Creating new markets for district energy

District Energy in Cities
A Global Initiative to Unlock the Potential of Energy Efficiency and Renewable Energy

Celia Martinez, District Energy in Cities Initiative, UN Environment

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District Energy in Cities Initiative launch at Climate Summit

Double Global Rate of Improvement of Energy Efficiency by 2030
Our donors

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A global partnership

International District Cooling & Heating Conference
24th - 25th October 2017 | Ritz-Carlton Hotel - Doha, Qatar

- Scale up and Regional replication
- Demonstrate Viability
- Market Transformation
- Create Enabling Framework
- Raise awareness and capacity

8 COUNTRIES
33 CITIES
38 PARTNERS
3 DONORS

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Where we work

- Morocco
- India
- China
- Malaysia
- Chile
- Serbia
- BiH
- Russia

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Barriers found

- Lack of awareness and misperceptions
- Lack of local and institutional capacity for coordinating DES development.
- Lack of holistic planning policies that integrate energy and DES
- No incentive schemes, no regulatory frameworks
- Commercial viability of DES unproven in some markets.
- Lack of data on heating and cooling consumption
What we do

**Increase knowledge** of multiple benefits (publications, outreach and communications campaign)

**Technical Assistance** (rapid assessments, pre-feasibility studies, energy mapping, etc)

**Policy Advice** (city-wide policy and investment plan, multi-stakeholder coordination structure, regulatory framework)

**Build local capacity to** deliver and scale-up (trainings, webinars, city twining)

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The role of local governments

- Planner and regulator
- Coordinator and advocate
- Local Government roles
- Facilitator of Finance
- Provider and Consumer
The Multi-stakeholder coordination structure

- WHO TAKES PART?
  - Consumers
  - Buildings developers
  - Potential investors
  - City planners/local authorities
  - Local utilities

- WHAT IS THEIR ROLE?
  - Support the design and implementation of a long-term DES development plan
  - Platform for collaboration
  - Engage the main stakeholders from the beginning

A first multi-stakeholder consultation meeting in India!
Example of Implementation: Engaging Consumers

Renca, Chile: Opportunity for waste heat recovery

OUR INTERVENTION IN RENCA TO DATE
- Technical visit
- Rapid assessment for project identification.
- Engagement and coordination of stakeholders

NEXT STEPS
- Pre-feasibility study
- Support the city in the development of an enabling framework (e.g. city-wide plan)
- Support in the development of a call for tender
Example of Implementation: Engaging Consumers

OUR INTERVENTION IN MOROCCO TO DATE

- Technical visit to several hotels in the touristic district
- Engaging the local Hotel Association in the multi-stakeholder coordination group
- Data collection including current costs for water heating and cooling services.

Marrakech, Morocco: Engaging potential customers for a district cooling network
### Best practice: consumer protection and tariff setting

<table>
<thead>
<tr>
<th>Mandatory connections (regulated tariffs)</th>
<th>Voluntary connection (unregulated tariffs at national level)</th>
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</thead>
<tbody>
<tr>
<td>Tariff regulated at alternative technology cost. Eg. Norway, Singapore</td>
<td>Market competition</td>
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<tr>
<td>Indirect regulation through capped profits and pass-through costs. E.g Canada</td>
<td>Local governments may still influence tariffs through concession contracts</td>
</tr>
<tr>
<td>Pass-through existent energy subsidies at consumer level to DHC</td>
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</tbody>
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- **Mandatory connections** refer to regulated tariffs enforced through mandatory connections. Tariff setting is based on alternative technology cost, as seen in countries like Norway and Singapore.
- **Voluntary connection** involves unregulated tariffs at the national level, driven by market competition and indirect regulation through capped profits and pass-through costs. Local governments can influence tariffs through concession contracts or pass-through existing energy subsidies to consumers.
Best practice tariff setting: Singapore

**CONNECTION POLICY**
- Singapore District Cooling Act mandated connection of commercial buildings in zone

**TARIFF REGULATION**
- Regulates tariffs to be cheaper than alternative technology
- Operator allowed to earn baseline return on invested assets
- Once start-up costs paid off, profits are shared with consumers
Best practice tariff setting: Yerevan

Using a multi-part tariff to encourage efficient and affordable heat!

**TARIFF REGULATION**

- Business model: Public-private partnership
- Reduce commercial risk and attract private sector
- Heat tariff well below the cost of heat from individual house appliances
- Multi-part tariff encouraging reduction in demand-side.
- Fixed element ensure that fixed costs of connection are paid off
- Electricity tariff calculated to cover all other revenues needed to meet returns on investment for the private sector
For more information on the Global District Energy in Cities Initiative and to become a partner, please visit the website or contact:

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