



We support
companies and
public bodies in
their work for
energy and
climate issues

Energy Agency for Southeast Sweden (ESS)

Public owners, non-profit, funds from EU and national institutions

Facts about the southeast part of Sweden

- Three counties

• Blekinge	153 000 inhabitants	2 941 km ²
• Kalmar	235 000 inhabitants	11 694 km ²
• Kronoberg	187 000 inhabitants	8 426 km ²

Both total area and inhabitants of the region amounts to 6 % of Sweden.

- 25 municipalities

- Entrepreneurial region

- One of the most industrialized regions in Scandinavia, with both large and small companies.
- Some well known are Orrefors, IKEA, Electrolux, ITT Flygt, Alstom, Bruno Mattson, NIBE, Skanska, Scania and Saab Aerotech, Volvo Construction Equipment and SlipNaxos.



ESS objectives

- **Increase energy efficiency in all sectors of the society**
- **Increase the share of energy from renewable energy sources**



Areas of activity

- **Energy efficiency**
- **Sustainable transports**
- **Renewable energy**

Energy efficient
buildings

Green
procurement

Biogas

Mobility
management

Solar energy

Combined heat
and electricity
production

Wind power

Bioenergy

Sustainable
transports

How we work



Strategic

- Network
- Referrals and strategies
- Demonstration of new techniques



Promote

- Training courses and seminars
- Campaigns and activities
- Reports and facts/information



Support

- Expertise
- Coordination
- Writing and managing projects



READY

- **Resource efficient cities implementing advanced smart city solutions**

Based on integrated climate planning the READY project demonstrates a whole city approach towards affordable retrofitting of buildings in Aarhus DK and Växjö SE.

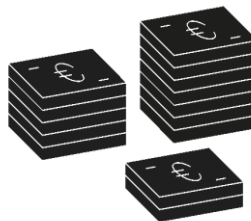
With available and innovative technology measures READY demonstrates how the demand for energy, the need for fossil fuels and release of CO₂ can be considerably reduced to nearly zero, and shows a sustainable way to go for other European cities.



- Project website: www.smartcity-ready.eu
- FP7 – Lighthouse project

Key information

- Start date: Dec 2014
- Duration: 60 months (actual M30)
- Partners: 24
 - Denmark: Aarhus Municipality, Aarhus University, Boligforeningen Ringgården, Danfoss, Dansk Fjernvarme, DONG Energy, E.ON Denmark, Kamstrup, Lithium Balance, Racell Sapphire.
 - **Sweden: CA Araby Fastigheter, Energy Agency for Southwest Sweden, Linneaus University, VEAB Växjö Energy, Växjöbostäder, Växjö Municipality, Växjö Fastighetsförvaltning, Wexnet.**
 - Lithuania: Kauno Energija, Lietuvos Energetikos Institutas.
 - Austria: AIT - Austrian Institute of Technology.
 - France: LGI consulting.



- EC funding (A): ≈20 M€
- Private investment (B): M€
- Leverage factor (=B/A): n/a



New systems and technologies

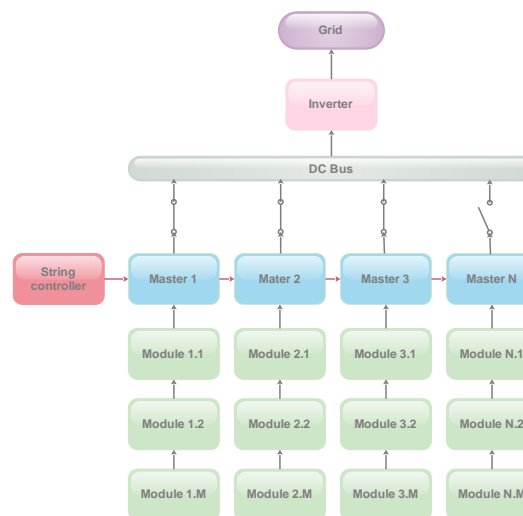
(3 out of 10 being developed)

Short description of each new system and technology developed by the project & progress beyond the state of the art & how the innovation contributes to EeB cPPP objectives	Current TRL (May 2017)	TRL expected by the end of your project	Exploitation
Smart Building Energy Hub, combined with battery management system BMS: The system manages charging and discharging of battery storage for optimised operation according to price signal and forecast. The system will as well control operation modes for DSM.	4 Lab test	8	○ Commercial
New PV(T) energyabsorber: Unglased PV panels with integrated energy absorber in customized sizes up to 3 x 6 m, in various colours incl white and with buildt-in diodes and new mounting systems	7 Prototype	9	○ Commercial
Waste heat recovery: New design of heat exchanger / manhole / well for non separated household waste water and system integration with low temperature district heating consumer installation	6	9	○ Commercial



Pictures

- PV(T) Energy Absorber, Smart Building Energy Hub and battery storage



- 7 videos about use of smart metering in District Heating systems found at <http://www.smartcity-ready.eu/d-3-3-2-documentation-of-model-development-for-optimised-dh-network-operation-based-on-smart-metering-data/>

Växjö

final design on demonstration buildings – May 2017

Alabastern

313 apartments
built 1964-1966
160 kWh/m²



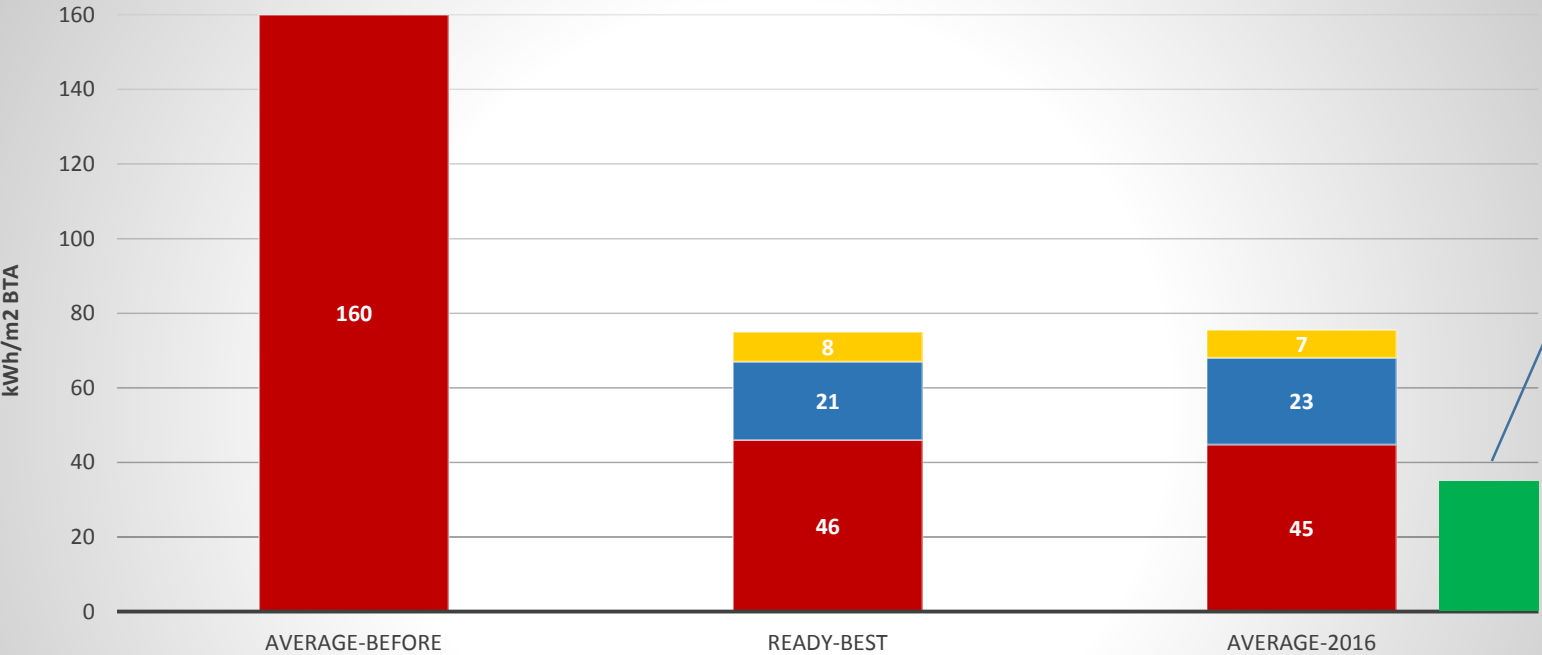
Alabastern ver 2.0



Växjö building monitoring status – May 2017

Preliminary Result Alabastern kWh/m2 BTA

12 months monitoring, 5 of 15 buildings



Special –
house 36 apt,
PVT, HRWW
38 kWh/m2

■ Heating ■ DHW ■ B-el





We support
companies and
public bodies in
their work for
energy and
climate issues

www.energikontorsydost.se

Thankyou for your attention

Stefan Olsson

Stefan.olsson@energikontorsydost.se