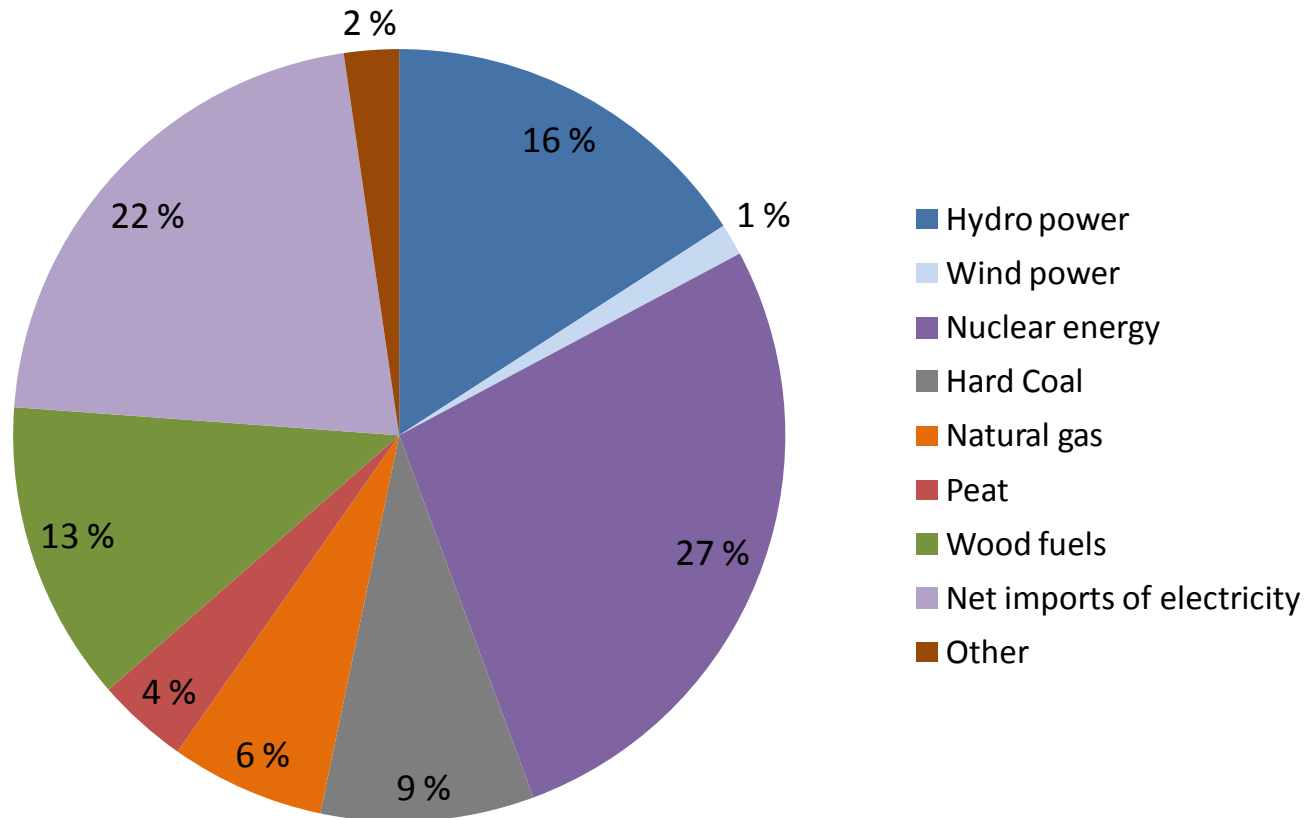
Renewable energy 1970-2014



Power: Towards a low-carbon economy



Supply of electricity by energy source 2014 (83.4 TWh)



The EU 2030 Climate and Energy policy framework



- **Emissions reduction target of at least 40%** by 2030 compared to 1990
 - Emissions Trading Scheme: 43 % compared to 2005
 - Binding national reduction targets **outside the Emissions Trading Scheme** (non-ETS): 30 % compared to 2005
 - **Finland -39 %** compared to 2005 (the proposal in July)
- **Renewable energy target of 27%** of final energy consumption, binding only at EU-level
 - No national targets for Member States by the EU
 - Governance: national plans have to be in line with the EU target; first draft plan in 2018
- **Energy efficiency target of at least 27%**, indicative at EU level
- **Land use, Land-use Change and Forestry** (the proposal in July)
 - Emission of biomass used in energy are counted in the LULUCF sector

Juha Sipilä's Government Programme:

Towards carbon-free, clean and renewable energy cost-efficiently



- The use of emission-free, **renewable energy** will be increased in a sustainable way so that its share will rise to **more than 50 per cent during the 2020s** and the self-sufficiency in renewable energy to more than 55 per cent, also including peat. This will be based, in particular, on the growth in the supply of bioenergy and other emission-free renewable energy. The greatest opportunities will be achieved in increasing the production and technology of liquid biofuels and biogas.
- Aid for lowering the costs of the increase in renewable energy that is compatible with the EU guidelines will be based on technology neutrality and ranking of economic priorities.
- **Coal** will no longer be used in energy production and the use of imported **oil** for the domestic needs will be cut by half during the 2020s.
- The **share of renewable transport** fuels will be raised to **40 per cent** by 2030.



Some further clarifications

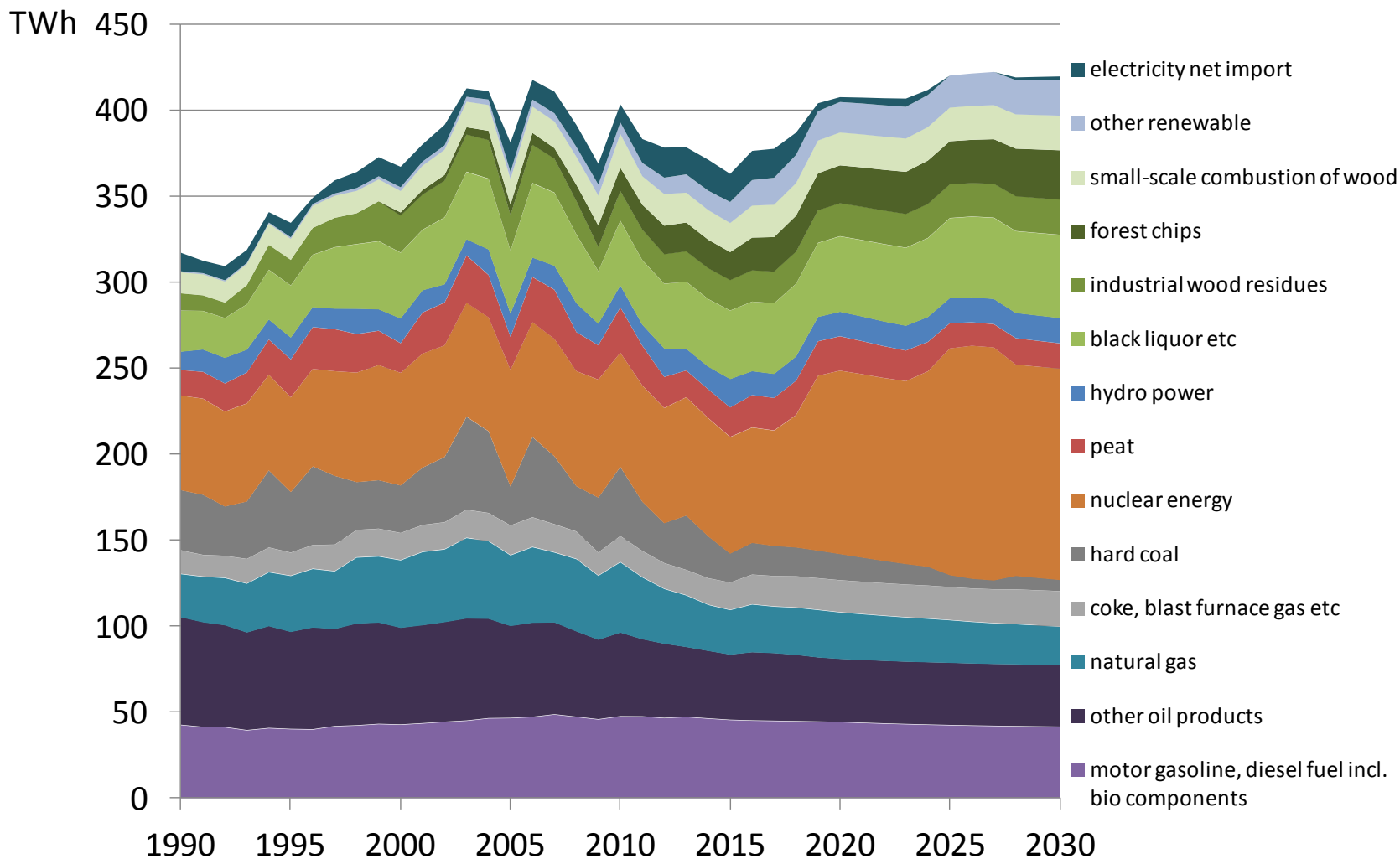
- **The share of renewables** will be counted as in the RES Directive (2009/28/EC), i.e. **based on final energy consumption**.
- The same goes for self-sufficiency which includes also peat, waste, recycled fuels as well as industrial reaction heat.
- The use of imported oil for the domestic needs includes motor and aviation gasolines, diesel, kerosine as well as heavy and light fuel oil; the reference year for calculations is 2005 (like in RES Directive and Effort Sharing Decision).
- **The share of renewable transport fuels** will be counted as under current Transport Biofuels Act (446/2007)(=**double counting** for advanced biofuels) however **taking into consideration also electricity used in transport** (in accordance with the RES Directive) as well as hydrogen produced by renewable energy sources.

National Energy and Climate Strategy 2030



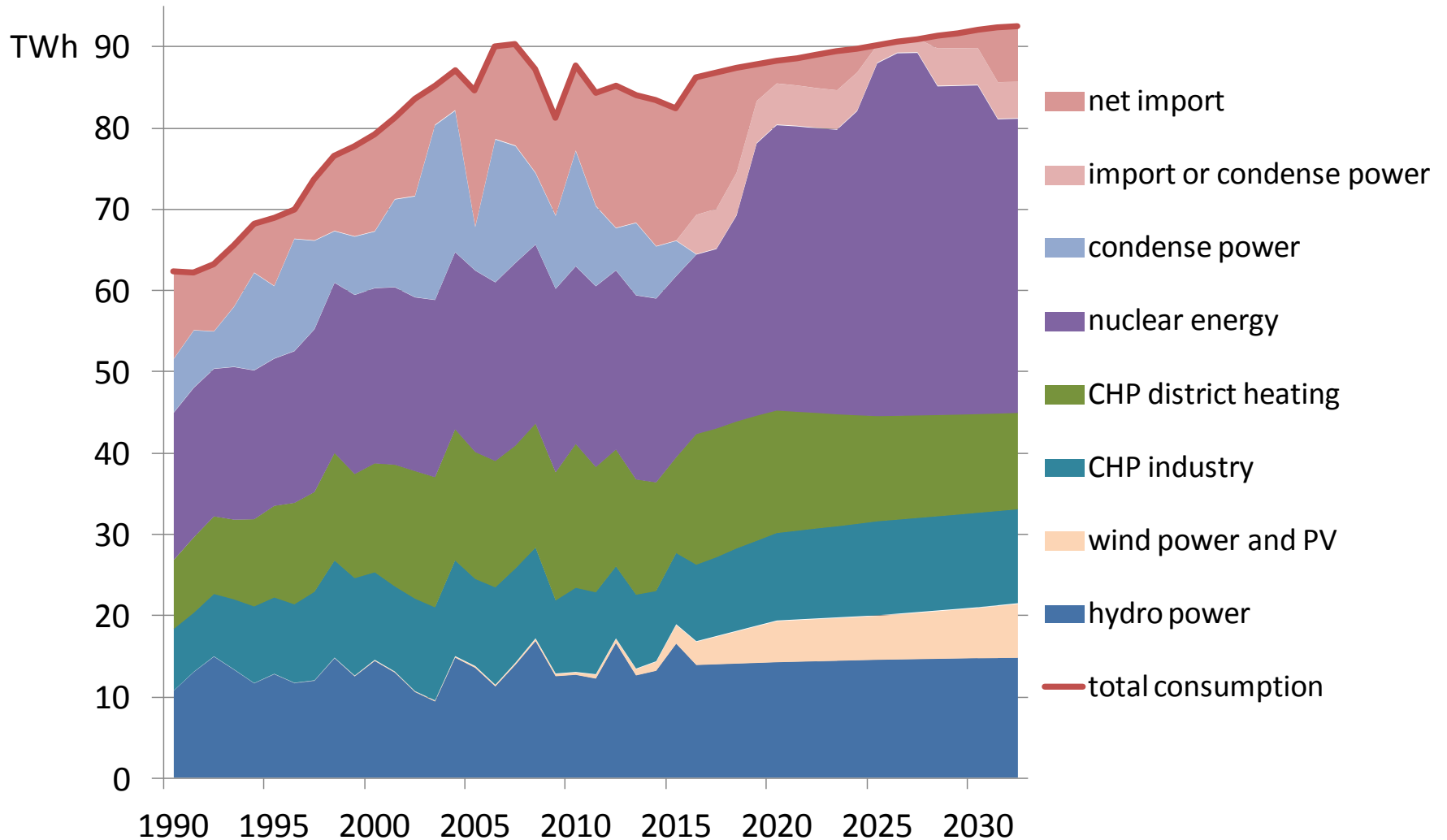
- **The reference/baseline scenario was published on 15 June**
 - Development with existing measures
 - Forest energy has a central role in renewable energy: Share of RES is very dependent on the by-products from the forest industry
 - Need for **additional measures**
- **During autumn, policy scenario**
 - Key topics:
 - How to meet the non-ETS target: **transport**
 - Forest energy: availability for energy use, possible restrictions
 - Support schemes for renewable energy and **decentralized production**
 - **Development of electricity market**
 - Development of gas market
- **Published by the end of 2016**
 - The Government will submit the Strategy to the Parliament

Primary energy supply, reference scenario

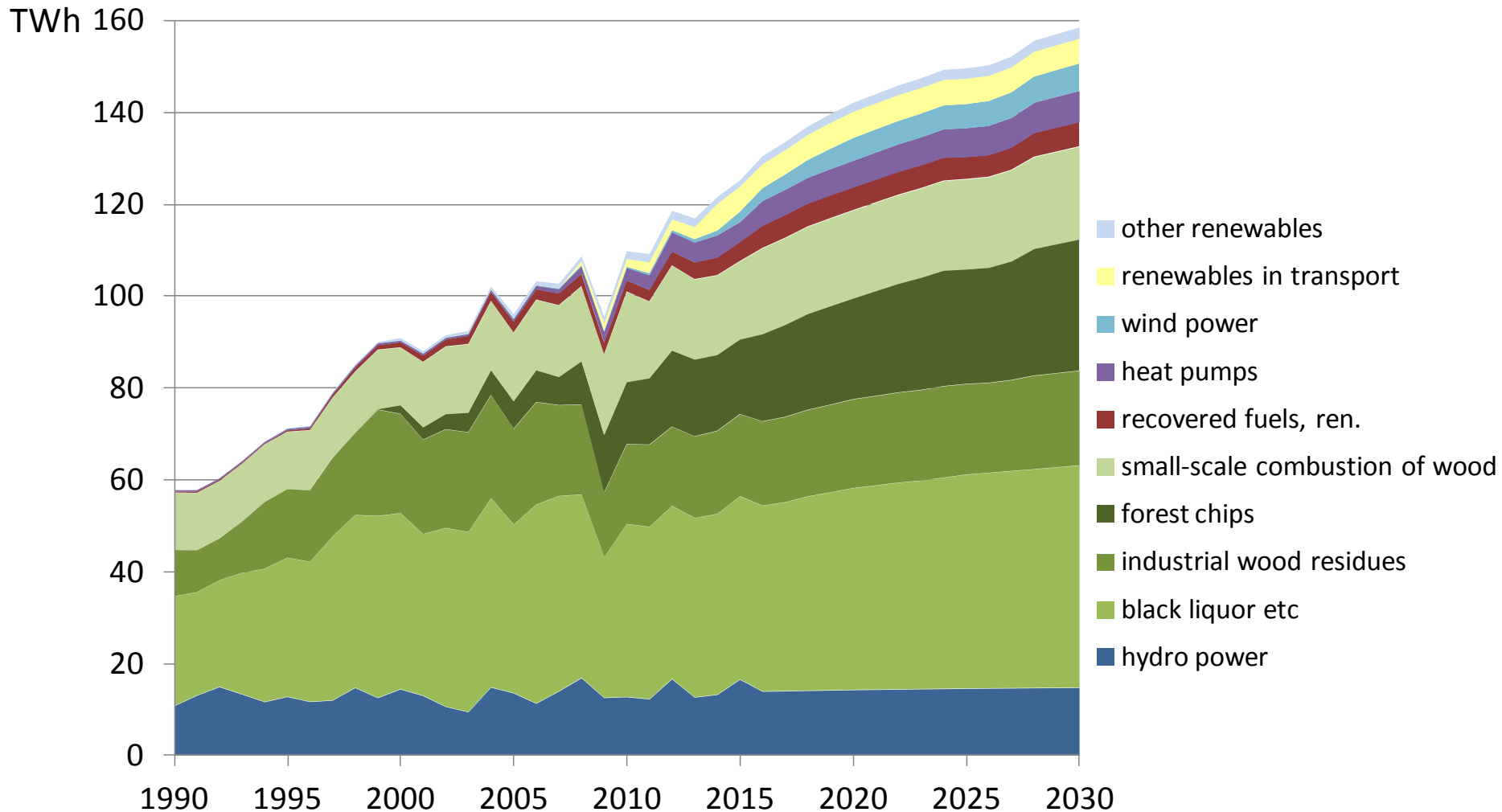




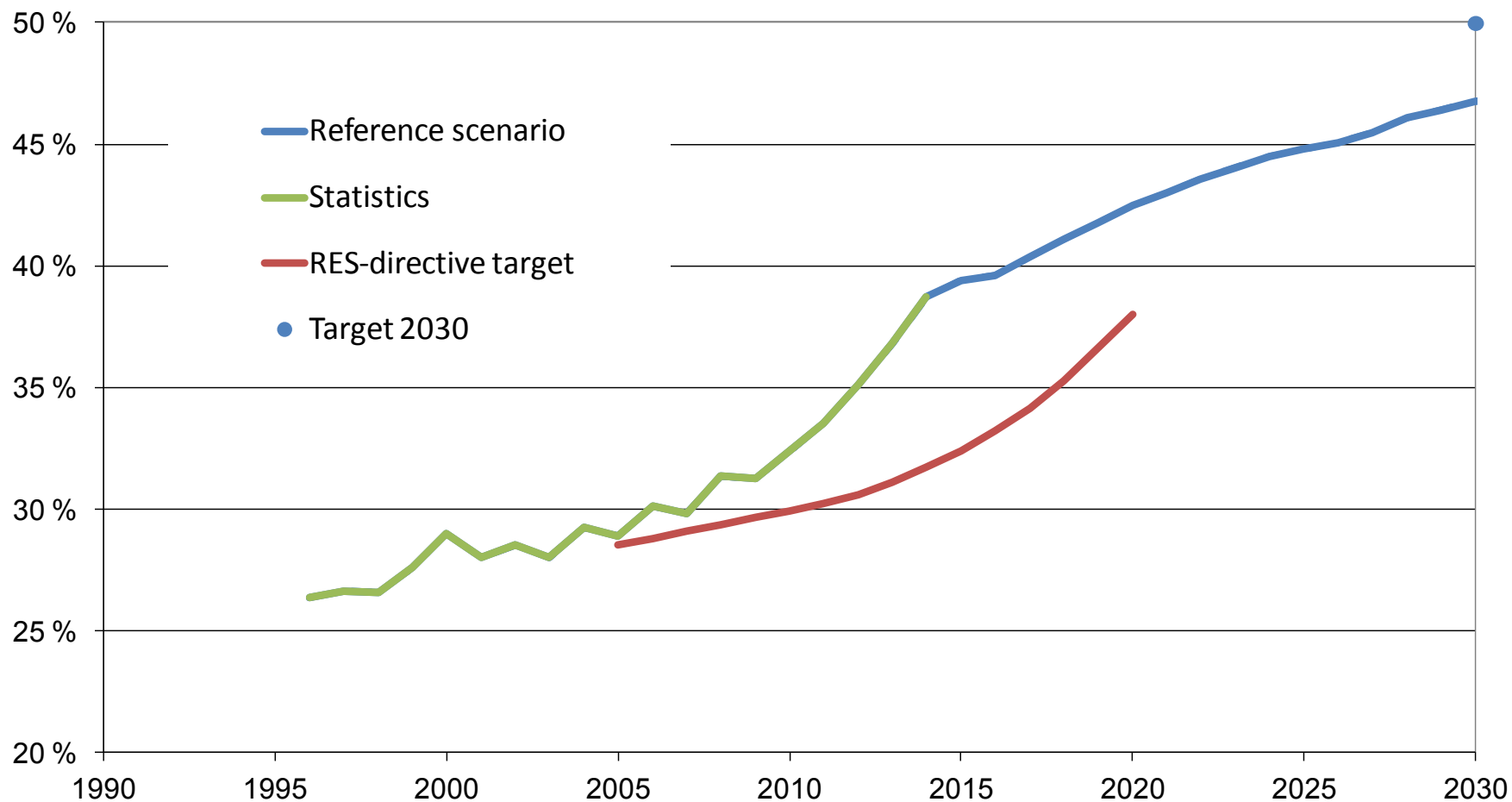
Electricity supply, reference scenario



Renewable energy, reference scenario



Renewable energy, share of final consumption



Policy instruments for increasing renewables



• Regulation and taxation

- Distribution obligation for (advanced) transport biofuels
- Energy taxation (taxes for fossil fuels in heat production and transport, no tax or lower taxes for biofuels)

• Subsidies/Support Schemes

- R&D aid by Tekes
- Investment aid:
 - Energy aid (energiatuki) and Aid for key energy projects (ns. kärkihankeraha) by MEE
 - Innovative and new technology demonstration projects
 - Important e.g. for biofuels, biogas, geothermal facilities, storage
- Operating aid for electricity production ?
 - The role of support scheme in renewable electricity production?
 - Technical options have been studied: operating aid/premium + tendering, investment aid, green certificates

• Micro-production (electricity, heating)

- a number of incentives (tax exemptions, investment aid, regulation)

• New instruments?



Thank you