Heat sector decarbonisation

The way forward

Melanie Shaffu
City Energy Solutions
E.ON SE
Renewables share in sectors in EU-28 2016, in %

- Heating & Cooling: 19% (81%)
- Transportation: 7% (93%)
- Electricity: 30% (70%)

Urban Heat supply with the highest potential to meet local CO2-targets – Evolution of technological and regulatory environment is key
Switch will not be easy – How a successful evolution path of a city could look like

Development of urban heat supply

- **Switch from coal to gas**
- **Modernisation heating systems, Expansion decentral district heating**
- **Expansion decentral CHP as bridge technology; Enabling heat feed-in**
- **Growing integration renewables and expansion Power-to-Heat including heat storages**

### Berlin
- **60%**
- **2030**
- **-85%**
- **2050**

**Public administration**
- **CO2-free**
- **2030**
Key points

- Decentral energy production with PV, Geothermal, CHP and waste water heat
- LowEx heating and cooling network (flow temperature max. 40°C/ return temperature max. 20°C) as energy hub
- Enabling of prosumer feed-in
- Decentral heat pumps for providing higher and/or lower temperatures
E.ON experience enables to define and implement solutions on individual/local basis

City supply
- Malmö
- London

City quarter solutions
- Werksviertel, Munich
- Sigtuna, Stockholm

Single-site-solutions
- Berlin
- Westfield Mall, London

Sustainable energy solutions to reach local climate targets
Integrated district solutions based on LowEx concepts
Innovative technologies (e.g. power-to-heat) in decentral object solutions
Thank you

Melanie Shaffu
melanie.shaffu@eon.com