BUSINESS MODELS IN DISTRICT ENERGY SYSTEMS WEBINAR

16 FEBRUARY, 2021

DISTRICT ENERGY IN CITIES

A GLOBAL INITIATIVE TO UNLOCK THE POTENTIAL OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

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eTraining on District Energy Development

Module 1
Fundamentals of district energy

Module 2
Stakeholder coordination for district energy development

Module 3
Energy mapping and data collection to identify long-term opportunities for district energy systems

Module 4
Strategy development: Incorporating district energy into a local energy and low-carbon heat/cool strategies

Module 5
Policy development: Integrating district energy systems into urban planning

Module 6
Business models, financing options and procurement of sound sustainable district energy systems

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WHAT DO WE DO?

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Our goal: **Help cities tackle the energy transition through district energy**

Our model: A private-public partnership with over 60 partners

Our Approach: Take best practices from around the world, adapt and replicate

Where are we: Supporting over 30 cities in 14 countries

What we do:

MARKET TRANSFORMATION

1. Increase **knowledge** of multiple benefits of district energy
2. Provide **technical assistance** to identify potential pilot projects, undertake pre-feasibility studies, design business models, support the tender process and develop long-term local district energy strategies.
3. **Scale-up** locally, through the establishment of local multi-stakeholder coordination units, and nationally , supporting the development of a national framework to support project development.
4. **Unlock investments**: Support the identification of financial mechanisms to address financial barriers and support the first projects in new markets.

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WHY IS DISTRICT ENERGY IMPORTANT?

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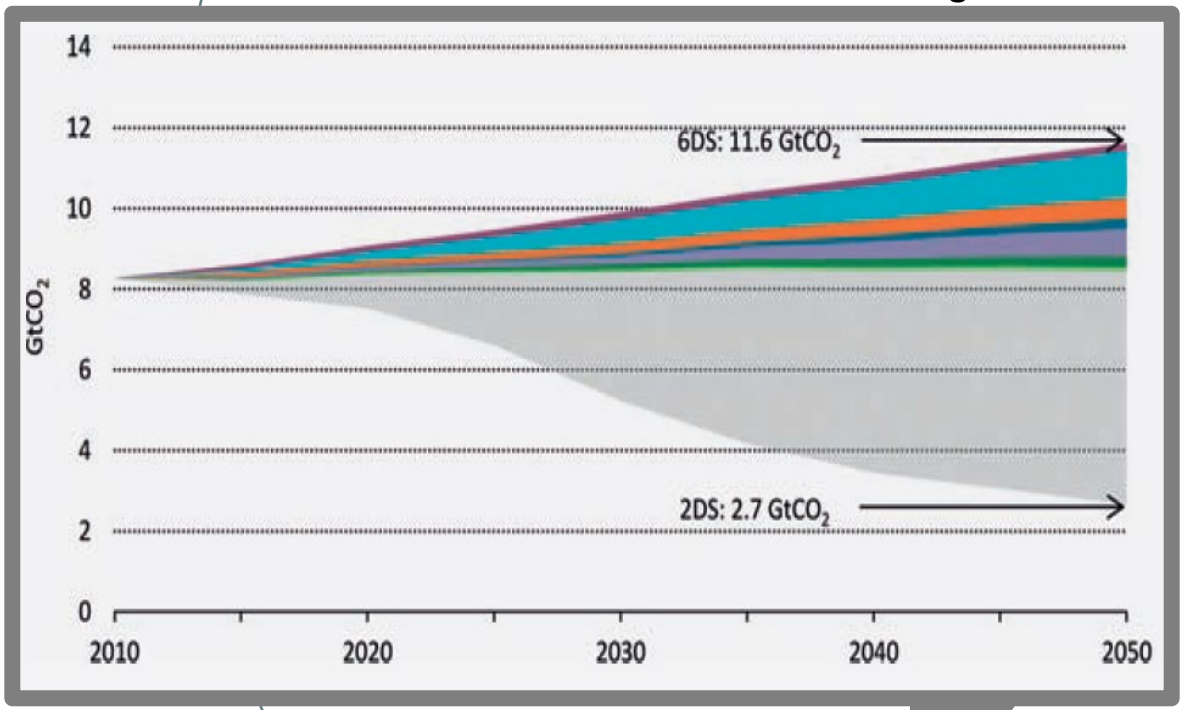
Heating, hot water and cooling account for **60% of the global energy consumption** in buildings, largely met by fossil fuels

Emissions from the buildings sector need to be **reduced by approximately 75% by 2050**

Cooling demand will **grow by 625% by 2050** in selected regions of Asia and Latin America (IEA 2°C scenario)

CO2 emission reductions needed from buildings sector



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WHAT IS DISTRICT ENERGY?

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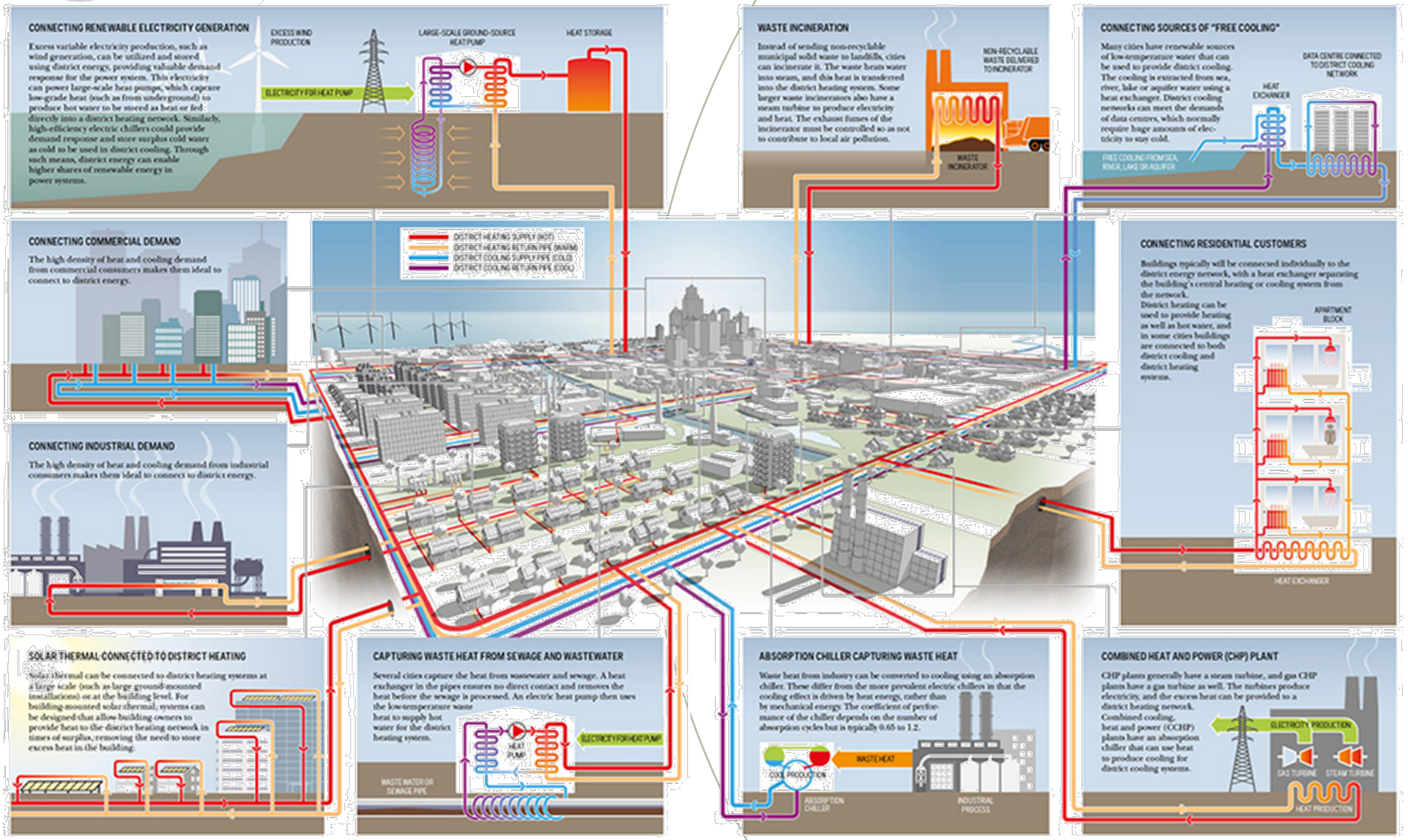

MULTIPLE BENEFITS TO ACHIEVE DIVERSE POLICY OBJECTIVES

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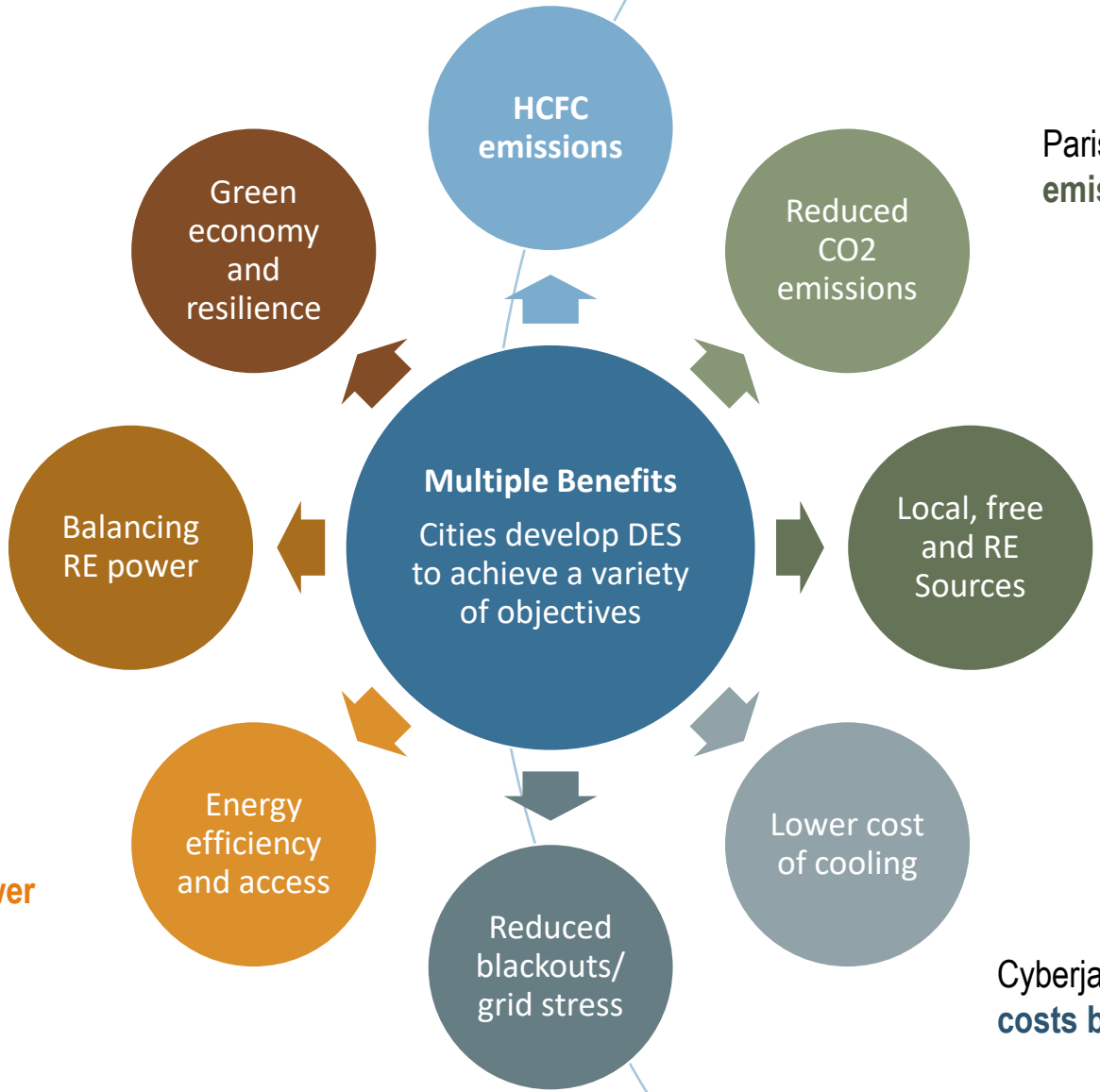
Empower created **700 full-time jobs.**

Paris reduced **refrigerant emissions by 90%**



GIFT City could **lower electricity consumption for cooling by 65-80%**

Cyberjaya **lowered cooling costs by 39%**

WHY ARE BUSINESS MODELS IMPORTANT IN DISTRICT ENERGY

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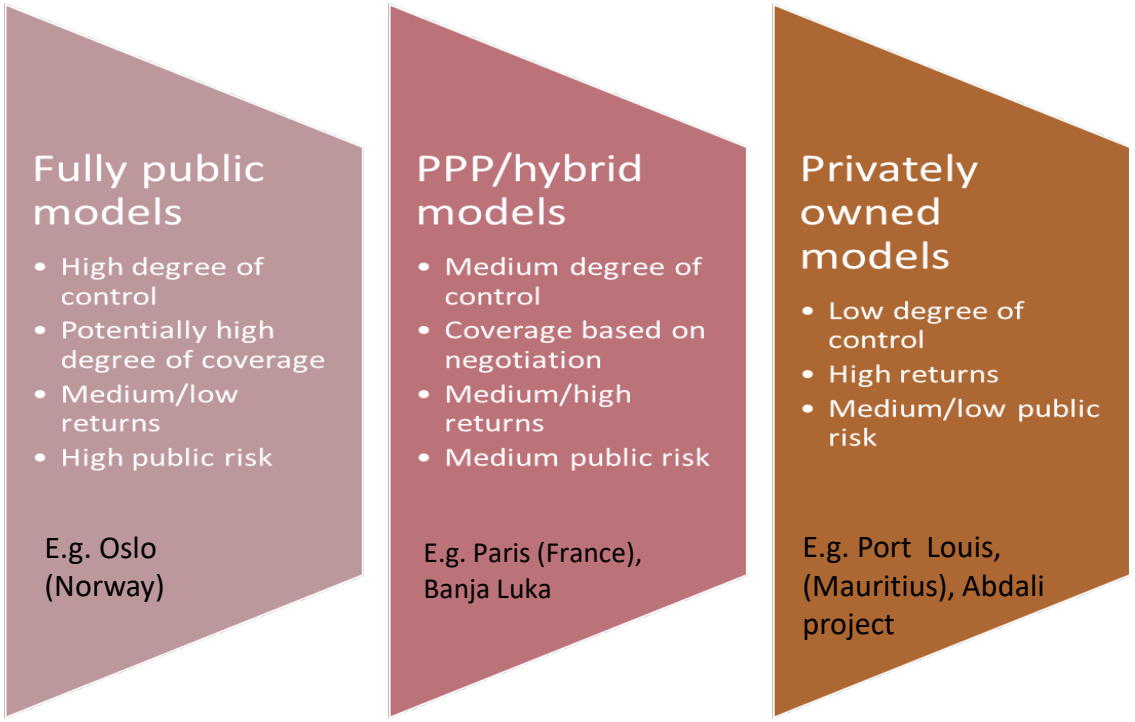
The role of a solid business model in district energy projects

- Leverage lower cost to finance
- Attract and engage investors
- Cater projects' good functioning and operations
- Ensure project stability and longevity

"A mediocre technology pursued within a great business model may be more valuable that a great technology exploited via a mediocre business model" (Chesbrough, 2009)

CHARACTERIZATION OF BUSINESS MODELS IN DES

Business models in DES based on ownership type



Level of Engagement of the public sector will depend on:

- ***RoI***
- ***Level of risk***

Source: District Energy in Cities, unlocking the potential of Energy Efficiency and Renewables (UNEP, 2015)

THANK YOU FOR YOUR ATTENTION

For more information on:
the Global District Energy in Cities Initiative
the Copenhagen Center on Energy Efficiency (C2E)
please visit the website or contact:

District Energy in Cities: http://districtenergyinitiative.org

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