



Interreg
Baltic Sea Region



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ENERGY TRANSITION

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Tere tulemast

Välkommen

Welcome

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Learning Platform: Energy Generation (2)

Best practice & resources

Outlines

Best practice & resources:

- Community-owned electricity generation
- Smart grids
- Resources
- Activity:



Best practice: Community-owned electricity generation (1)

“Community-owned power refers to the energy projects that are collectively owned and operated by residents or organizations within a specific community. Such projects leverage renewable energy sources like solar, wind, hydro, and biomass to generate electricity.”

The most important benefits are:

- Increased resilience – energy independence
- Economic empowerment and job creation
- Promoting sustainable energy
- Local control and decision-making
- Satisfied and proud customers - “our energy”

Community-owned power projects can generate additional revenue streams for communities. They can sell excess energy back to the grid, allowing for income generation that can be reinvested into other local projects and initiatives.



Best practice: Community-owned electricity generation (2)

Samsø, Danmark: The world's first renewable island – when a community embraces wind power.

The island of Samsø went from being entirely fossil fuel dependent to becoming the World's first 100% renewable island, in under a decade.

Samsø today is a society of farmers and a small community with all the functions of any place where people are living together. The difference is that the activity today is fueled by renewable energy. The wind turbines are producing more than the island consumes.

Biomass and solar supplies the heating demand. The revenue is invested in better infrastructure and smart energy systems and in general improvements of houses with better insulation and windows. This is possible because the local people decided to invest in their own energy infrastructure.



Best practice: Community-owned electricity generation (3)

"Centrales Villageoises": local citizen-owned energy communities in France

"Centrales Villageoises" are local companies whose shareholders are mainly citizens, local municipalities and local companies. Their aim is to develop renewable energy and energy efficiency projects, at a territorial scale, taking into consideration the local stakes (integration into landscape, economic local development, social link, etc.):

- Their governance is mainly driven by citizens.
- They generate local benefits and contribute to the development of their territory.
- They use a shared approach with common tools and services.

Main figures:

- 7000 shareholders
- 475 Photovoltaic plants in operation
- 15 million Euro invested



Best practice: Community-owned electricity generation (4)

Bürgerwerke eG, Heidelberg, Germany

Bürgerwerke is an association of more than 50,000 people and 113 local energy communities with over 1,400 decentralized power plants in all over Germany. Together they supply citizens in Germany with renewable community electricity from solar, wind and hydropower, as well as sustainable citizen gas.

Bürgerwerke is an energy supplier that belongs to citizens and in which everyone can get involved.

Bürgerwerke pursues the vision of a renewable, regional and independent energy future in the hands of the people.



Smart Grids (1)

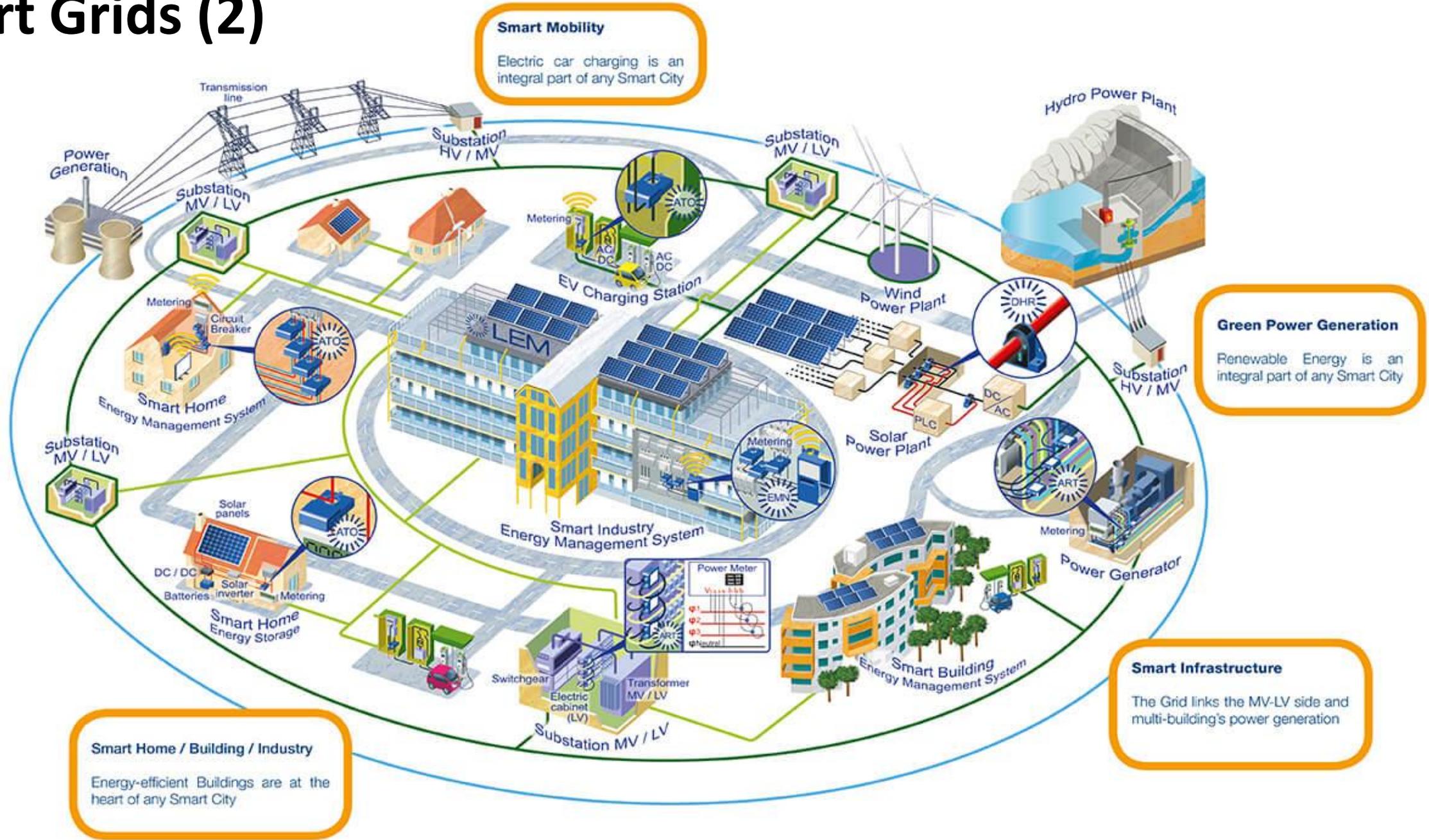
“A smart grid is an enhancement of the 20th century electrical grid, using two-way communications and distributed so-called intelligent devices. Two-way flows of electricity and information improves the delivery network. Research is mainly focused on three systems of a smart grid – the infrastructure system, the management system, and the protection system.”

The main Smart Grid benefits are:

- Managing energy use
- Secure electricity supply, energy reliability
- Improved electricity distribution
- Enhanced energy efficiency and integration of renewable energy which leads to reduced emissions
- Energy conservation
- More accurate billing



Smart Grids (2)



Resources (1)

<https://www.eia.gov/energyexplained/electricity/how-electricity-is-generated.php>

Electricity explained by the US Energy Information Administration. Lots of useful basic information.

<https://understand-energy.stanford.edu/energy-currencies/electricity-generation>

Fast facts about electricity generation compiled by Stanford University.

<https://ourworldindata.org/energy>

Lots of global energy data and statistics from “Our World in Data”.

<https://www.iea.org/energy-system/electricity>

Statistics and current developments summarized by the International Energy Agency IEA.

<https://www.irena.org>

Data, success stories and analyzes about renewable energy from the International Renewable Energy Agency IRENA.

https://energy.ec.europa.eu/index_en

The European Commissions site on energy and climate change.

Resources (2)

<https://www.eea.europa.eu/en/topics/in-depth/energy>

Useful information on energy and electricity in Europe from the European Environment Agency EEA.

<https://eeb.org/wp-content/uploads/2023/05/RES-Best-Practices-factsheet-5.0.pdf>

Renewables Best Practices - solutions for nature-positive, community-led renewable energy in Europe – collected by the European Environmental Bureau EEB.

<https://greenbestpractice.jrc.ec.europa.eu>

A tool to discover, showcase and collaborate on green best practices by the European Commission.

<https://cor.europa.eu/EN/regions/Pages/eir-map.aspx?view=stories&type=greendeal>

A collection of best practices by the European Committee of the Regions.

https://energy.ec.europa.eu/energy-explained_en

Energy explained. Audiovisual and other online products for citizens, explaining various energy topics.

Your turn: Check the resources!

Take a look at the resources listed on page 9 and 10 of this training module.

Make a list of the 5-8 most useful tools, examples or best practices you could find.



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Thank You for your attention!

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