DISTRICT ENERGY PROJECT IN COLOMBIA

February 1st, 2017
HOW DID WE GET HERE?

- Imminent change or expansion of clients equipment
- EPM strategy to promote new energy districts
- Existence of the “Chiller Program” from MADS

Coincidence of factors

2004
2012

Provides international technical assistance and financial resources
Implements the project and provides resources
Accompanies the project

Leads promotion of thermal districts and provides resources
COOPERATION PROJECT

**OBJECTIVE**

Promote the implementation of Districts Energy in Colombia to improve energy efficiency in buildings. Replace coolers that work with Ozone Depleting Substances

**Contributions**

<table>
<thead>
<tr>
<th>SWITZERLAND</th>
<th>MADS</th>
<th>EPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>28%</td>
<td>0.4%</td>
<td>72.6%</td>
</tr>
</tbody>
</table>

**INFRAESTRUCTURE**

- Pilot project
- Construction of District Cooling of La Alpujarra
- Energy efficiency measures for buildings of La Alpujarra
- Learning and replication

**PROMOTION**

- Analysis of current regulations
- Identification of business models
- Mapping and development of energy districts in 5 cities
- Renewable energy
- Training and dissemination
- International knowledge and experiences exchanges
INFRAESTRUCTURE

Pilot project of District Cooling of La Alpujarra

- 5 beneficiary organizations
- Technical and operational innovation
- Demonstration, learning and replication
- 30% decrease of Greenhouse Gases
- Elimination of Ozone Depleting Substances
INFRAESTRUCTURE

Electric Energy (EE)

Substations 1 & 2 of EE

Electric Energy (EE)

District Energy
Electricity demand

EE Generation System

Absorption Chiller LiBr

Cold water production DE

Postcombustion system with burner

Natural Gas Regulation Station

EE from the grid

NG from the grid

Electric Chiller of NH₃ No. 1

Electric Chiller of NH₃ No. 2

Electric Chiller of NH₃ No. 3

Heat exchanger
INSTITUTIONAL STRENGTHENING AND STRATEGIC PARTICIPANTS

- National and regional public organizations
- Financial institutions and cooperation organizations
- State-owned enterprises
- Clients

- Identification of environmental and energy attributes of cooling industry nationwide
- Definition of potential areas for implementing energy districts
- NAMA for the Air Conditioning industry in Colombia
- Methodology for identification and selection of thermal districts
- Institutional strengthening and Business opportunities
Thank you!

Lucas Velasquez
Professional of Planning and Development
EPM
lucas.velasquez@epm.com.co