



Press release
March 2021

The HIVE team has been awarded by the City of Helsinki as the most effective solution to decarbonise its heating network by 2035

Helsinki is aiming to be one of the leading cities in the transition towards a sustainable future, with the goal of becoming carbon-neutral by 2035. To achieve this target, the city has decided, in February 2020, to launch a competition to meet the challenge of decarbonizing its heating network by using as little biomass as possible. On Tuesday 16 March, an international jury selected four winners, including the European team HIVE (Hyvä meaning “good” in Finnish), composed of ENGIE and its subsidiary Storengy, NEWHEAT, SAVOSOLAR, PLANENERGI and AEE INTEC.

A shared ambition to move towards a carbon-neutral economy, through reduced energy consumption and greater respect for the environment

HIVE is proposing a solution for the city of Helsinki that calls for an end to coal burning by 2028, no burning of fossil fuels beyond 2035 and a reduction in the use of biomass to 50% of needs by 2024.

HIVE's energy plan for Helsinki, based on proven solutions, consists of a combination of seawater heat pumps, solar thermal energy, electric boilers and extensive heat storage. The mixed asset portfolio of mature technologies further enhances the reliability of the system.

Technologies that make better use of Helsinki's assets

HIVE's solutions:

- Can take advantage of Helsinki's incredible natural resource to harvest heat from the sea using heat pumps, up to 50% of the city's heating needs. In this way, heating will not depend on imported fuels or commodities. Water from the Baltic Sea, aided by extensive local storage, will become the main source of heat.
- Ensure an optimisation of solar thermal fields, thermal energy storage and the district heating network (set to a lower operating temperature).
- Freeing up space in the city centre, especially in the Salmisaari and Hanasaari areas, where coal-fired power plants will be phased out and replaced by smaller heat pumps.
- Foster local roots and create local jobs over 15 years and beyond.



HIVE – a scalable, adaptable and ambitious solution to reduce the city's footprint

The HIVE solution meets the city's expectations, including demand-side management measures and strong support throughout the implementation process. Its energy plan is flexible and able to integrate new technologies or heat sources as they emerge.



Download available at energychallenge.hel.fi/hive

About ENGIE:

Our group is a global reference in low-carbon energy and services. Our purpose (“raison d’être”) is to act to accelerate the transition towards a carbon-neutral world, through reduced energy consumption and more environmentally-friendly solutions, reconciling economic performance with a positive impact on people and the planet. We rely on our key businesses (gas, renewable energy, services) to offer competitive solutions to our customers. With our 170,000 employees, our customers, partners and stakeholders, we are a community of Imaginative Builders, committed every day to more harmonious progress. Turnover in 2019: 60.1 billion Euros. The Group is listed on the Paris and Brussels stock exchanges (ENGI) and is represented in the main financial indices (CAC 40, DJ Euro Stoxx 50, Euronext 100, FTSE Eurotop 100, MSCI Europe) and non-financial indices (DJSI World, DJSI Europe and Euronext Vigeo Eiris - World 120, Eurozone 120, Europe 120, France 20, CAC 40 Governance).

www.engie.com

About Storengy:

Storengy, an ENGIE subsidiary, is one of the world leaders in underground natural gas storage. Drawing on 60 years of experience, Storengy designs, develops and operates storage facilities and offers its customers innovative products. The company owns 21 natural gas storage sites with a total capacity of 136 TWh in France, Germany and the United Kingdom. Storengy is positioned today as a key player in the development of geothermal energy (heat/cold production and power generation), as well as innovative production and storage solutions for renewable gas (biomethane, hydrogen, synthetic methane).

www.storengy.com

About NEWHEAT:

As a renewable heat producer and leader in solar heat supply, NEWHEAT designs, finances, builds and operates renewable heat production, heat storage and heat recovery assets to supply sustainable, local and competitive



heat to industry corporates, district heating networks and greenhouses. Its mission is to massively decarbonize heat which stands for 50% of the final energy consumption worldwide. Created in 2015, NEWHEAT has set up 15 million euros for its greenfield projects and is currently operating or building 6 production units.

www.newheat.com

About Savosolar:

Savosolar with its highly efficient collectors and large-scale solar thermal systems has taken solar thermal technology to the next level. The company's collectors are equipped with the patented nano-coated direct flow absorbers, and with this leading technology, Savosolar helps its customers to produce competitive clean energy. Savosolar's vision is to be the first-choice supplier to high performance solar installations on a global scale. Focus is on large-scale applications like district heating, industrial process heating and real estate systems – market segments with a big potential for rapid growth. The company primarily delivers complete systems from design to installation, using the best local partners. Savosolar is known as the most innovative company in the business and aims to stay as such. The company has sold and delivered its products to almost 20 countries on four continents. Savosolar's shares are listed on Nasdaq First North Growth Market Sweden with the ticker SAVOS and on Nasdaq First North Growth Market Finland with the ticker SAVOH.

www.savosolar.com

About PlanEnergi:

PlanEnergi is a private independent consultancy specialized in the planning and deployment of renewable energy solutions. With three offices in Denmark (Skørping, Aarhus and Copenhagen) and 45 employees, the company has facilitated the integration of renewable energy through numerous projects both in Denmark and abroad since 1983. PlanEnergi ensures a strong combination of experiences from the practical implementation of various renewable energy technologies and R&D projects to play an active role in the development of new technologies. This link is key to PlanEnergi's best practice planning and implementation of RE heating and cooling systems including flexible sector coupling. Technologies include solar thermal plants, heat pumps, biogas and thermal storages among others, while a focus is always kept on the overall energy system perspective.

www.planenergi.eu

About AEE INTEC:

AEE INTEC- Institute for Sustainable Technologies (AEE INTEC) is a non-university research institute in the field of renewable energy and resource efficiency located in Gleisdorf, Austria. AEE INTEC is one of the leading European institutes in the field of applied research. The institute was founded in 1988 and currently employs over 75 staff members from 8 different nations. The research work of the institute is spread across a number of main areas: Cities and Networks, Industrial Systems, Buildings and Technology Development. AEE INTEC is one of the frontrunners in terms of sustainable heating and cooling for cities, districts and building and actively involved in national and international research and demonstration projects ranging from the development of technologies such as innovative storage concepts, to the planning and concept development of technical and systemic interventions to later demonstration, monitoring and optimization.

www.aee-intec.at