Renewable Heating and Cooling from the Dutch Perspective

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Vertrouwelijk
The district heating has a sky high ambition to innovate and grow at an unprecedented level.

Innovation & sustainability
- Solar & Geothermal
- Demand side management
- Plastic piping
- Combined heating and cooling
- Smart networks

Growth
NL ambition: x3
The growth will mostly need to come from expanding existing networks with performance that is at best “questionable”

We run on PLC and a simple web interface on top. While really important, analytics feels light years away for us.
- Small network owner

Asset managers typically have little incentive to invest and improve performance. If they forecast the same performance as historic, with little risk, they easily hit their targets. There was not a yearly process to identify improvement opportunities, and no-one analyzing these types of things centrally.
- Former asset manager

We run our networks with much too high temperature margins because everyone puts a few degrees margin ‘on top’ just to be sure. We’re engineers you see.
- Senior operator

Everyone talks about 4th generation networks and smart networks, but I’ll admit internally we don’t have a roadmap nor the capabilities to really get started and ‘get smart’. The Nordics do seem ahead but that’s a bit far away.
- Former development consultant

Don’t underestimate how little time and insight asset managers have on their networks. This is still an ‘excel world’.
- Former asset manager

Current district heating networks lose 20-40% of energy during transport

In people’s mindset this is still a government entity, where historic performance is just fine. Heat loss is seen as a fact of life. We can’t change that mindset without better information to set unambiguous targets.
- Network manager
In other words:

*How do we successfully fit in sustainable, efficient, low-temperature, bi-directional solutions into our current mostly outdated, high-temperature and low performance infrastructure?*
Without words:
So what do we need?

- Setup realistic performance ambitions for existing networks
- Focus and reward incremental improvements, rather than risky “big bang” solutions
- Optimize what is there, and start with the basics:
  - Setup annual targets for temperature reduction in existing networks
  - Assign a performance manager with the right mandate
  - Resolve bottlenecks, one substation at a time
  - Don’t wait until perfect data is available and work from what is there today