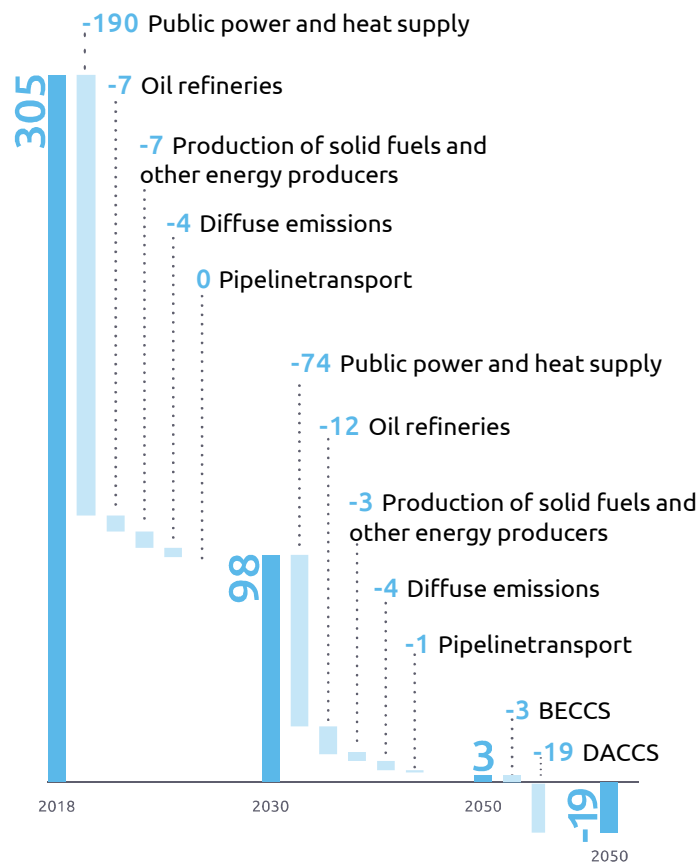


Energy sector 2050: GHG emissions and decarbonization measures



2030

Electricity and district heating¹: Coal phase-out in 2030. Share of **renewable energies** increases to about 70 % of gross electricity consumption. Phase-in of **hydrogen** in gas-fired power plants (2.5 GW). Decarbonization of **district heating**

Refineries: Decline in refinery output

Other producers²: End of lignite refining

Diffuse emissions and pipeline transport: Reduced use of natural gas in the consumption sectors, end of coal mining

2050

Electricity and district heating¹: Direct share of **renewable energies** increases to 100%* of gross electricity consumption. Remaining power generation from renewable **hydrogen**, and from stored and imported renewable electricity. Completely decarbonized **district heating**. Residual emissions from waste incineration. Negative emissions from BECCS (-3 Mt CO₂ eq.) and DACCS (-19 Mt CO₂ eq.)

Refineries, other producers², fugitive emissions and pipeline transports: residual emissions close to zero.

(GHG emissions in Mt CO₂eq)

¹ Public electricity and heat supply

² Production of solid fuels and other energy producers

* Includes electricity generation from renewable hydrogen, and from stored and imported renewable electricity.