

Plenary Keynote: Samir Abboud

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Industrializing geothermal energy for urban district heating

Abstract

As the globe is getting warmer, it's time to rethink the way we heat our urban buildings. Large-scale geothermal heating plants can provide local baseload renewable energy for district heating companies and accelerate the independence of gas and coal.

There are three main reasons why the breakthrough for geothermal as an energy source for district heating is now:

1. In the future, power will be produced by wind and solar which does not generate waste heat to heat our houses. This opens a demand for new heat production technologies.
2. Historically many projects have failed due to either poor planning and executing in the exploration phase or poor production management in the operating phase. With experience and competencies from the oil and gas industry and taking full project responsibility from 'cradle to grave', Innargi removes the risks from the district heating company and consumers, making geothermal energy an attractive product.
3. The price has been reduced when talking large scale geothermal heat production because the process can be industrialized.

Innargi has developed and patented a modularized surface facility solution that has a very small physical footprint. The small footprint makes it easier to integrate in an urban environment. The modularization and standardization help us drive down costs and reduces the time on-site in the construction phase. It also reduces downtime if a major repair is to be made - then the module can be lifted out through the roof of the building and repaired off site.

The geothermal brine is produced and injected via a standard pair of wells, and what is going on in the reservoir is basically a large waterflood - there is just no oil involved. That is why using experience and competencies from the oil and gas industry is an essential part of unlocking geothermal as a renewable energy source for district heating.

District heating is one of the cheapest ways of achieving the transition to green energy in large cities. But district heating is only green when the energy sources are green and only reliable when the energy sources are available as baseload 24/7 – 365. Geothermal energy is a large renewable energy source waiting to be tapped. So, let's rethink heating!

