Introducing DATES

Or, how to optimise energy use
(among buildings)
Your speaker

I’m Robert Jan Buunk of IF Technology, and (on the left) my colleague Herman Velvis
Our company

IF Technology is a leading provider of ATES solutions. We apply theory to create practical, cost-effective solutions.


Most of the shares in IF are owned by our 60 employees.

www.iftechnology.nl
I guess you all know ATES

A smart, ‘green’ way to store and use seasonal heat or cold.

You will need a suitable climate, an aquifer, and compliance with regulations.
What’s the role of ATES in DATES?

ATES provides storage for DATES

- Thermal efficiency approx. 0.7 – 0.9
- 100 - 1,000 MWh of thermal energy per well.
And what’s the D in DATES?

A 2-pipe solution with divided ATES storage points
How does DATES work?

Mark and Sanne want to share some energy.
A solution is found!

Now they can exchange energy, using DATES.
Now, let’s add more buildings.

Can we join?
No problem!
DATES in practice

10 large wells (250 m³/h) instead of 24 wells
3,100 m extra pipework
Total investment costs are 19% lower
Should the wells be clustered or distributed?

- Both examples need 1,430 metres of piping and 40 m³/h per building
- Distributed wells need smaller diameter piping
- Here, the cost reduction with distributed wells is 65%
So, what about our friends?

There’s a problem with the energy balance...
What do our friends need to know?

To make DATES work, you need to pay attention to:

• Your accounting (measuring and controlling)
• Your return temperature (under various conditions)
• The total energy balance (joint regeneration)
“Change is the only constant”

Utrecht University Uithof Campus

2009: Update a building
2011: Update a building
2013: New building
2014: New building
2015: Change a building
2017: Connect a building to DATES
2019: New building
2020: Change a building
2022: Demolish a building
2024: Demolish a building?
Switch to DATES

Utrecht University

Uithof Campus

The situation (in 2014):
• ATES since 2002, 8 wells
• One central exchange point (tree structure)
• Not able to connect new data centre (small piping, end of tree)
DATES: fit for the future

2014:
- 4 extra wells
- New network
Our friends are also future-proof

An office building becomes student housing.
Now what about you?

Could DATES be viable in your situation?

Please contact us to find out.

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