Supported by:

District Energy in Cities

Unlock the market of renewable energy and nature sources for district heating and cooling

Ministry of Foreign Affairs of Denmark
DANIDA

KIGALI COOLING EFFICIENCY PROGRAM

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE

DISTRICT ENERGY IN CITIES INITIATIVE

SUSTAINABLE ENERGY FOR ALL

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UN environment programme

DTU

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District Energy and UN's Sustainable Development Goal

ENSURING *universal access* TO MODERN ENERGY SERVICES.

DOUBLING THE GLOBAL RATE OF IMPROVEMENT IN *energy efficiency.*

DOUBLING THE SHARE OF *renewable energy* IN THE GLOBAL ENERGY MIX.

SDG-11: Sustainable cities & communities

SDG-7: Affordable & Clean Energy

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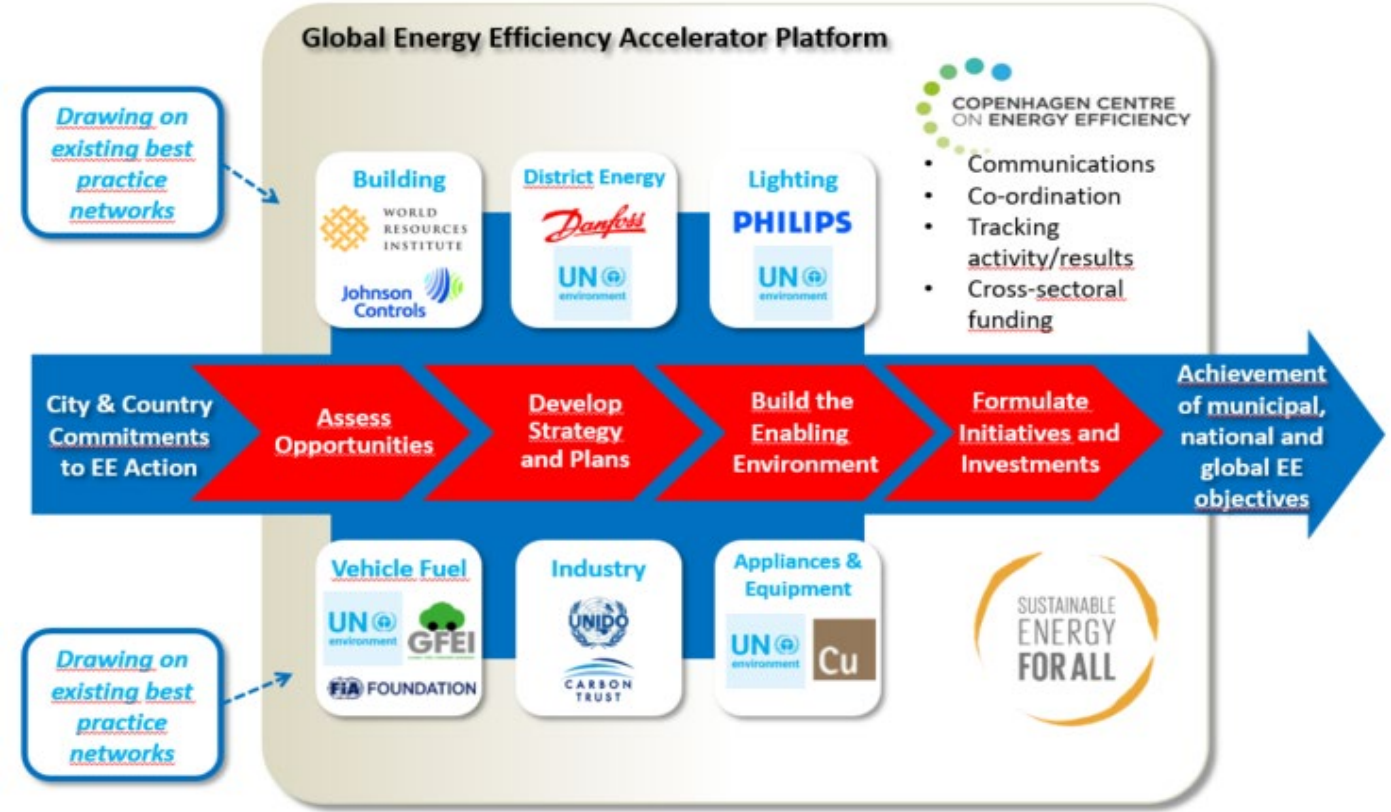
SUSTAINABLE ENERGY FOR ALL ACCELERATOR PLATFORM



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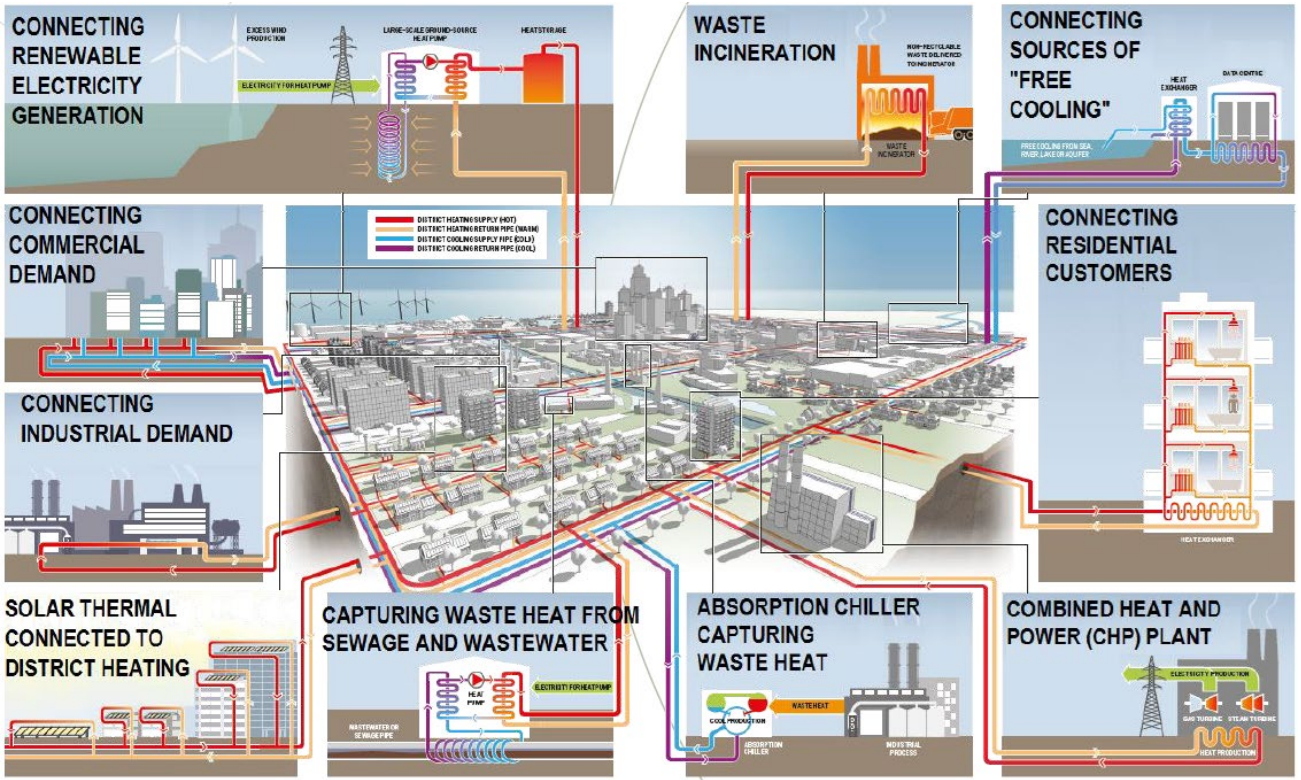
District Energy:
Key to Renewables & Efficiency in Smart Cities



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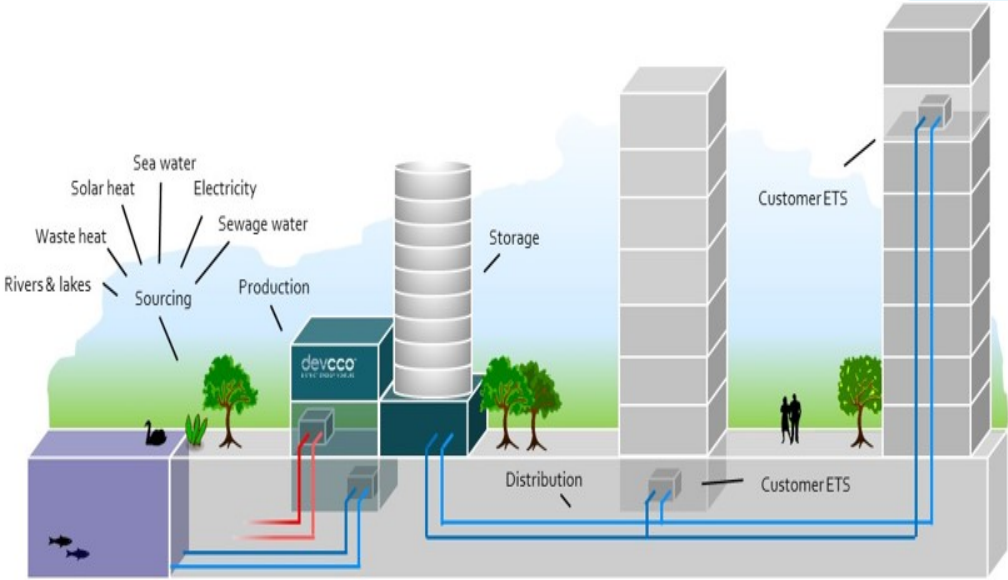
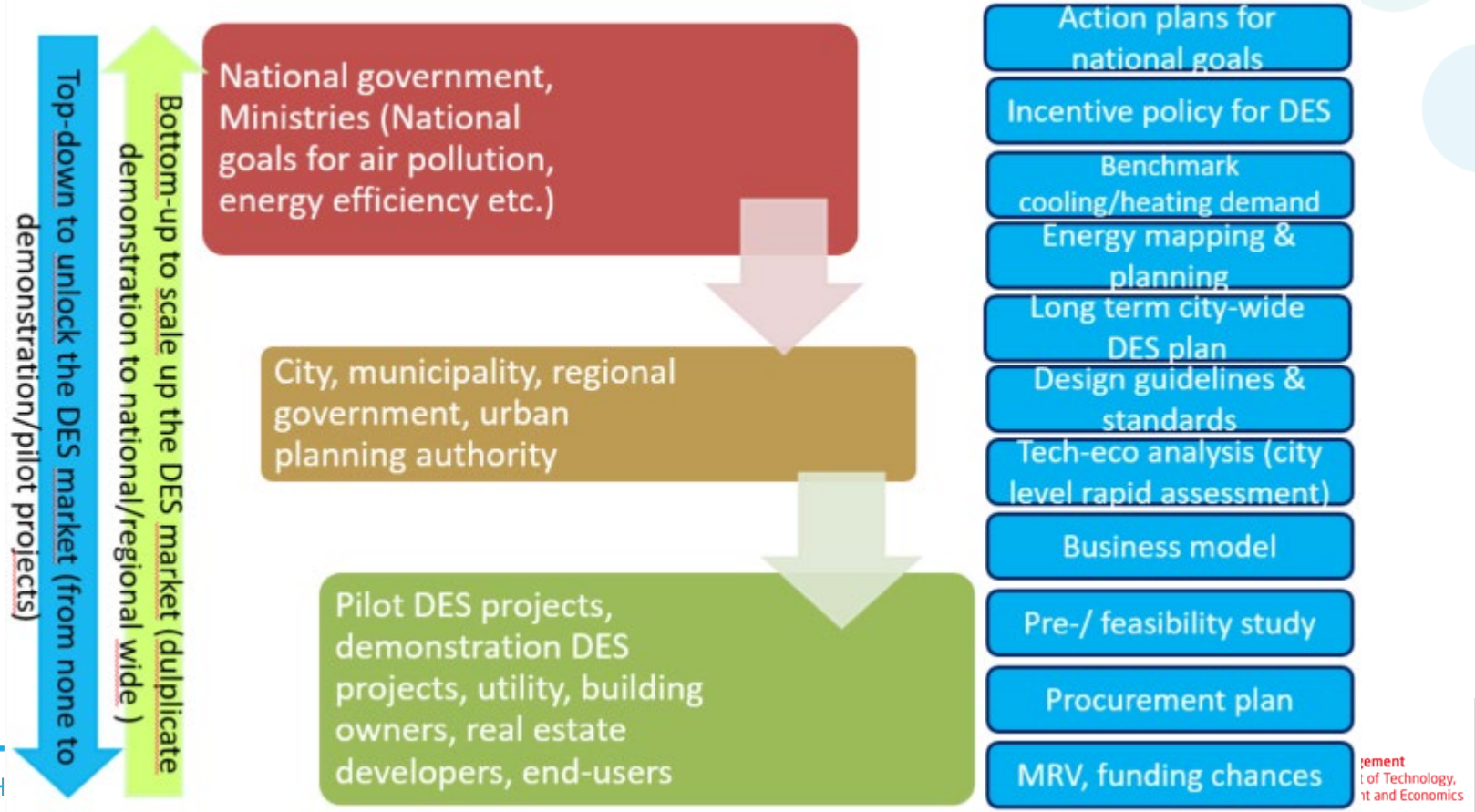
District Energy: Definitions

District energy aims to **use local energy sources** that otherwise would be wasted or not used, in order to offer for the local market a **competitive and high-energy-efficient alternative** to the traditional heating and cooling solutions.



Work Path of District Energy Initiative
Top-down & Bottom-up



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District Energy Team in UDP

Co-supervise students as a team.

Dr. Zhuolun Chen

Dr. Romanas Savickas

Mr. Santiago Martinez Santaclara

Ms. Clara Camarasa Hernando

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Potential topics for master thesis

Principle thoughts:

1) to use the knowledge you have learnt from your master courses, including but not limit to:

- Sustainable heating and cooling of buildings, Energy & Sustainability,
- Energy systems analysis and scenarios, Building energy and technical services
- Energy Economics
- Simulation or Analysis tools: IDA ICE, GIS, etc.

2) to combine with your personal interest and/or intern experiences

3) to combine with our project needs

Potential topics for master thesis

- 4th/5th Generation of District Heating and Cooling
- GIS-based district energy mapping and planning
- Long-term city-wide district energy planning, including integration of renewable energy and other low-carbon technologies
- Technical, environmental and financial analysis, simulation and assessment of district energy systems in different countries or climatic conditions

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Potential topics for master thesis

- Heating & cooling consumption simulation at building-cluster level and its reactions with the district energy network

- Analysis of policies and enabling frameworks, business models of district energy systems and their potential in developing countries and emerging economies

- Methodology or theory of district/region sustainable development and green community design and operation

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DISTRICT ENERGY IN CITIES

For questions and more information, please contact:

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