



# CASE: *Ii Municipality*

**MUNICIPAL AREAS STRIVING FOR CARBON NEUTRALITY ARE DRIVERS OF CHANGE. KNOWLEDGE GAINED BY MONITORING IS THE DRIVER FOR ACTIONS.**

*The Ii municipality (pronounced "ee"), home of ten thousand in the north of Finland, has committed to very ambitious carbon reduction targets within the municipal area. The climate initiative starts by explaining what's consumed, where, when and how.*



### **THE CHALLENGE**

Find ways to realise the most stringent carbon reduction commitments: 80% in 13 years by 2020



### **THE SOLUTION**

Systematically measure, analyse, pilot and implement new, smart and saving technologies. Measuring is the key.



### **THE RESULTS**

Ii has reached the best carbon reduction track record of Finnish municipal areas. 30 years ahead of the common EU targets.



Photo ©European Union

## **AWARDED SUCCESS**

*Oct 2017 - EU RegioStars awarded Ii in the climate action category. Project manager Kristiina Nurmenniemi received the award.*

*May 2017 - Youth Group Agenda2030 awarded Ii the special prize of sustainable development, for the commitment to cut greenhouse emissions by 80% until 2020, of the 2007 level.*

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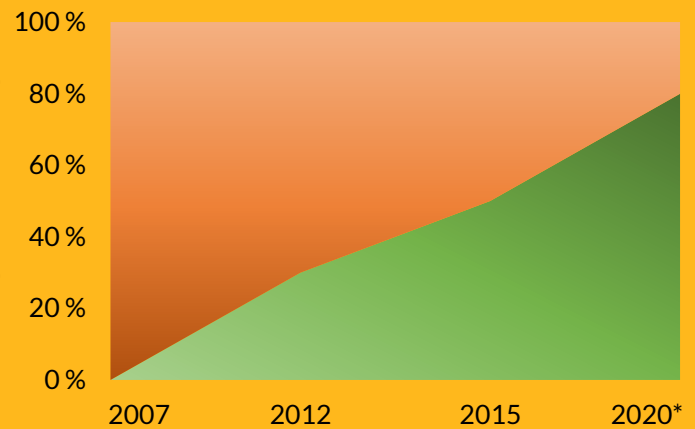


# IN 2012, LI MUNICIPALITY COMMITTED TO AMBITIOUS CARBON REDUCTION TARGETS, LAID OUT BY THE FINNISH ENVIRONMENT INSTITUTE. RESOLUTE ACTIONS HAVE RESULTED IN GIANT LEAPS TOWARDS CARBON NEUTRALITY.

After engaging in the targets, li purposefully started to walk the talk. 43 separate improvement projects have been completed so far. Every stone's been turned over: replacing fossil fuels with wind, solar, geothermal and bio energy technologies, improving demand side efficiencies, and influencing consumption habits. All public buildings now heat with renewables, and electric vehicles are used in municipal employees' business trips.

The success was so good that li recently decided to advance the 80% reduction target from the original year 2030 to 2020. Considering this involves all carbon emissions in the municipal area, not only by the municipal operators, this is a bold statement for climate actions.

## li's carbon reduction since 2007



## THE SOLUTION

The key to get where you want to go is to know where you are now. Early on, li started monitoring energy and utility consumptions. ionSign provided Neutron12 units to collect data from energy, electricity and water meters on one server, via the municipal TCP-IP network.

Micropolis, the local development company, realised the project. They built a bespoke management and reporting system, based on EmonCMS, an open source solution, maintained by OpenEnergyMonitor.org. ionSign offered all interface documentation to support building the communications. The EmonCMS provides required calculations, data repository and visualisations. Data flows directly from the Neutron field units to the EmonCMS server, in the internal municipal network.

Some twenty Neutron12s are now in use and more will be installed in years to come, to improve the coverage and granularity of energy and utility data.

li is a member of the Finnish carbon neutral municipality initiative, HINKU, coordinated by the Finnish Environment Institute. The member municipalities not only commit to improve their own carbon balance, but also to influence that of the whole community, businesses and private consumption in the municipal area.



## NEUTRON12-LAN PULSE DATA COLLECTOR

- 12 standard S0 pulse inputs for open collector and relay outputs
- Data transfer via TCP-IP with RJ45 connector, 3G option available
- Internal buffer of 30 days for data transfer failures
- Send data to ionSign Cloud or integrate to your own energy management with a standard http interface
- Ideal for generating high granularity data by submetering

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