

Workshop 1: Best Practices in District Energy Systems: Design, Construction, deployment, and Operation

Date: Wednesday, 27 September, 2023

Time: 8:00 a.m. - 12:00 m

Venue: Centro de convenciones Cartagena de Indias, Salón Secretaría General

Language: Spanish

Facilitators:

Juan Ontiveros, IDEA & Ontiveros Energy Consulting, LLC

Carlos Valdez, Optimum Energy LLC

Andrés Velásquez, CEO BT Consultores (Colombia)

Workshop Summary

Using the example of the thermal power system at the University of Texas at Austin, the components of an energy district will be described and the techniques used to extend the life of the system will be explained, as well as key design concepts to facilitate efficiency, operational flexibility and optimization.

In addition, the holistic approach used to operate the system will be described along with an explanation of the key factors used to optimize a single plant, multiple plants on a single circuit, and the use of thermal energy storage.

Efficiency and optimization results will also be provided along with key sustainability advantages and an online demonstration of the University of Texas system, sideways with recommendations for deploying optimized district energy systems.

Methodology:

The workshop will be conducted in four one-hour sessions.

- Each session will consist of 35 minutes of presentation, 15 minutes for questions and a 10-minute break. This allows for the break-up of the seminar to allow for audience participation.
- The fourth session will consist of a live on-line demonstration of the digital twin of the University of Texas at Austin. The intent is to illustrate the actual implementation of the holistic concepts applied to the system with as much time as possible for questions and feedback to the audience.

Content:

1. General Introduction of a District Energy System -DES
2. Introduction of the CHP & thermal system at the University of Texas at Austin
3. Techniques used to improve the life of the system
4. The holistic method of operating the system
5. Important optimization factors
 - i. Using the affinity laws
 - ii. The effect of delta P to delta T
 - iii. Multi-plant dispatch
 - iv. Thermal Energy Storage (TES) dispatch
6. Sustainability benefits
7. Results
8. Demonstration on the use of optimization software
9. Colombia Experience
BT Consultores will share some experiences on the design and implementation of the Energy Districts in Colombia, as well as on the progress in the design, implementation, operation and optimization tools of these systems during the last years.

Cost: \$ 150.000 + Taxes (COP) (USD \$ 50 including taxes)

Registration: <https://districtenergylatamconference.com/inscripciones/>

More information: cidare@acaire.org

Workshop 2: Policy, Governance, Business Models & Financial Strategies for Developing District Energy Systems

Date: Wednesday, 27 September, 2023

Time: 8:00 a.m. - 12:00 m

Venue: Centro de convenciones Cartagena de Indias, Salón Pegasos

Language: English (simultaneous translation to Spanish is available)

Facilitators:

Rob Thornton, President & CEO, International District Energy Association -IDEA

Alexander Sharabaroff, Senior Energy Specialist, MAS Climate Advisory, International Finance Corporation – IFC (TBC).

Edgar Botero, CEO, MGM Innova Energy Services, Colombia.

Content:

1. Context and Level-Setting – Policy, Economic, Environmental and Social Contexts

Overview of trends shaping district energy deployment including nodal development and integration of renewables as well as economic, social and environmental drivers influencing growth.

2. Community-Based Energy Planning

Community energy planning includes organizational and financial best practices.

3. Enabling Policies

The role of policies in enabling District Energy including national/federal, state/provincial and municipal/council levels.

4. Business Models

The range of business model options from wholly-public to wholly-private and hybrids in between, with considerations for financing and governance and insights for choosing a business model.

5. Financing Strategies

IFC shares a range of financing strategies including green energy loans and other Paris Agreement-aligned approaches to achieve sustainability, climate mitigation and adaptation.

6. Colombia Experiences

MGM Innova Energy Services will share some experiences in the implementation of Energy Districts in Colombia, with emphasis on the enabling policies and business models that have been implemented in the country.

Cost: \$ 150.000 + Taxes (COP) (USD \$ 50 including taxes)

Registration: <https://districtenergylatamconference.com/inscripciones/>

More information: cidare@acaire.org