

The Role of Gas in the National Energy and Climate Strategy

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Ministry of Economic Affairs
and Employment of Finland



Themes

- The National Energy and Climate Strategy for 2030
 - Background and content
- The Gas Market
 - Situation and development
 - Challenges and opportunities
- The Natural Gas Market Act under preparation
 - Objectives
 - Key proposals

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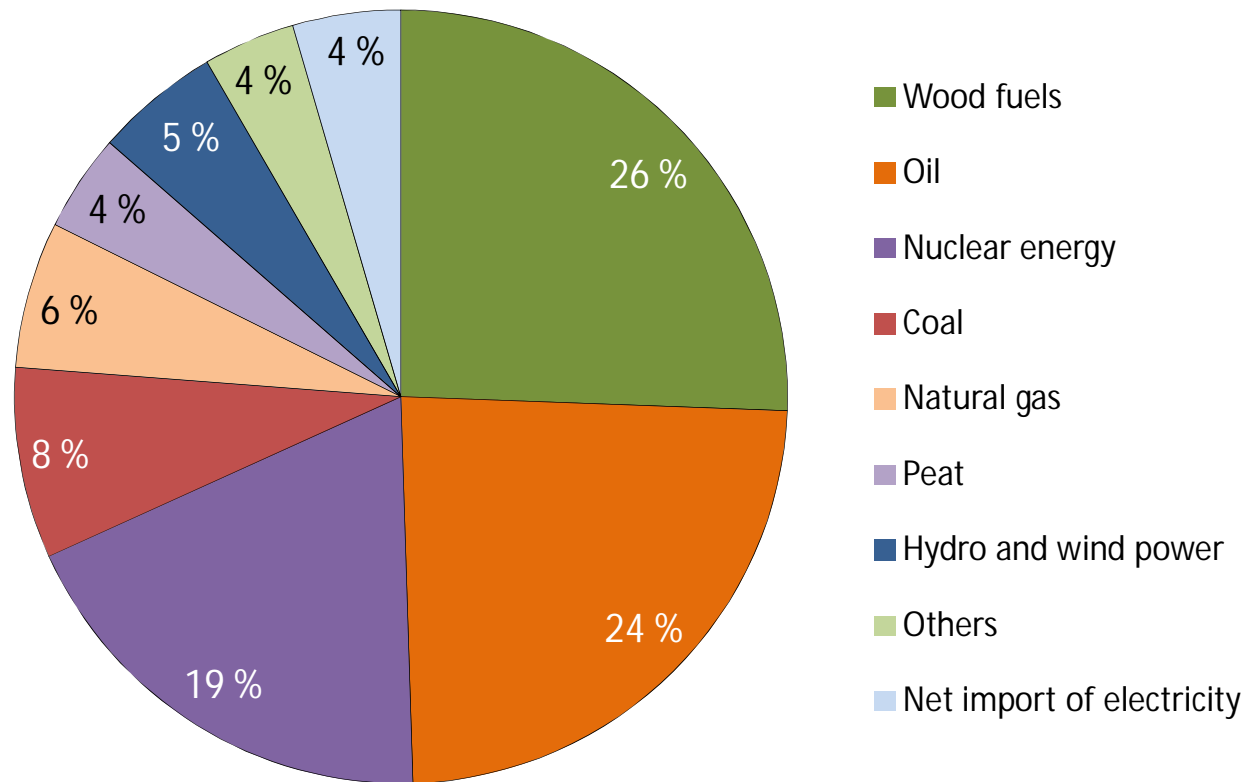


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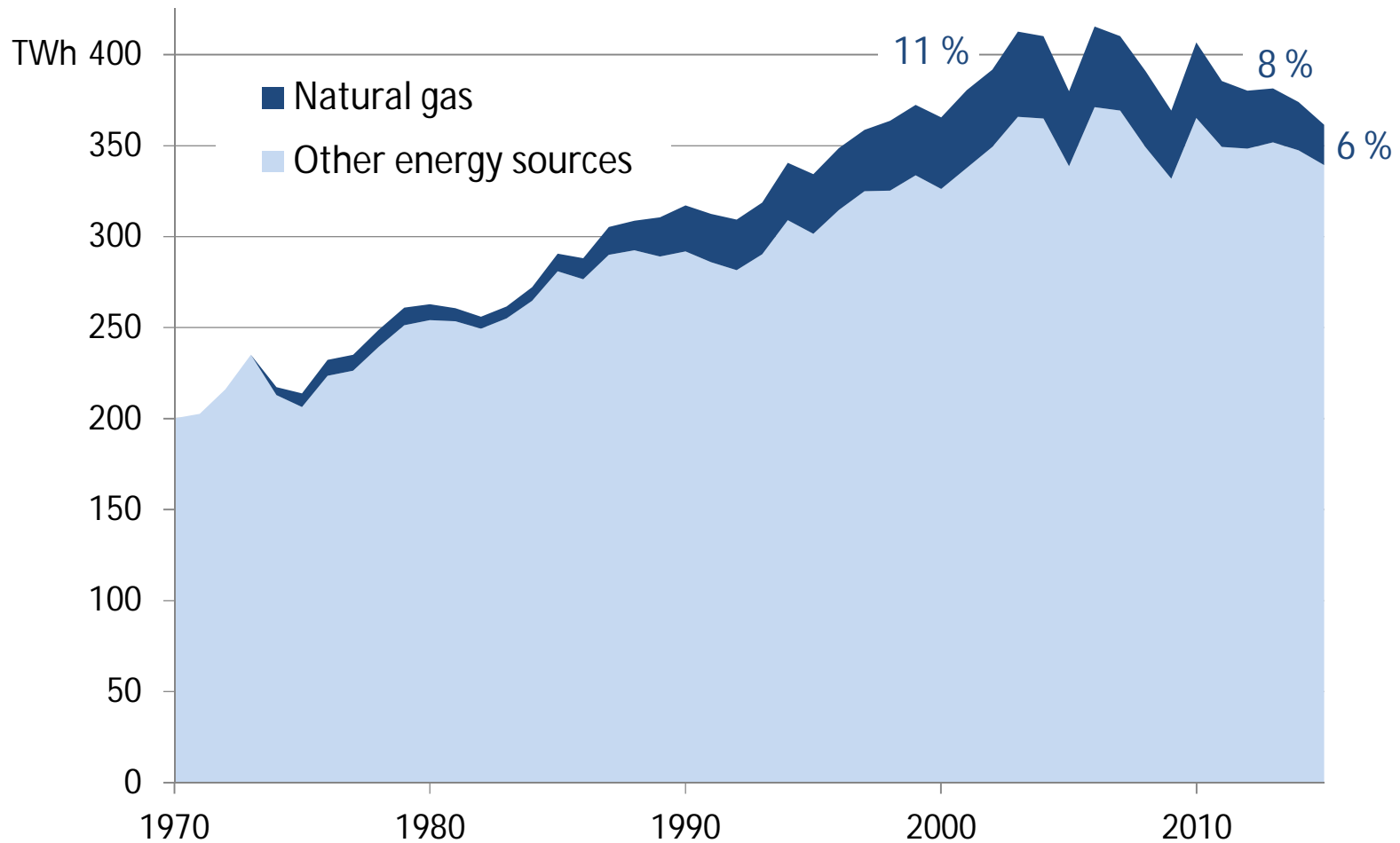
Big picture: Renewables progressing, fossil fuels losing ground



Primary energy consumption 2015 (362 TWh)



Energy use of natural gas and total energy consumption 1970-2015



Source: Statistics Finland

Background to national policies: EU 2030 climate and energy policy frame



In 2014, European Council agreed on 2030 policy frame:

- **Emissions reduction** target of at least 40% by 2030
 - Main instrument: EU Emissions Trading Scheme
 - Binding national reduction targets **outside the Emissions Trading Scheme** (non-ETS): the legislative proposal was given in July 2016
- **Renewable energy** target of 27% of final energy consumption, binding only at EU-level
 - No national targets for Member States by the EU
- **Energy efficiency** target of at least 27%, indicative at EU level
 - Increased to binding 30%? (EU Commission proposal in November 2016)

Proposed Energy Union Governance: national plans have to be in line with EU-wide targets on renewable energy and energy efficiency; first draft plans in 2018(?)

Juha Sipilä's government programme:

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



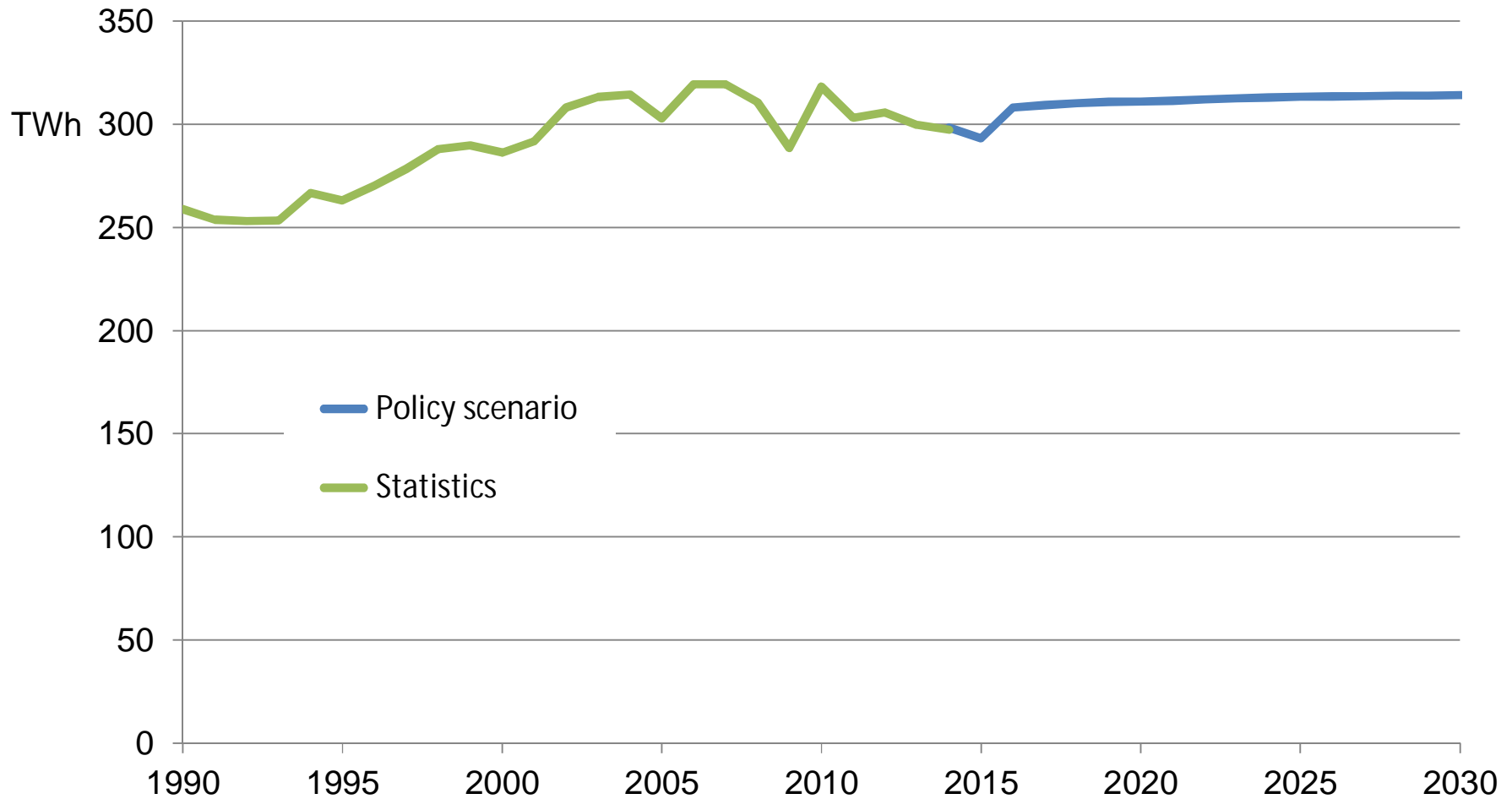
- The use of **emission-free, renewable energy** will be increased in a sustainable way so that its share will rise to **more than 50 per cent** during the 2020s and the self-sufficiency in renewable energy to more than 55 per cent, also including peat. This will be based, in particular, on the growth 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.
- Meeting the **sustainability criteria** for biomass and **fair burden sharing** in the EU and international climate negotiations will be secured.
- **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.

National Energy and Climate Strategy for 2030

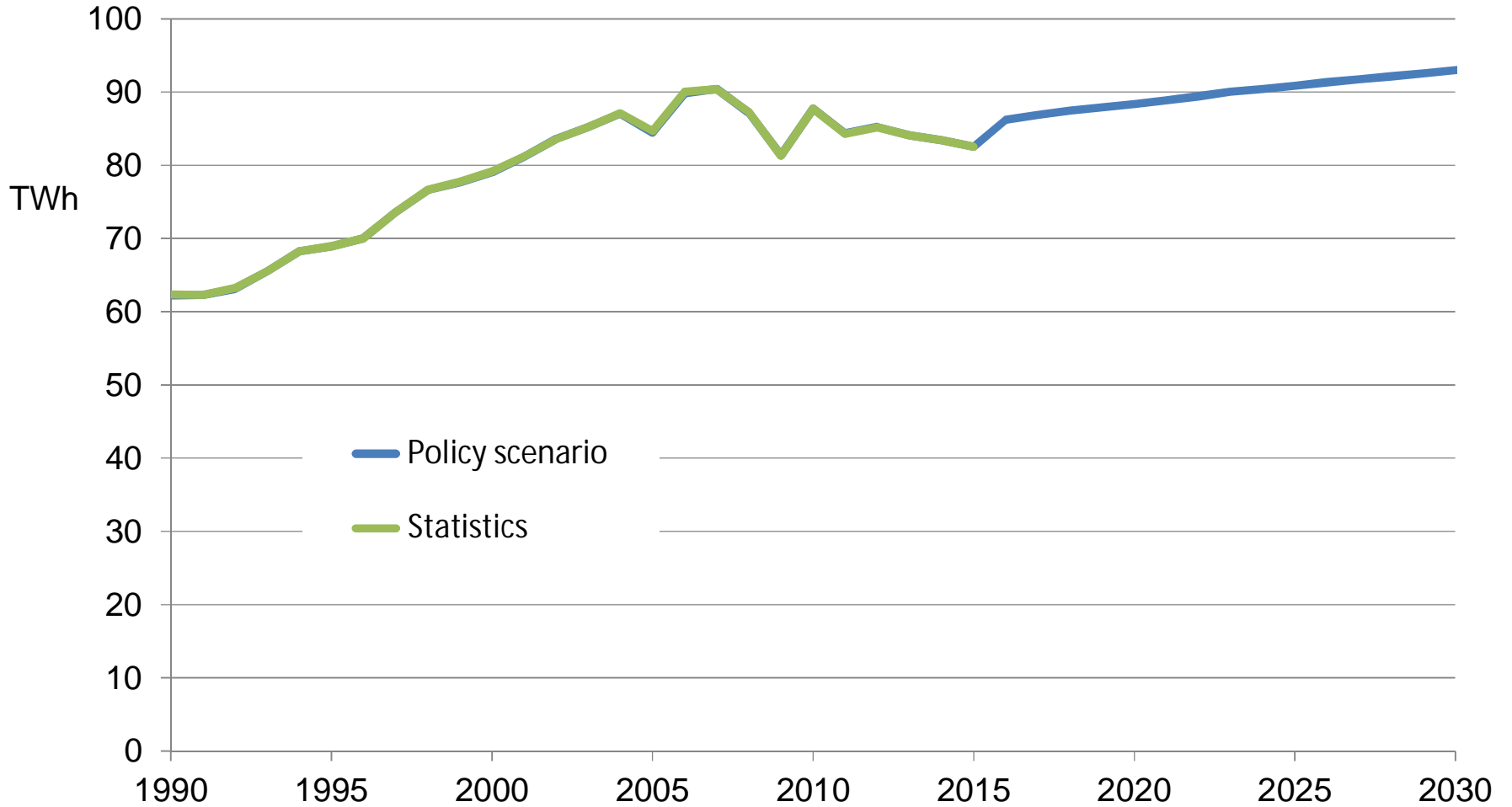


- Approved by the Government in November 2016 as a Report to the Parliament
- The aim is reach Government and EU 2030 targets
- Emphasis on reducing CO2 emissions and promoting renewable energy
 - **Investment subsidies** to new technologies: biorefineries etc.
 - **Limited production aid** for renewable electricity in 2018-2020 (tendering, technology neutrality)
 - **Transport fuels: at least 30 % renewables** by 2030 (especially by biofuel blending obligations)
 - **Phasing out the use of coal** in energy production by 2030 (with some conditions regarding i.a. security of supply)
 - **Halving the use of imported oil** for energy
 - **Promoting biogas**
 - etc. ...

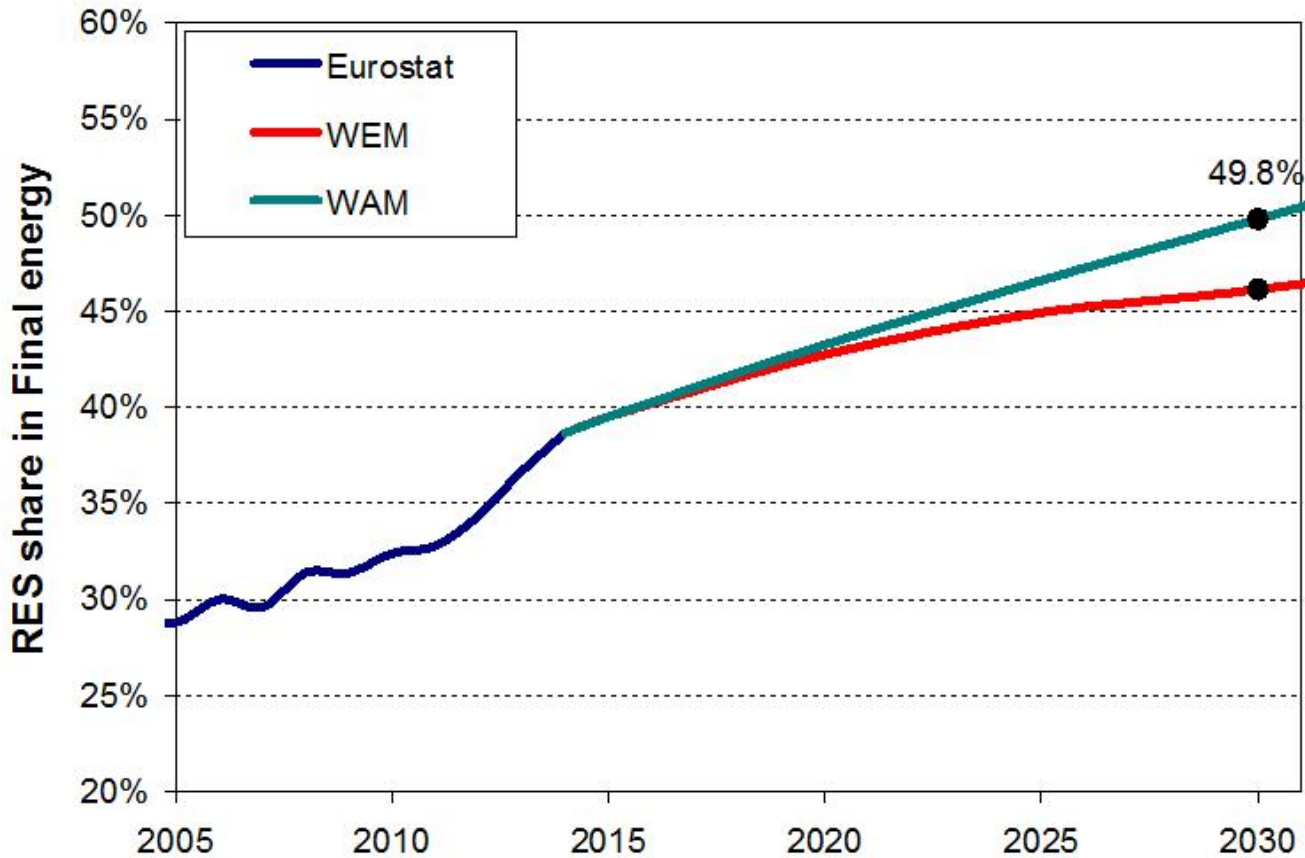
Final energy consumption



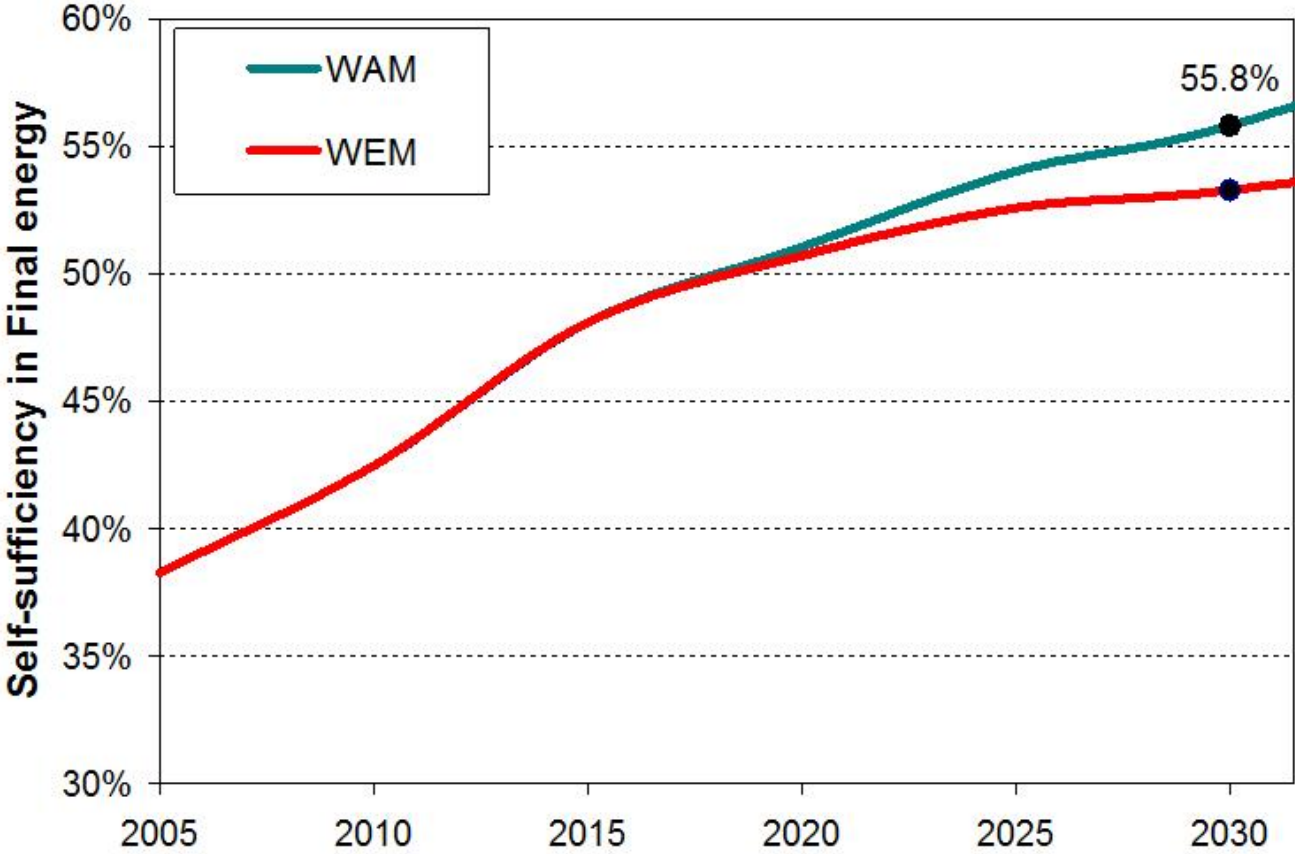
Electricity demand



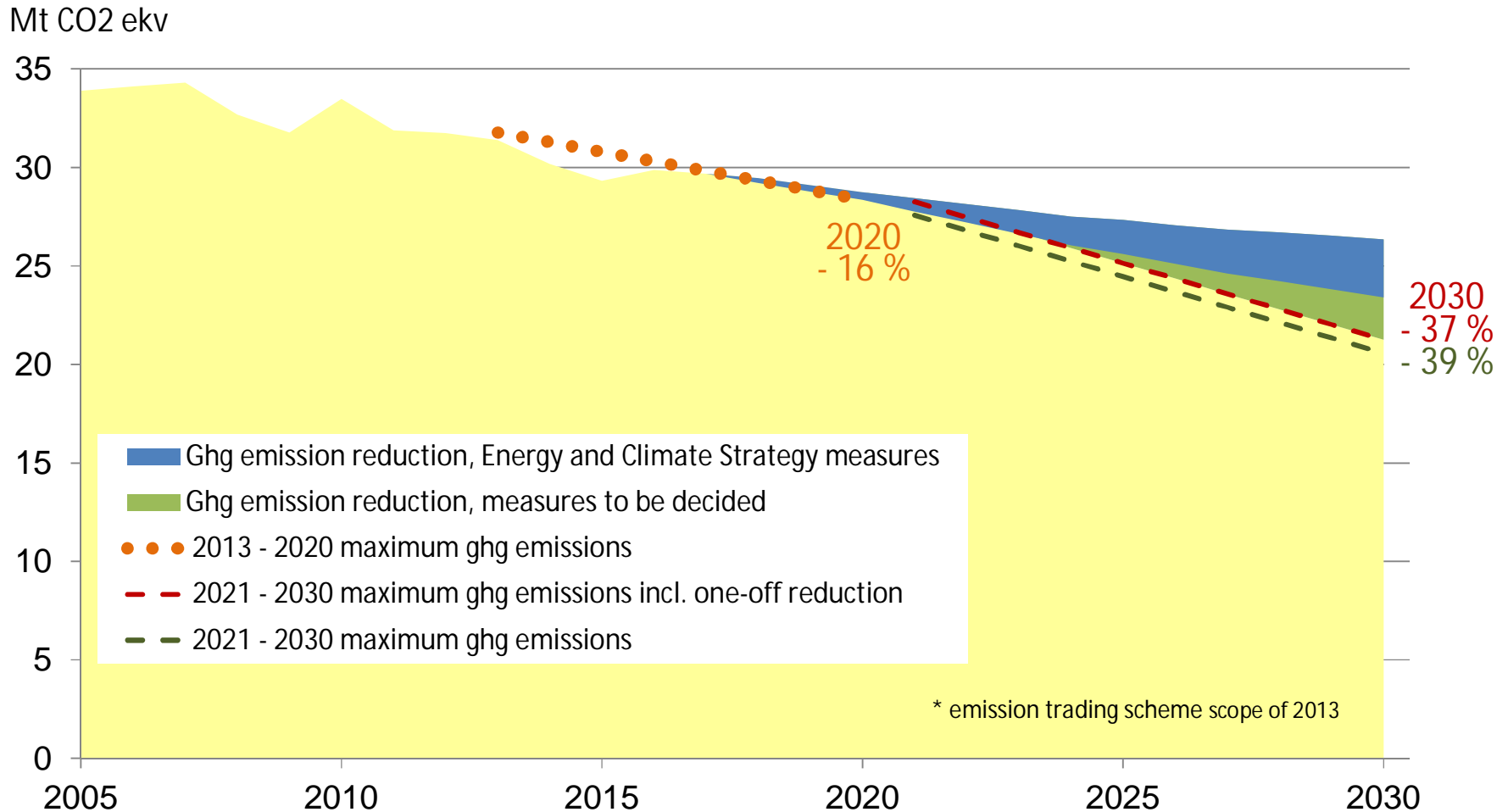
Renewable energy, share of final consumption



Domestic energy, share of final consumption

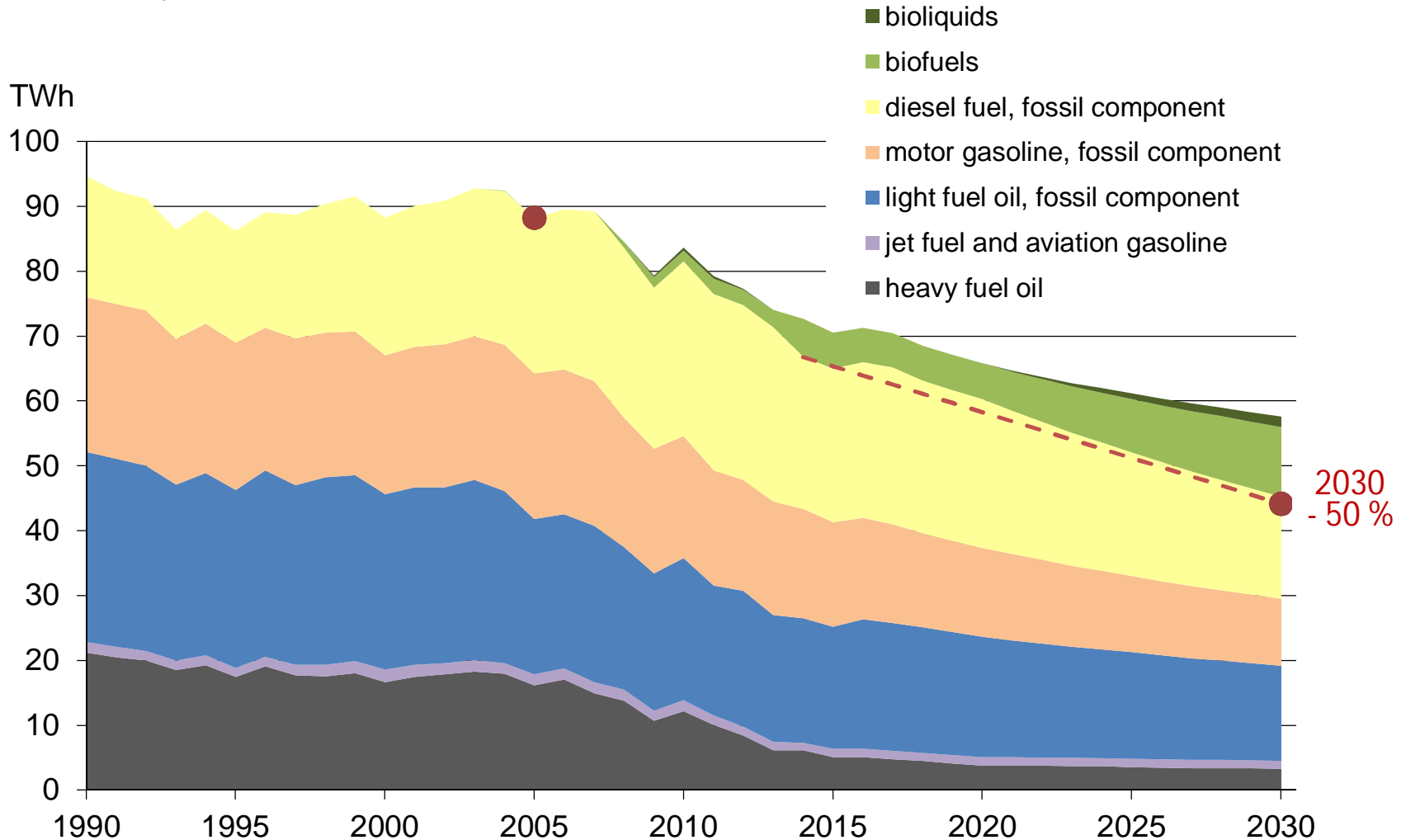


Non-ETS* greenhouse gas emissions



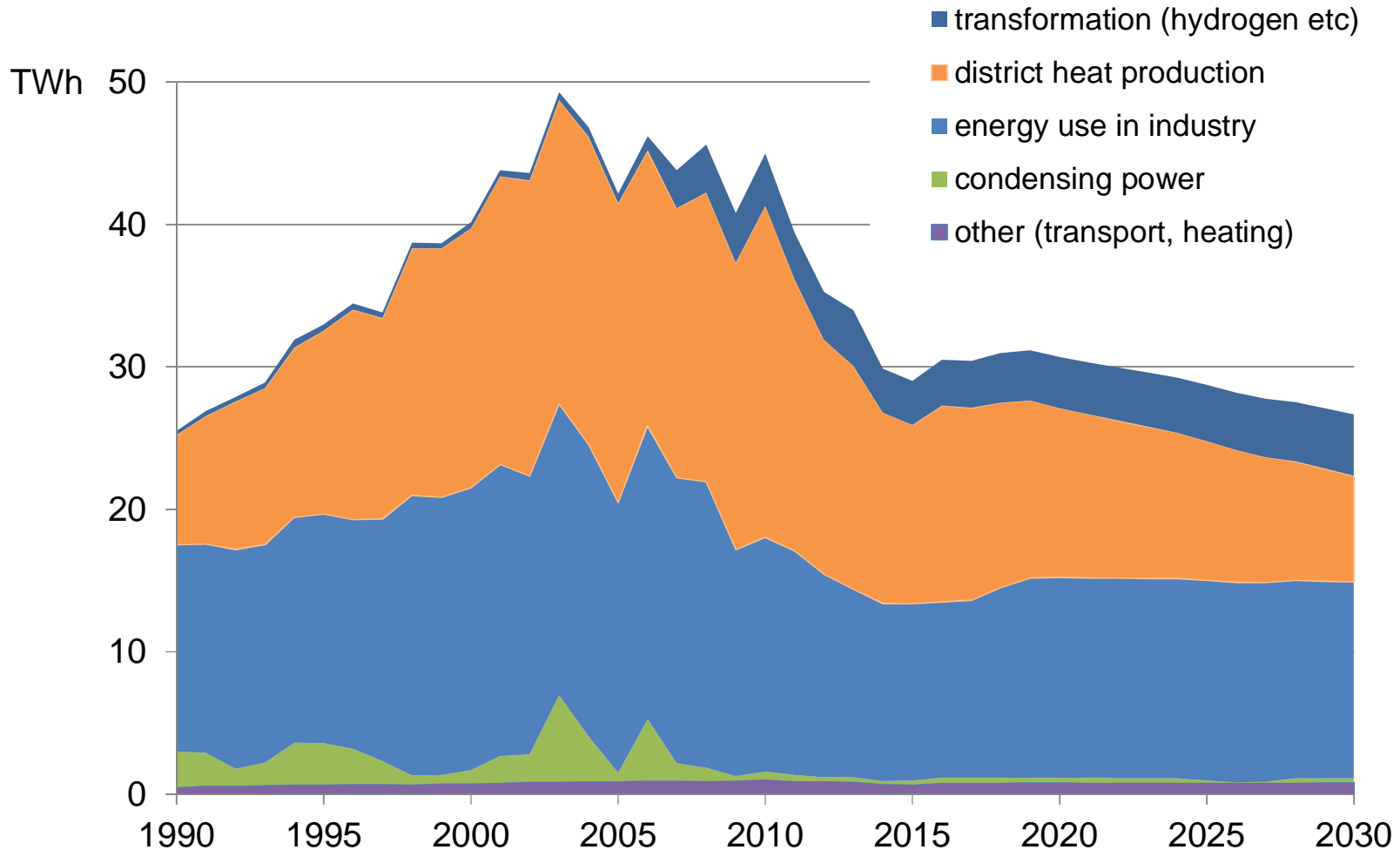
Oil demand

Policy scenario



Natural gas demand

Base scenario of the Energy and Climate Strategy



Quotes from the strategy: Gas market



- **Market liberalisation:** The construction of the Balticconnector gas pipe between Finland and Estonia will enable the opening and renewal of the gas market. As this investment is completed, the exemption from the Internal Market in Natural Gas Directive will be dropped, and the gas market will be fully open for competition from the beginning of 2020. In the new natural gas market act, price regulation of piped gas will be dropped, and gas marketplaces and internal market rules will be introduced. The objective is to create a regional gas market in Finland and the Baltic countries.
- **Unbundling:** Gasum's transmission network and gas sales will be unbundled.
- **The future of gas:** The creation of a gas market will provide preconditions for continuing the use of gas as an industrial raw material, for energy purposes and as an alternative transport fuel alike. The use of gas for energy will be important, especially during the transition towards a carbon-neutral energy system. The gas infrastructure will enable the utilisation of biogas and, later, synthetic gas. Over a longer term, the gas market can also be utilised as a flexibility mechanism for the electricity system (the so-called power-to-gas solution).

Quotes from the strategy: Biogas



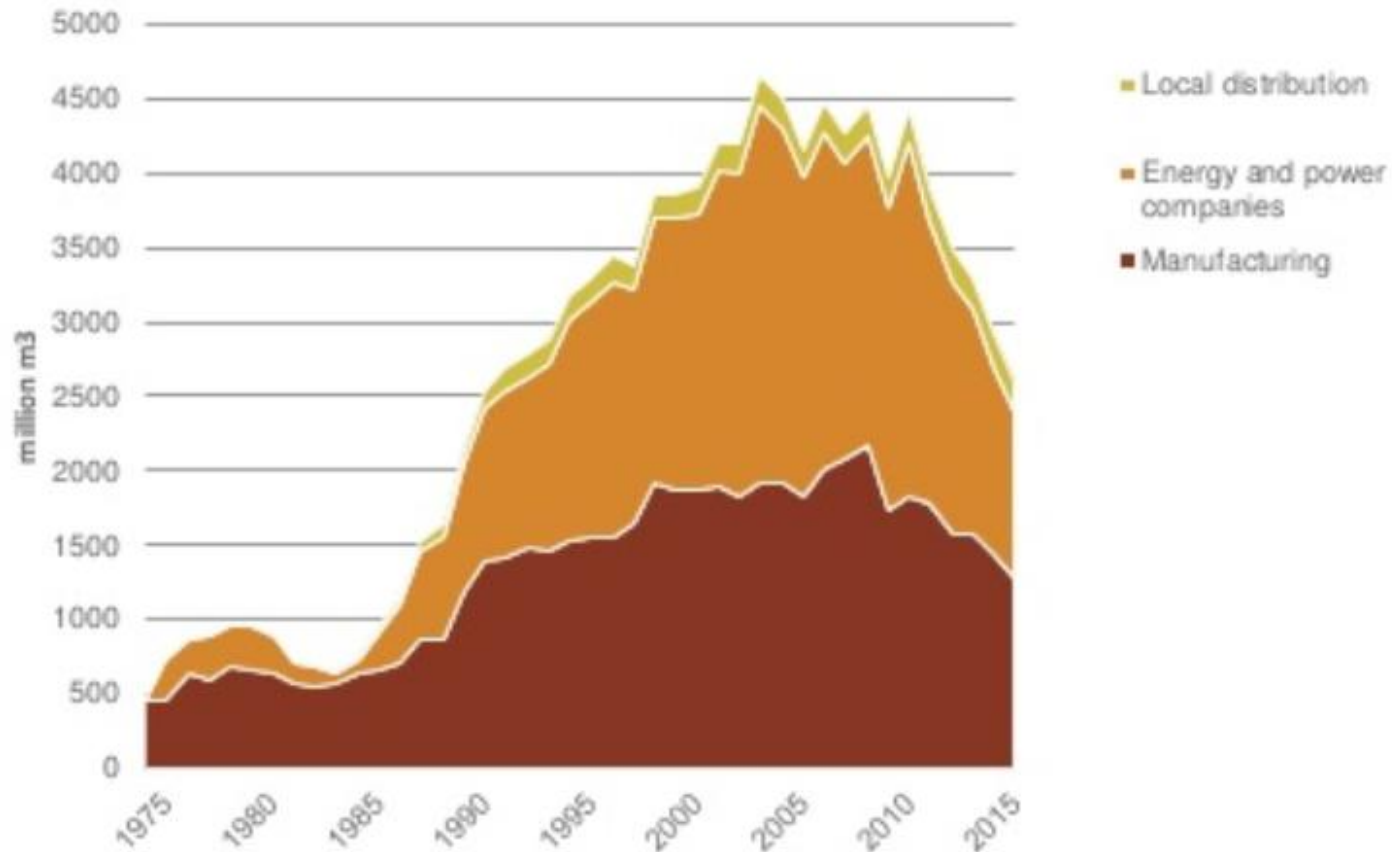
- **Growing use:** The production and use of biogas will increase, and growing Finnish business will emerge around it.
- **EU policies:** Finland will influence the drafting of EU legislation and State aid rules in the EU's post-2020 programming period by promoting solutions that support biogas.
- **Regulation:** National provisions and permit procedures will be clarified to promote the production and use of biogas.
- **Subsidies:** Support for biogas plants will continue to be available at least at the current levels as part of the aid schemes of the Ministry of Economic Affairs and Employment and the Ministry of Agriculture and Forestry.
- **Transport and machinery:** The wider use of gas-powered vehicles and machinery will be promoted. The goal for Finland is to have [...] a minimum of 50,000 gas-fueled vehicles in 2030.
- **Circular economy:** A better utilisation of the biogas potential of agricultural biomasses will be promoted.



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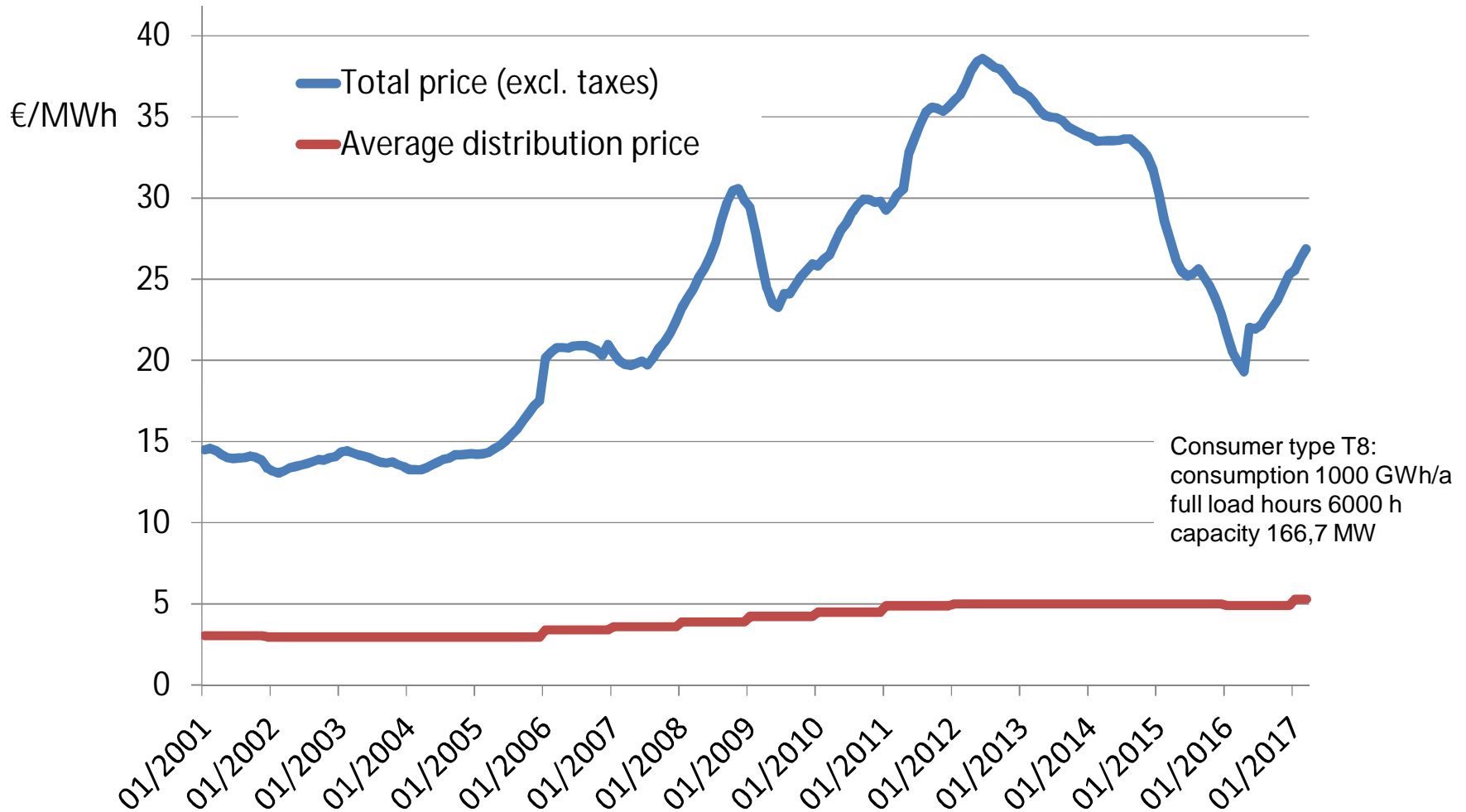
The gas market: Natural gas consumption 1974-2015



Source: Finnish Gas Association

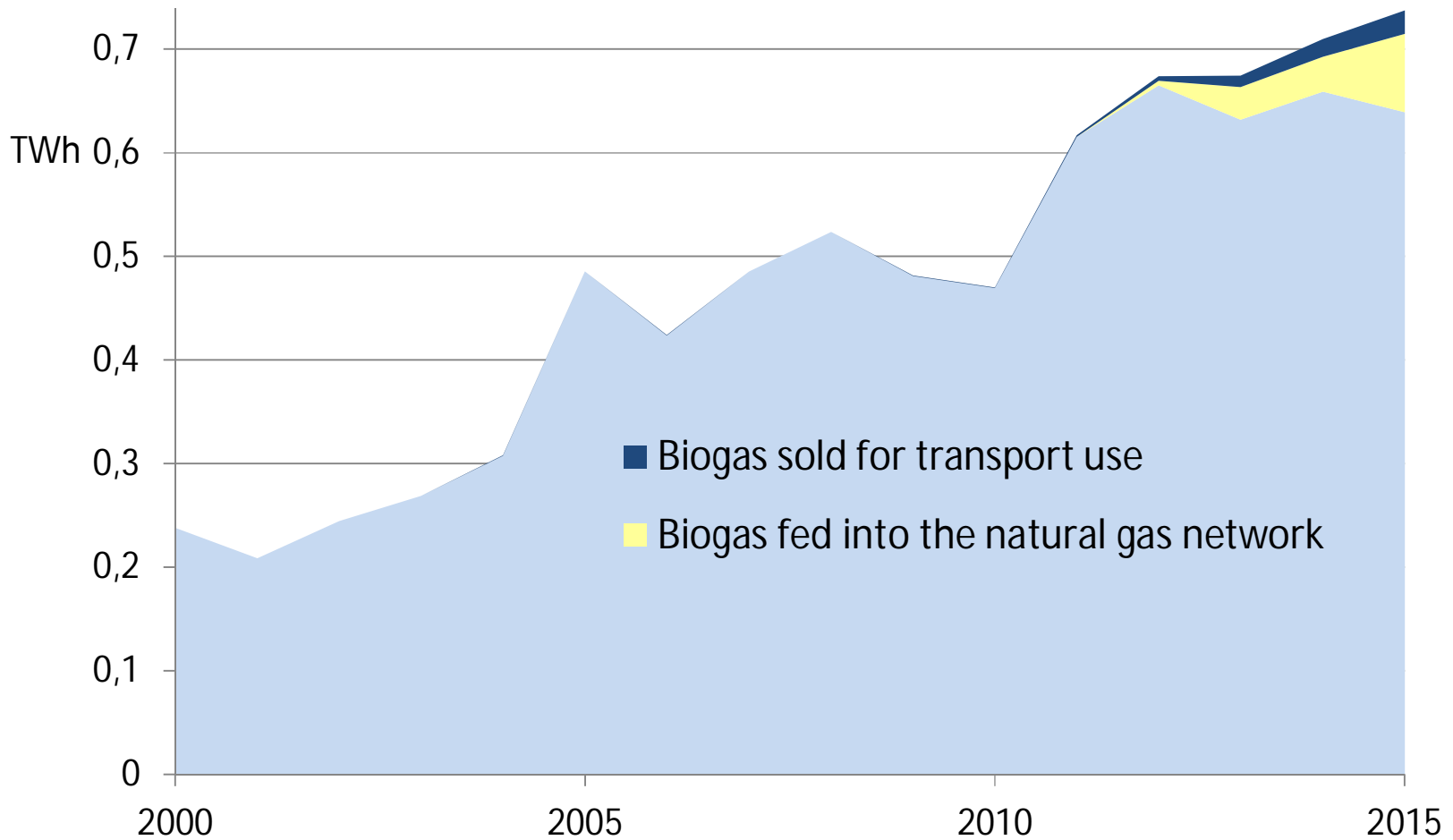


Natural gas price development



Source: Energy Authority

Biogas consumption 2000-2015



Source: Statistics Finland

Market development in the future: Challenges and opportunities



- **The overall competitiveness of gas in energy production**
- **Power markets: the need for flexibility**
 - Incremental renewable energy production will increase price volatility
 - Short term price signals must be strengthened in order to create incentives for flexible production and demand
- **The role of CHP**
 - Should be preserved, due to seasonality, energy efficiency etc.
- **Price of CO2: EU Emissions Trading Scheme, taxation**
- **Global development: more gas resources, less investments?**
- **Transport and industrial demand (pipeline and off-grid)**
 - LNG, biogas
 - Maritime transport, road transport (heavy and light)
- **Etc.**

Markets and market actors shall be prepared for evolving environment - flexibility and resilience needed.



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Objectives of the Natural Gas Market Act under preparation



The legislative proposal will be given in April.

Objectives:

- Market liberalisation
- Increased competition
- Creating the conditions to participate in the regional (Baltic) and European gas markets
- Promoting diversification of purchase of natural gas
- Facilitating further development of LNG infrastructure, production and use of biogas etc.
- Better regulation
- Limiting tariff increases

Key proposals



- **The act will come into force from the beginning of 2018**
 - Decreasing the level of regulation on gas supply and distribution networks
 - Third party access to LNG terminals
 - 15% roof for tariff increases
- **Transmission network (TSO) will be fully unbundled by ownership unbundling from the beginning of 2019**
 - Separation of transmission and system services as well as ICT systems
- **The Finnish gas market will be fully opened to competition from the beginning of 2020**
 - The Balticconnector gas pipeline into operation
 - Lifting the EU Third Energy Market Package derogation
 - Third party access to gas pipelines (obligation to transmit)



Thank you