



SmartEnCity Network Bulletin

FEBRUARY 2019 –

The Integrated Energy Plan of Sonderborg

Dear Readers,

This month the Bulletin focuses entirely on the Integrated Energy Plan (IEP) created lately by one of our lighthouse cities – Sonderborg, Denmark. The IEP, also referenced as the ProjectZero Roadmap2025 gives an overview of 50 initiatives that Sonderborg is focusing on to achieve carbon neutrality. The main points of the roadmap are highlighted and summarised here.

You can find a link to the full version of the Roadmap2025 at the end of the bulletin, along with the previous roadmaps that Sonderborg has developed; i.e. Roadmap2015 and Roadmap2020, and the Masterplan2029.

In addition, learn about some of the tools and methods that our lighthouse cities are using to start and develop their smart energy city transitions and learn more about the European Smart Projects Summit in San Sebastian scheduled for March 2019.

Enjoy reading!

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Integrated Energy Plan of Sonderborg (Roadmap2025) - summary

Cities play an increasing role in the sustainable zero-emission energy transformation across countries. In that sense, the municipality of Sonderborg is striving to become a role model and a forerunner city in the climate initiatives. Since 2007, becoming a carbon neutral city has been a lighthouse activity of Sonderborg's city council. The goal is to be achieved by 2029 and the main driver behind this process is [ProjectZero](#), a public private partnership initiated by the Sonderborg City Council in cooperation with private businesses in the area.

Along the way to **Zero CO₂ emissions**, Sonderborg places its citizens, businesses, educational institutions and utility companies in the centre of the process. This enables the stakeholders to contribute to the way the city is going to transform, rather than have the city council decide for all, the stakeholders that will experience and implement this transition are co-creation partners.



Since 2007, Sonderborg has reduced its carbon emissions by 35%. Roadmap2025 looks into how Sonderborg will reach 75% CO₂ emission reduction by 2025 and pave the way to a carbon neutral city in 2029. The roadmap has been developed by Sonderborg's ProjectZero, approved and ratified by the City Council at the end of 2018. In the development process numerous stakeholders have been involved. To do that, the city stakeholders participated in 8 segments. Following, were systemic CO₂ emission calculations. The calculations showed how much carbon emissions needed to be reduced in each of the segments to reach an overall **75% CO₂ reduction by 2025**. Representatives from each segment were invited to workshop discussions and were given the opportunity to propose initiatives that will reduce the carbon emission in their segment. These initiatives have then been evaluated and modelled using [EnergyPLAN](#), the result of which are 50 tangible initiatives for reducing the carbon footprint of Sonderborg by 2025. The initiatives are incorporated in the 8-segments creating the **Roadmap2025**. Furthermore, each segment and initiative has been allocated a CO₂ reduction target:

Renewable energy production– 295,000 tonnes

This goal is to be achieved by implementing near shore wind turbines, solar photovoltaic plants, biogas plants and by increasing the plastic waste sorting.

Home-owner houses – 35,000 tonnes

Green district heating, and individual household heat pumps are going to play a major role in decreasing carbon emissions in this segment. In addition to that, roof-integrated solar photovoltaic solutions are going to be implemented for the detached houses.



Passenger transport – 21,000 tonnes

Here the focus is on having more electric and hybrid vehicles, increasing the use of carpooling and bikes, as well as e-bikes. In addition, there needs to be improved public transport including an integration of gas fuelled and self-propelled busses.

The SmartEnCity Network

Do you need tools and methods to start or boost your smart city transition?

Learn about some of the tools that the SmartEnCity lighthouse cities are using and have used to create their sustainable, smart and resource efficient environments:

- [Energy Balance Tool](#) and a [Guide](#) on how to use it
- [EnergyPLAN](#) software – [introduction](#) and [training](#)
- [SmartEnCity Replication Toolkit](#) – [summary](#) and [full version](#)
- Review our series of **Webinars on**
 - [Strategic energy planning](#)
 - [Energy transition at city level](#)
 - [Citizen engagement](#)
 - [Energy retrofitting](#)
 - [Low carbon mobility](#)

Businesses – 14,500 tonnes



The 15 largest (industrial) companies in the area will be the new climate drivers paving the way to zero emissions by focusing on the 17 Sustainable Development Goals, carbon accounting, use of renewable resources and decreased energy demands. In addition, the [ZEROshop](#) concept will be spread across all 300 shops in the area.

House associations – 9,000 tonnes

House associations in Sonderborg will achieve their CO₂ reduction target by tenant engagement, energy efficiency measures, digital heating control, integration of solar cells, green heating and more.

Private apartment rentals – 5,500 tonnes

This segment will provide guidance on energy renovations to the landlords, thus certifying their properties as the demand for more energy-efficient rentals increases. This is a win-win for both the landlords and tenants i.e. owning and living in a better living space, in addition to lowering energy bills.

Farming – 8,000 tonnes



This segment aims to achieve its carbon reduction target by introducing green tractors, energy consultations and implementing zero emission agriculture best practices and concepts. In addition, the farmers are going to play a significant role in the two large biogas plants planned for the area.

Heavy transport – 4,000 tonnes

In this segment the focus is on introducing environmental zones, infrastructure for alternative fuels, and best practices, among others.

The EU corner – European Smart Projects Summit

Join the European Smart Projects Summit in San Sebastian, 26-27 March 2019. Cities from across Europe, the European Commission and high-level speakers will share their knowledge and vision about smart cities. The two-day event will cover topics such as:

- Funding the scalability of smart solutions;
- Transformation of districts towards sustainable and smart buildings;
- Data security and governance for citizen services.

In addition, study visits to the Smart District in San Sebastian will be done and the impact and lessons learnt will be shared with the participants.

Review the agenda of the event [here](#).



When: 26-27 March 2019

Where: San Sebastian, Spain

For more information about the event and how to register for it, click [here](#).

Source: www.replicate-project.eu

[Study Sonderborg's full Roadmap2025 report.](#)

You can also study the [Roadmap2015](#) and [Roadmap2020](#) along with Sonderborg's [Masterplan2029](#).

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