

## The potential of energy sector integration

- 1. Sector integration is a win-win for the European energy system and a boost for the wider economy.** Wind and solar will be among the leading energy sources in our future energy system. This will mean high shares of variable renewables and a new set of system management challenges which the heating and cooling (HC) systems can address in a smart way. Increasing the amount of renewables in the heating and cooling sector can reduce CO2 emissions and improve air quality in European cities while reducing the bill from imported fossil fuels and increasing security of supply. Crucially, more renewables in HC can enhance the flexibility of the energy system, reduce curtailment in case of power grid congestions and lower system costs to the benefit of all consumers. This joint development helps sustain global leadership in the renewables and heating and cooling sectors, which have great export potential in particular in the aftermath of the Paris Climate Agreement.
- 2. Sector integration is technically and economically feasible today.** The technologies necessary to make the energy system cleaner and more energy efficient are available, and their costs are falling fast. Integration of renewables into district heating and cooling systems is already happening in countries such as Germany and Denmark which have opted to capitalise on the benefits of smart energy systems. In 2014, renewable energy already accounted for 17.7 % of total energy use for heating and cooling in the EU-28<sup>1</sup>, and investments in renewables will continue to grow in the coming years. Heat pumps and boilers are readily available technologies to increase the use of renewables into heating and cooling.
- 3. Regulatory barriers must be removed to realise full potential.** Facilitated access to financing (cf. Smart Financing Initiative) as well as stable and long-term regulatory framework can help unlock investments as both HC and renewables face high upfront investment costs. Investments in networks are required to expand the share of renewable-driven heating and cooling. Stricter emission standards and resource efficiency requirements can drive the need for heating and cooling solutions (cf. CHP plants). To harness the potential of sector integration, Member States should facilitate a structured cooperation between electricity distribution system and district heating network operators to use the potential of thermal grids in providing balancing and other system services. Member States should also support R&D as innovation focused on upgrading materials, equipment and processes can lead to even higher levels of efficiency.

We call on policymakers to support sector integration as a key driver for a secure, sustainable and competitive energy supply in the spirit of the Energy Union.

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<sup>1</sup> Source: Eurostat