



SmartEnCity Network Bulletin

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Dear Readers,

In this month's bulletin we are focusing on the technologies that our SmartEnCity network cities across Europe use to back up their **Smart Zero Carbon** journeys. Find more about the District cooling solution in Tartu from our Estonian expert – Margus Raud, Fortum Tartu. Our expert David Drysdale from Aalborg University continues with his series of articles, this time he focuses on the second phase of the Integrated Energy Planning process that a city goes through.

In addition, we are happy to invite all of our SmartEnCity Network members to a replication workshop organised by Smart Cities and Communities in collaboration with INEA and the European Commission, which you can read more about below.

Enjoy reading!

Kristina Bozhkova
SmartEnCity Network Coordinator
ProjectZero



Status of the district cooling system in Tartu, Estonia



One of the SmartEnCity solutions for Tartu was to create a district cooling system in a chosen pilot area in the city of Tartu. The pilot area consists of apartment buildings where their

space heating is based on district heating networks. However, hot water is produced locally with individual natural gas or electrical boilers. The residual heat from the cooling process in this solution will be used to produce hot water and space heating and will be supplied through the existing district heating network. Furthermore, the district cooling system will use solar energy from PV panels to cover a part of the cooling system's electricity demand. Read more about this solution [here](#).

In the SmartEnCity project, AS Fortum Tartu provides district cooling services. Fortum Tartu has established the production plant and the distribution network of district cooling. The district cooling is produced from compressor chillers, heat pump and in the winter there is the possibility of using free cooling from the river. [Read full article](#).

The SmartEnCity Network

The **SmartEnCity Network** continues to expand and another mini national cluster is forming in **Bulgaria**. It all started with Asenovgrad, which is one of the initial follower cities of the SmartEnCity project and which has continuously involved and inspired other Bulgarian and international cities to join the SmartEnCity network and start their **Smart Zero Journey**.

The network in Bulgaria has a total of 4 cities – [Asenovgrad](#), [Burgas](#), [Smolyan](#) and [Sofia](#). In addition, the Association of Rhodope Municipalities has also joined the network and its 7 Covenant of Mayor signatories' cities are on the way to become part of the SmartEnCity Network.



[Learn more about all city members on our SmartEnCity Network Platform](#)

How is SmartEnCity contributing to zero carbon cities in Europe?



David Drysdale is a PhD fellow at Aalborg University, Copenhagen. As part of the SmartEnCity project, he is conducting research on zero carbon energy planning in cities particularly focused on combining local city planning with the energy system transition. He is also supporting the SmartEnCity Network development process. This short article, written by David, is Part 3 of a series of articles describing the SmartEnCity approach to zero carbon city development.

Part 3. Creating a vision for zero carbon energy system

For a city to become zero carbon, it is infeasible to rely upon incremental technology implementation. The energy system needs to be transitioned as a whole: systematically and comprehensibly. Systematic transition will involve separate technologies but the types, quantities and timing of implementation need to be understood. To direct and achieve this transition, there must be a vision of what the future system looks like at a particular year. It is necessary to have a basic systemic vision at the outset of the first integrated energy plan when making goals. [Read full article](#).

Ringkobing-Skjern's wind and solar farms



Denmark's largest energy park consists of 69 000 PV's which stand in a row at the largest onshore wind farm in Denmark. Together the solar and wind farms produce power enough to supply electricity to 61,000 households and cover an area corresponding to 57 football fields. **Read**

more about the [wind](#) and [solar](#) farms in Ringkobing-Skjern.

Hydro power plants in Asenovgrad



There are two existing hydro power plants on the territory of Asenovgrad with total combined power capacity of 8.5 MW, enabling the municipality to produce renewable electricity for its residents. **Read more.**

[Read more.](#)

Smart street lighting in Tartu



The smart street light control system developed by Cityntel OU is based on a wireless mesh technology. Smart controllers, capable of network and device-related decision-making, are installed in each of the new 312 LED street lights in Tartu and rely on wireless communication for exchanging information between the controllers and sensors. **Read**

more. [Read more.](#)

Biomass district heating in Vitoria-Gasteiz



In addition to retrofitting residential buildings in the Coronación neighbourhood, a biomass district heating network is going to be deployed. A two-step implementation process has been developed for the district heating network in order to maximize the cost effectiveness

of the investment in the distribution network. **Read more.**

The EU corner - Invitation to a cross SCC Replication workshop in Stavanger

This event targets city representatives from all Smart Cities and Communities projects (SCC), including SmartEnCity's lighthouse, follower and observer cities. The workshop is organised with the collaboration of INEA and the European Commission with the aim of helping cities in facilitating their procurement and implementation of **Smart City Solutions** and overcoming the barriers they face.

Two rounds of round table discussions are planned for this event where different municipal city representatives across Europe and their partners will present their best practices. Following this, the cities participating in the workshop will discuss various challenges they face and how they could be resolved.

When: 28th September 2018, 8:30 to 14:00

Where: Stavanger, Norway

Register [here](#).

For more information about this event, please read [here](#).

Deadline for registration is 5th September 2018.

Join the SmartEnCity Network and start your learning experiences now!

Stay in touch:

- Use the SmartEnCity Network platform to learn more about our network members, events and news [here](#).
- Learn more about the SmartEnCity project on our [website](#).
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