

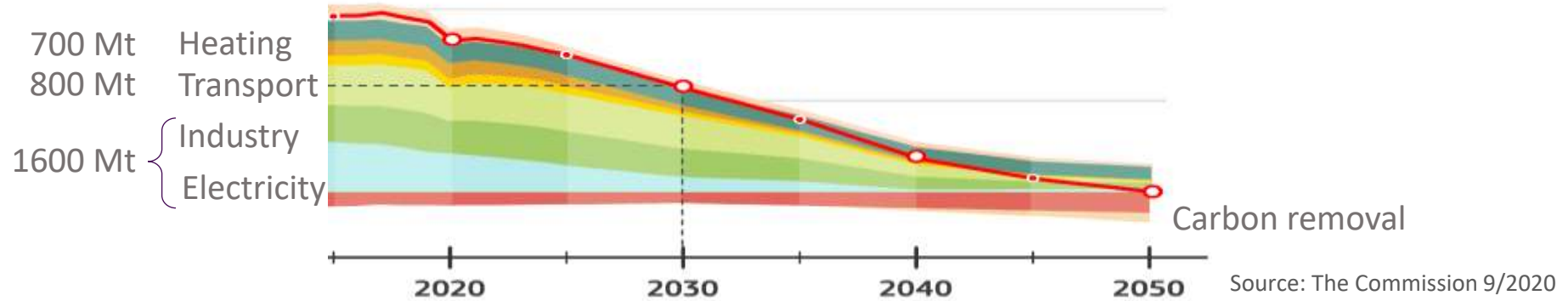
Reaching the EU 2030 climate target

A Finnish Energy roadmap for efficient policy

5.2.2021

The EU 2030 climate target plan

How to effectively decarbonise different sectors



	For 2020s	For 2030s
Electricity, district heating and industry	<ul style="list-style-type: none"> - Align the EU ETS cap to the -55 % target - Recently revised RED and EED are up to their tasks. - Use sector integration to prepare industry for decarbonisation 	<ul style="list-style-type: none"> - Use decarbonised and integrated electricity and synthetic fuels to decarbonise the process industry - Thus the climate target can be raised to 60 % by 2035
Heating and transport Other fuels consumption and waste	<ul style="list-style-type: none"> - Create separate ETS's and keep ESR for outlying sectors - Review energy taxation to address the non-ETS sectors 	<ul style="list-style-type: none"> - Move remaining sectors to ETS/AFOLU and discontinue ESR
Technological carbon removals	<ul style="list-style-type: none"> - Create market and incentives - Demonstrate to large scale 	<ul style="list-style-type: none"> - Market based implementation in the most potential applications

Content

- Finnish Energy team for the EU 2030 framework
- Finnish targets
- Lessons of the 2020 framework
- What to focus on in the 2030 framework
- ETS review
- RED review
- EED review
- ETD review
- Sustainable finance taxonomy
- State aid guidelines
- Comments on offshore strategy
- Comments on hydrogen strategy



Finnish Energy team for the EU 2030 framework



Joonas TURTTIAINEN
Director of Advocacy



Antti KOHOPÄÄ
Head of EU Affairs



Annina ALASAARI
EU Policy Advisor



ETS, LULUCF, ESR
Jukka MAKKONEN



RED, Biomass
Karoliina MUUKKONEN



EED
Sirpa LEINO



EPBD, Renovation Wave
Mirja TIITINEN

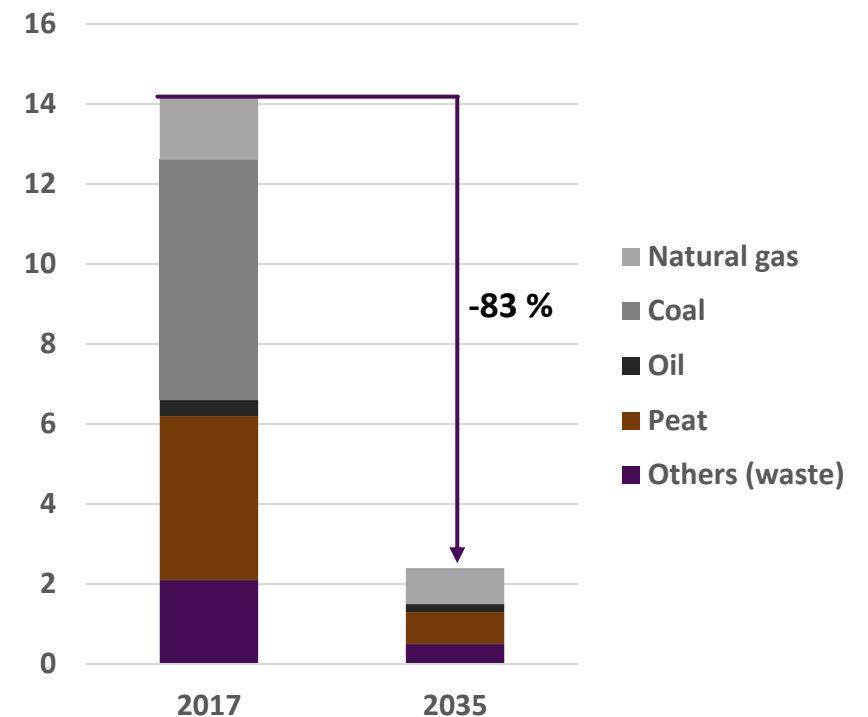


ETD, EEAG
Mari NASSER

Finnish Energy aims for carbon neutral society in the 2030s

- Finnish Energy supports the -55% by 2030 target for the EU. Furthermore, we see the possibility to reach -60% by 2035.
- In 2020, Finnish Energy published a new roadmap aiming to halve emissions in ten years and to enable a climate neutrality of society in the 2030's.
 - The remaining 10% share of fossil fuels in **electricity generation** is rapidly decreasing with the help of the EU ETS. Electricity producers invest on market basis to wind power, biomass fired CHP, nuclear and existing hydro power plants.
 - Emissions for **district heating** are coming down and the prospects of deep geothermal heat, large-scale heat pumps, waste heat and even small modular nuclear reactors are very promising.
 - **Biogas and hydrogen** are increasingly joining the integrated energy system.
 - *The Finnish solution to climate change is based on all potential carbon free energy sources brought together with the smart infrastructure of electricity, district energy and gas networks.*
- Finnish energy sector has performed in emission reductions superbly. In 2020, the CO2 emissions from
 - **electricity generation** was 63 g/kWh, down 78 % in a past decade,
 - and 127 g/kWh for **district heating**, down 46 % in a past decade.

CO2 emissions (Mt) from district heating and cogeneration

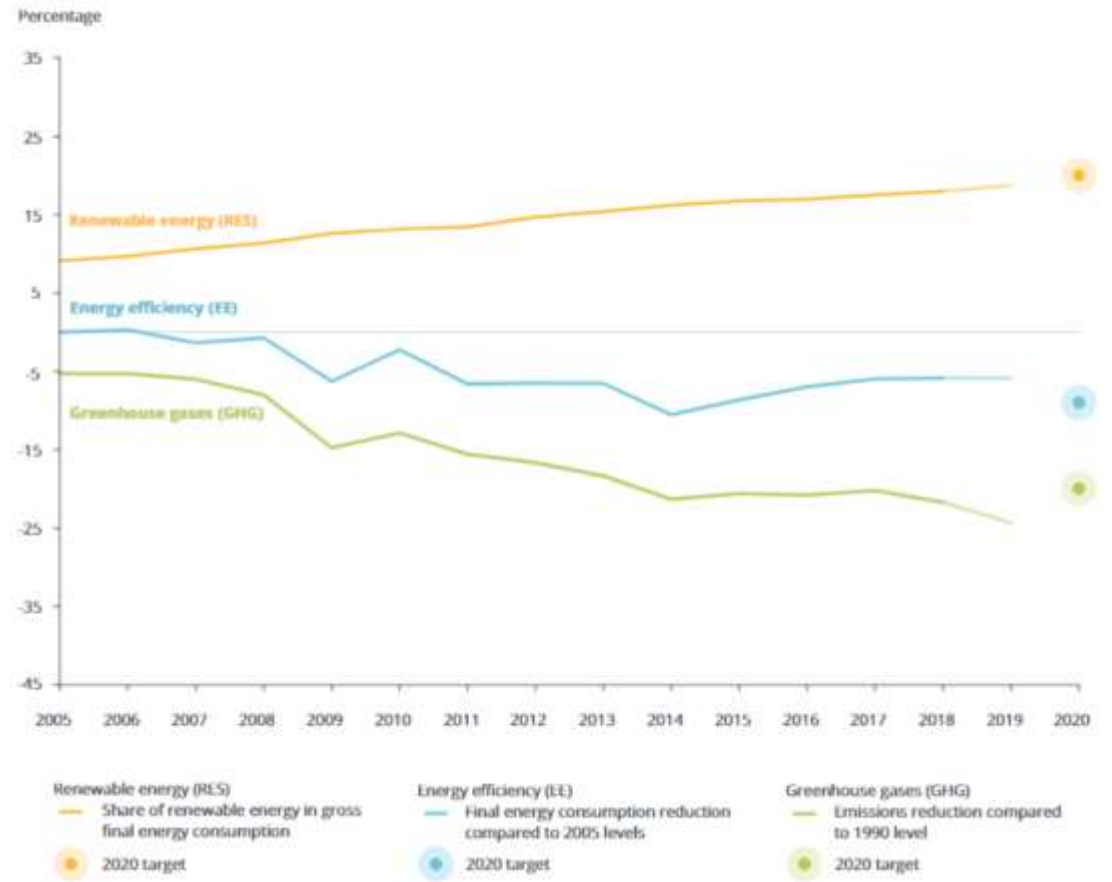


Source: AFRY, Finnish Energy Low Carbon Roadmap 2020.

Lessons of the 2020 framework and targets

- The EU is likely to overshoot its 2020 **climate target** – great news!
 - The path has been far from optimal, but now Europe is in a good position to double the speed of emission reductions.
 - We are concerned of the high cost of emission reductions so far, the lack of progress in some countries and sectors, and the marginal role of carbon pricing in the previous decade.
 - Public financing can only be an accelerator, not the main financier in the next phase.
- **Renewables** development has been skewed towards electricity with wind and solar. However, bioenergy is still the largest renewable source and hydropower continues to be the main source for flexible generation.
- **Energy efficiency** has been more difficult to move forward. Further work should be put into aiming efficiency into reducing the use of fossil fuels. Ambitious climate policy creates a strong demand signal also for energy efficiency and energy efficiency measures.

Figure E51.2 Historical trends and progress to 2020 and 2030 targets of the EU-28



Sources: EC (2007, 2013a); EEA (2019c, 2019d, 2018, 2020b, 2019b, 2011, 2020d); EU (2012, 2009b, 2018c, 2018d); Eurostat (2020b, 2020c, 2020e).

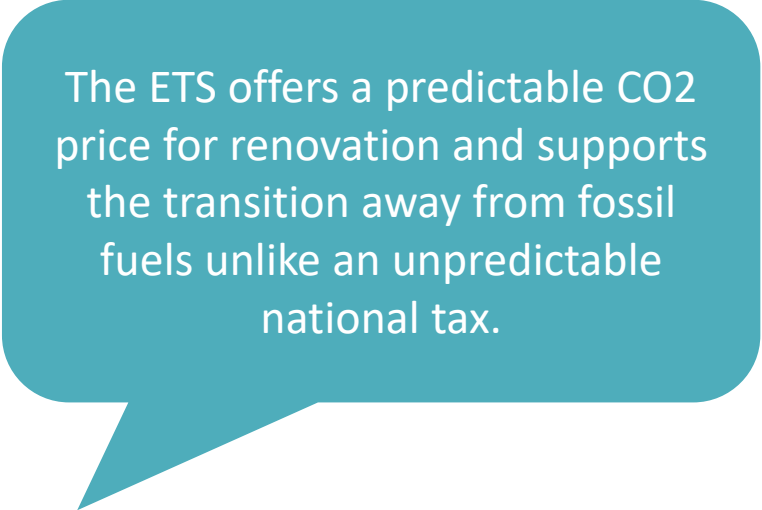
2030 framework – where to focus

- Speed of decarbonisation needs to be quadrupled. Cost-efficiency becomes non-negotiable. Climate target should be prioritised over the other targets.
- Developing the roles of **emissions trading**, **energy taxation**, **state aid rules**, **sustainable finance** and the use of **EU funds** are crucial to channel investment in a smart and efficient, market-oriented way.
- Setting an emission cap for new sectors - like heating – ensures these sectors keep up with emission reductions all around Europe.
- **State aid** was partly loosely directed in the past, and recovery funding will magnify this potentially distortive element in the energy markets – returning back to normal, strict rules after recovery is essential for competition in the climate arena.
- **Energy taxation** is currently lagging behind and not being supportive of the climate and energy policy. It should become the tool to set a price on carbon in the remaining non-trading sectors.
- **Sustainable Finance** is absolutely necessary to guide funding for the energy transition. It needs to be aligned with the carbon neutrality roadmaps and not move investors away from technologies that are part of the solution.



ETS / Extension of CO2 pricing

- Finnish Energy supports the plan to extend the cap-and-trade system to new sectors. In 2020s this can be done in a separate ETS (trial period), but the aim should be to consolidate the market.
- The current Linear Reduction Factor (LRF) must be aligned with the new 2030 target and must be brought into force as soon as possible.
- It can be assumed that overlapping policies (national and the EU level) will exist and therefore it's necessary to strengthen ability of the EU ETS to respond to this (MSR and cancellation).
- Overlapping policies should focus on opening the markets, building needed infrastructure and fostering R&D.
- Now is the moment to decide how to incentivize CCU for bioenergy and WtE plants. The EU ETS could be one way to accomplish this.



The ETS offers a predictable CO2 price for renovation and supports the transition away from fossil fuels unlike an unpredictable national tax.

RED / Renewable energy directive review 1/2

- The recently **RES target** adequately supports the climate policy framework up until 2030. Target setting ensures that more slowly progressing member states are not left behind. A review might be necessary for post-2030 development further on.
- Alongside with renewables, the RED should equally value the utilization of **waste heat and all low carbon energy sources** and technologies, such as low carbon hydrogen and nuclear. Carbon free energy transported via networks should be treated equally with local production.
- Useful ways to **accelerate the use of RE on market basis** are to setting binding timeframe for permitting process including the environmental impact assessment, city and urban planning and permits for the construction and operation, steer investment aid to R&D instead of mature technologies and further develop the energy market. A harmonized funding frame combined with versatile aid would yield more results.
- **Overlapping policies** should be minimized than increased. Where overlaps remain, policy coherence is crucial.
 - ‘Energy-efficiency-first’ should be primarily applied on system level, not to managing individual solutions or local sub-optimization.
 - The increase of low carbon energy use in buildings should be promoted via EPBD. The specific tools for the increase should be left for the MSs to decide.
 - Hydrogen should be promoted via the upcoming gas regulation.



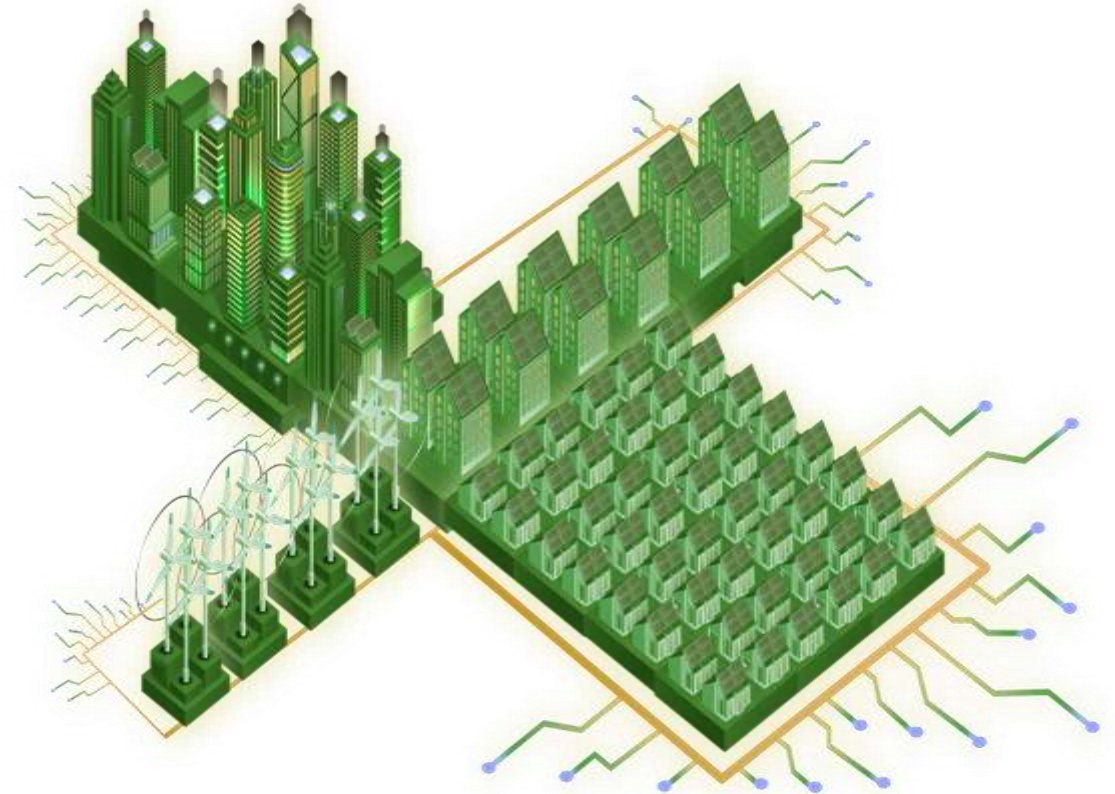
RED / Renewable energy directive review 2/2

- **Heating and district heating** should be regulated in either RED or EED, not both. Balanced specifications for waste heat and efficient DH-networks across Europe are needed. The successful Nordic model is based on open heating markets and very little regulation.
- **Transport** needs a push from the RED review. Finland has set a RES target at 30% for 2035 and is leading the way. RED should also promote the use of power-to-X technologies to decarbonizing transport.
- We emphasize the use of **forest industry by-products and wood residues for energy production**. The current sustainability criteria for biomass are taking national requirements well into consideration. This approach is being currently implemented and should be continued. A few years of experience with the new criteria will allow for an informed review for post-2030 period.



EED / Energy efficiency directive review 1/2

- Ambitious climate policy creates a strong demand signal also for energy efficiency and energy efficiency measures.
- ‘Energy-efficiency-first’ should be primarily applied on system level, not to managing individual solutions or local sub-optimization.
- Low-carbon efforts in different energy use sectors will lead to, for example, an increase in the use of electricity in industry, transport and heating. The absolute amount of energy use is no longer the appropriate indicator for efficiency.
- A technology neutral approach to different energy efficiency measures in different parts of the value chain is the way to deeper emission reductions.
- Overlapping policies should be minimized. Where overlaps remain, policy coherence is crucial.
- Heating and district heating (including waste heat) should be regulated in either RED or EED, not both. The energy performance of buildings should only be included in one directive (EPBD).



EED / Energy efficiency directive review 2/2

- Links between the EED and the Sector Integration Strategy should be considered in particular - how to optimize energy efficiency in a further integrating energy system.
- In addition to reducing energy consumption, energy users should be encouraged to participate in the energy market through their own energy production, flexibility, storage and waste heat. This is possible by utilizing the energy system and networks. Above all, this requires awareness-raising and easily accessible services.
- So far, the EED has created a good framework for improving energy efficiency by giving Member States the flexibility to choose the most appropriate and cost-effective policy measures.
- Flexibility of implementation will be lost at national level if all directives (EED, REDII, EPBD) contain binding and / or mandatory detailed or sector specific requirements.



ETD / Energy taxation directive review

- Energy taxation should become a tool of the climate and energy policy to set a price on carbon in the non-trading sectors.
- The directive should recognise the combined effects it has with relation to emissions trading.
- The directive should recognise the development that has taken in place in the use of renewable fuels and energy sources, the need to electrify the society and integrate different sectors.
- The number of exemptions in the directive should be reduced in order to create transparency and predictability.
- Clarity on the approach to future taxation of energy products is needed. Future technology development must be noted and too detailed legislation should be avoided.
- Possible social impacts of climate policy should be managed through national social welfare systems instead of energy taxation.



Sustainable finance taxonomy - delegated act and new strategy

- Sustainable finance taxonomy is the codex to clarify where investment needs to go in order to promote sustainable development.
- The main challenge is how to finance the energy transition to carbon neutrality.
- All technologies that are able to take us closer to carbon neutrality should be made desirable and interesting to investors.
- Although financing may, and will, exist beyond the taxonomy, it has already taken the place in guiding public and private funds towards the approved technologies.
- The role of nuclear power, different gases, bioenergy, hydropower and CCSU in the carbon neutral future is an imperative case for including them in the taxonomy – with more nuanced requirements on how to use them if necessary.
- Even existing power plants need financing and re-financing of their maintenance, upgrades and due loans.
- The new sustainable finance strategy should set the principle of proceeding with the carbon neutral energy system in every way we can, and to secure financing for them.



EEAG / Review of state aid guidelines on energy and environment

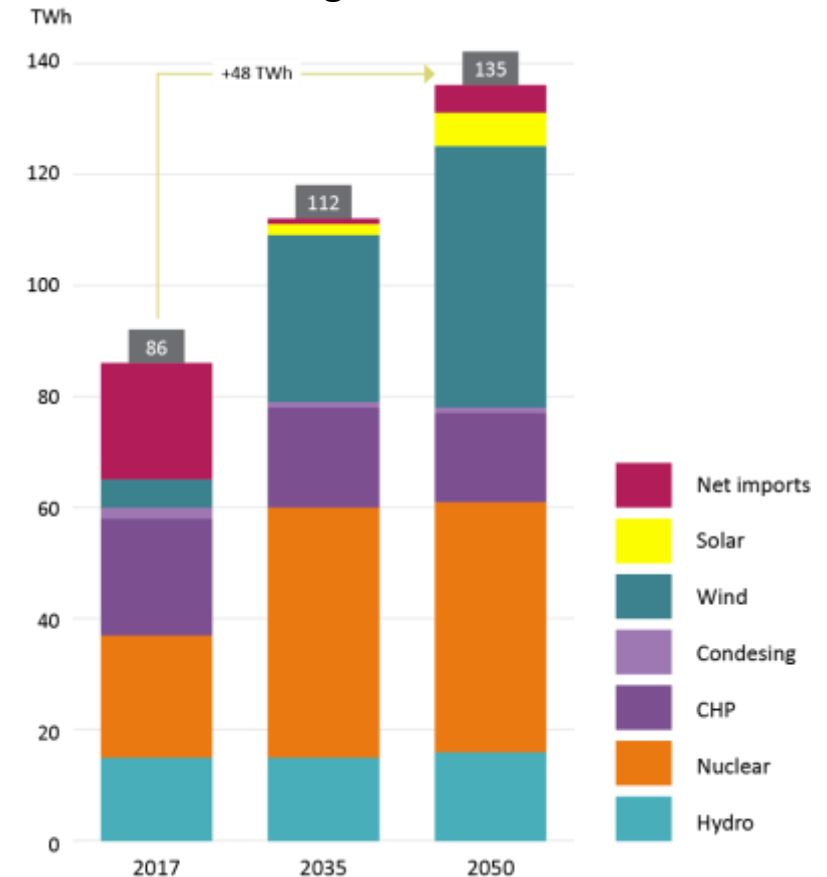
- Multiple technologies are competing for efficient emission reductions with the power, heat and carbon markets as their driver.
- Whereas new solutions are still to be aided to become viable in the market, we need to be even more strict in the future to safeguard the competed arena.
- The temporary boost of national and EU level recovery funding must not spill over and dilute the interpretation of state aid rules in the future.



Offshore renewable energy strategy

- Offshore renewable energy, mainly wind power, is likely to become one of the major electricity sources in the coming decades, also in the North.
- Improving the competitiveness of offshore wind is an important target. It should encompass the whole chain of wind power plant production, infrastructure and market rules for variable production and international projects.
- For becoming a large-scale solution, offshore wind power needs smart sector integration as its companion.
- The question how much offshore wind there will be should be left to the energy market to decide.

Scenario of strong electrification in Finland

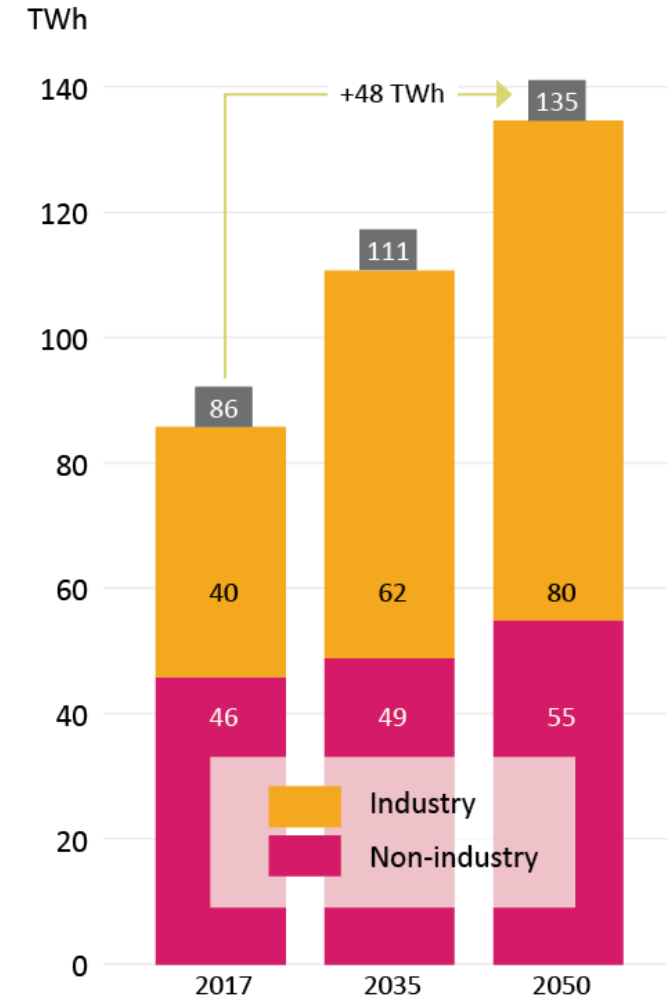


Source: AFRY, Finnish Energy Low Carbon Roadmap 2020.

Hydrogen strategy

- Hydrogen is a welcome addition to carbon free energy carriers alongside electricity and district energy.
- It is especially valuable in areas where fossil fuels are otherwise difficult to replace (Industrial processes, heavy transport etc.)
- The value of hydrogen lies also in its ability to provide much needed flexibility and storability to the energy system. It is therefore important to fully integrate it to the existing system, and avoid creating a detached value chain.
- After taking steps to improve the competitiveness of hydrogen solutions in the first steps of entering the market, the scale and amount of its use should be, once again, decided by the market.
- Finnish Energy supports the state aid mechanism for the electrification of heavy industry (e.g. CCfD).

Scenario of strong electrification in Finland



Source: AFRY Finnish Energy Low Carbon Roadmap, 2020.