A Swedish perspective
Our Milestones

1923
Foundation of CTC company in Sweden

1955
Establishment of CTC factory in Ronneby (south of Sweden) producing copper-lined storage tanks for hot water, heat exchangers and laundry equipment.

1991
After many organizational changes creation of the brand and company name Cetetherm with subsidiaries in Germany, Finland, Poland, Czech Republic, Estonia, Latvia and Lithuania

1998
Cetetherm France is created when Alfa Laval acquires the French company Vicarb. The product offer is expanded with the French tap water systems of the following brands: Smart, Uranus and Vicarb.

2005
The Cetetherm product range is completely integrated into Alfa Laval and the brand name Cetetherm is replaced by Alfa Laval.

2018
NIBE acquires on June 1st the complete Cetetherm product range from Alfa Laval. This means the comeback of the brand name and the company name Cetetherm in the HVAC market.
Our sales force

https://www.cetetherm.com/en/contact
Our «Nordic» observations on District Energy in Europe

Happy to see
- DE is gaining ground as solution to Climate Change!
- Many different technologies are being considered: from utilizing Waste Heat to developing Low Temperature Grids

Happy to share
- Some cultural experiences (collectivity vs individuality)
- Technical experiences («Best Available Technologies») >60 years
Some of our concerns

- Learning Curve takes time!
- Decision Making Process takes time!
- Hidden cost of non-industrial approach
- Ownership Primary vs Secondary installations
- Performance in District Energy = RETURN TEMPERATURE!
Return Temperatures?
The Industrial Approach

« My Local Needs »
• Local regulations
• Historical preferences
• Relationships
• Performance?

« Industrial Quality »
• Economies of Scale
• Predictable and reliable Performance
• Integrated Communications
• Return Temperature!
Eco Labelling for Substations

• EuroHeat and Power / DHC Initiative
• Quality Seal: get what you expect
• Performance rating
Some Key Elements of the Program

- Ratings: Bronze - Silver - Gold - Platinum
- Independently tested by accredited laboratories
- How to « earn points »?
  - Right sizing and dimensioning of equipment
  - Heat Exchangers according to EN1146
  - Insulation
  - Good Control System
- If possible, Configuration Software designed in line with Program
Cetetherm WebSelect

- Eco Efficient Substation online configurator
- Designs substation, defines EES label and generates output documents for production

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat losses</td>
<td>0 / 10</td>
</tr>
<tr>
<td>Pressure losses in secondary side</td>
<td>5 / 5</td>
</tr>
<tr>
<td>Cooling of return temperature (heating)</td>
<td>20 / 20</td>
</tr>
<tr>
<td>Cooling of return temperature (DHW)</td>
<td>15 / 15</td>
</tr>
<tr>
<td>Control and limitation of max capacity / primary flow</td>
<td>15 / 15</td>
</tr>
<tr>
<td>Indoor temperature data</td>
<td>5 / 5</td>
</tr>
<tr>
<td>Remote monitoring and control</td>
<td>25 / 25</td>
</tr>
<tr>
<td>Eco function</td>
<td>5 / 5</td>
</tr>
</tbody>
</table>

PLATINUM 90 / 100
Win – Win - Win

**Energy Companies**
- Easier design process
- Quality Assurance
- Better Return Temperatures
- Operational Profit!

**Supply Chain**
- Standardisation
- Economies of Scale

**End Customers**
- Peace of Mind
- Lower Energy Bills
- Link to EPC?
Adoption Process

- **Supply Chain:** Cetetherm supports, prepares and promotes

- **Users/Energy Companies:** Dalkia France interested
IQ Heat Cloud – the Enabler

- prepared for API real-time adaptive control
- enables the use of artificial intelligence to:
  - even out peak loads in the grid
  - optimize the energy consumption in buildings.
Our Product offering

District heating & cooling solutions

- Heat Interface Units
- District heating substations
- District cooling substations
- Tubular heat exchangers

Collective boiler room solutions

- Tap water systems
- Storage tanks
- Hydraulic expansion systems