



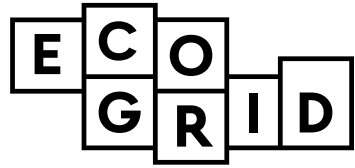
## THE BORNHOLM PLATFORM

Bornholms Energi og Forsyning

Projectmanager: Kim Kock-Hansen

EcoGrid 2.0 is a research and demonstration project funded by EUDP (Energiteknologisk Udviklings- og Demonstrationsprogram).  
The 9 partners in the project are:





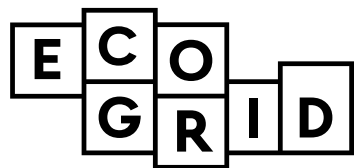
## The HEMS'es

In EcoGrid 2.0 we continue to work on the systems who was implemented in the EcoGrid EU project:

Siemens Climatix system: Controllerbased system for controlling Direct Heating only. The system can be operated via a cloud based UI AND in the house via a locally installed controler.

Greenwave Systems: Gateway based system, can only be operated through a cloud based interface.

The gateway can be used for both Direch Heating and Heat Pumps (air and liquid TO liquid heat pumps only)



# The participants

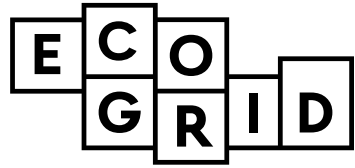
## Number of participants

All in all

EcoGridGruppe	Antal ▼
2.0 Siemens	323
2.0 GWR Elvarme	235
2.0 GWR Varmepumper	218
2.0 frameldte	129
2.0 Afventer kontrakt	42
2.0 Mangler demontering	35
2.0 LRSC	10
2.0 Hvilende deltagere	9
<b>Total</b>	<b>1001</b>

## Active participants

EcoGridGruppe	Antal ▼
2.0 Siemens	323
2.0 GWR Elvarme	235
2.0 GWR Varmepumper	218
2.0 LRSC	10
<b>Total</b>	<b>786</b>

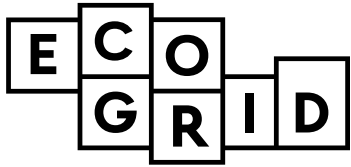


## The HEMS'es

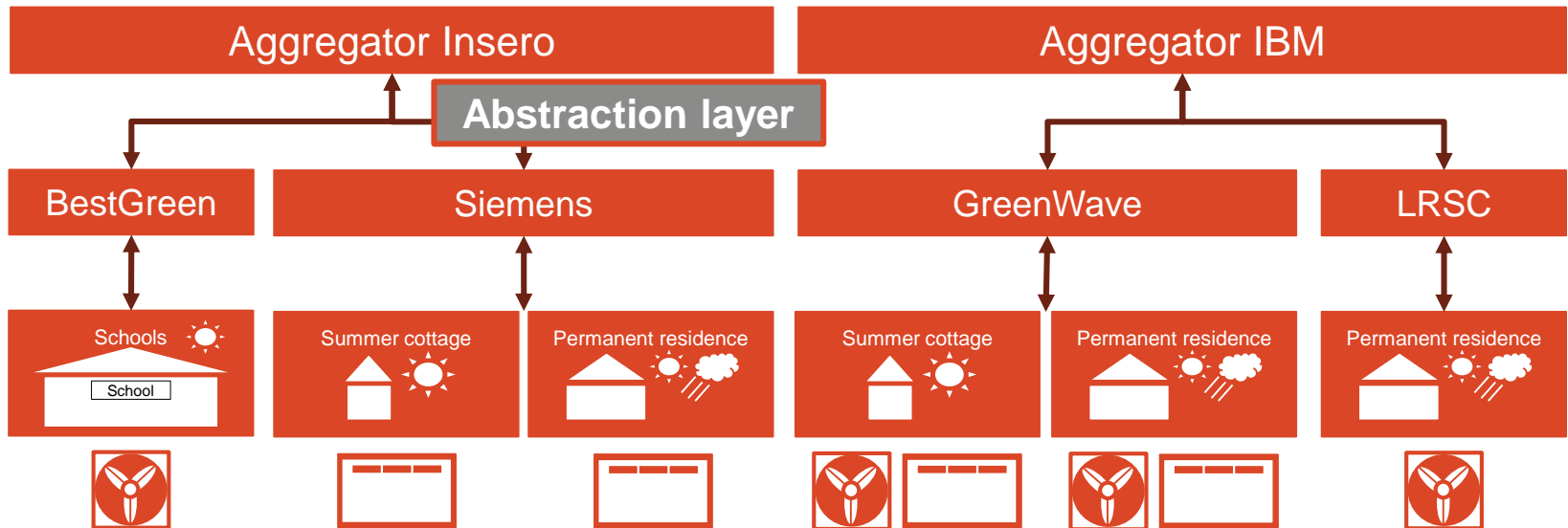
For aggregator control, the Siemens houses has been operated by Insero through an abstraction layer.

Greenwave has been operated through the Greenwave servers by IBM.

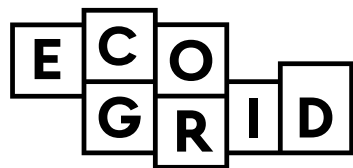
Interoperability will be demonstrated in full scale later this Heating Season.



# HS1 and HS2 control



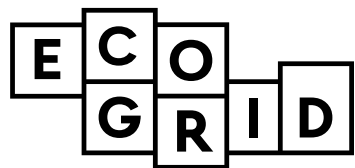




## The participants

Status on the houses – distributed by housetype. This is the communication with the gateway status. We have houses with issues on relays, sencors etc.

Hustype	EcoGridGruppe	LRSC	Missing in Dashboard	Offline	Online	Total
Helårshus	2.0 GWR Elvarme			32	190	<b>222</b>
	2.0 GWR Varmepumper		3	41	165	<b>209</b>
	2.0 LRSC	10				<b>10</b>
	2.0 Siemens			30	122	<b>152</b>
	<b>Total</b>	<b>10</b>	<b>3</b>	<b>103</b>	<b>477</b>	<b>593</b>
Sommerhus	2.0 GWR Elvarme			5	8	<b>13</b>
	2.0 GWR Varmepumper			1	8	<b>9</b>
	2.0 Siemens		1	32	138	<b>171</b>
	<b>Total</b>		<b>1</b>	<b>38</b>	<b>154</b>	<b>193</b>
<b>Total</b>		<b>10</b>	<b>4</b>	<b>141</b>	<b>631</b>	<b>786</b>



# The participants

The meters:

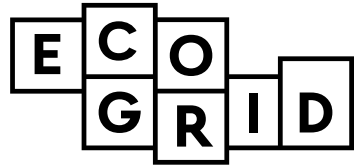
Metertype	Metersonline	Metersoffline	Metersmissing	Antal▼
EcoGrid 2.0 måler	762	6	18	786
<b>Total</b>	<b>762</b>	<b>6</b>	<b>18</b>	<b>786</b>

The meters are L+G meters from the EcoGrid EU project.

We collect data at 12 hours intervalls – giving a stable platform – compared to EcoGrid EU.

The system collecting data has shown to be unstable – we are monitoring the meters on a daily basis.





# The EcoGrid Bornholm Team

System maintenance – The customers.

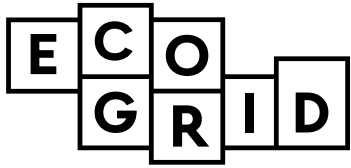
The supportorganisation is:

Lene, Kim & Hans-Henrik, phone and mail during businesshours

Brian and Lars, electricians

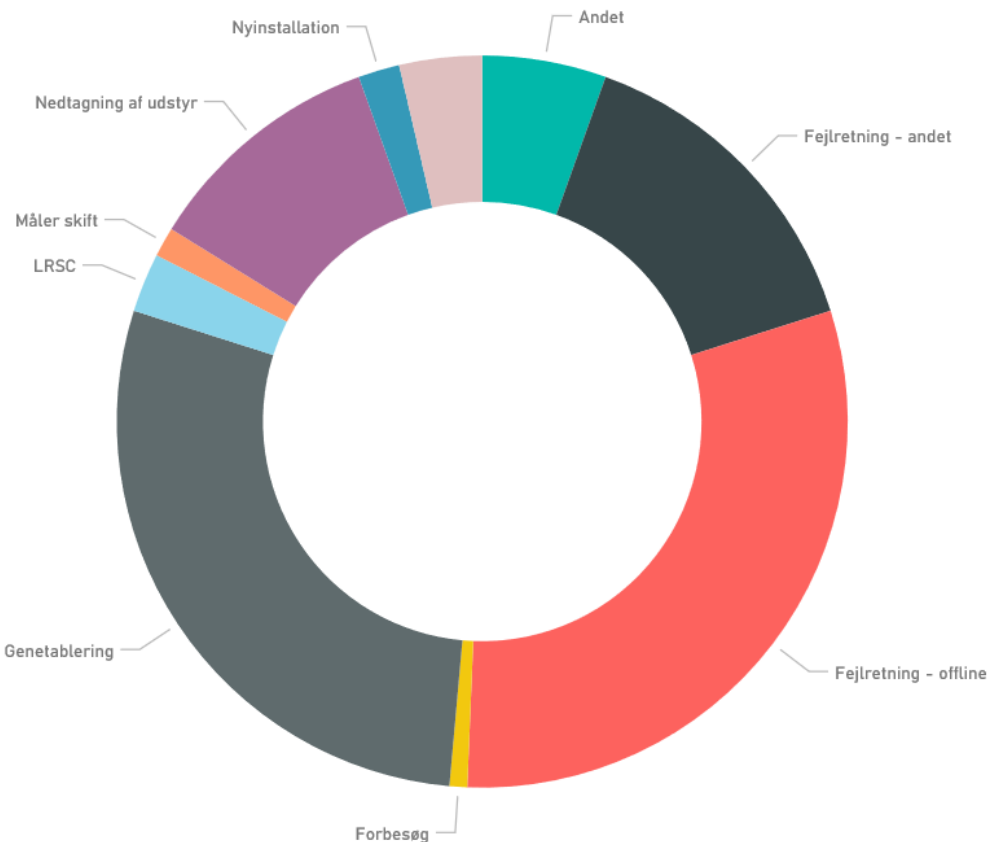
Sofie and Camilla: Students calling customers for planning visits

Torsten: Daily monitoring the meters and update status

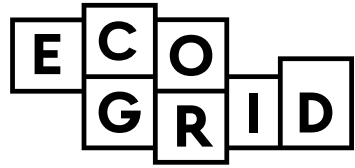


# Support visits, 2017 – categorized by Hardware

T7.1 System maintenance – The customer visits in 2017.



Opgavetype	Antal besøg
Fejlretning - offline	234
Genetabling	218
Fejlretning - andet	112
Nedtagning af udstyr	82
Andet	42
Undervisning	28
LRSC	20
Nyinstallation	14
Måler skift	10
Forbesøg	6
<b>Total</b>	<b>766</b>



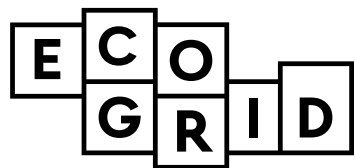
## The platform compared to EcoGrid EU

In EcoGrid EU, we experienced problems with the HEMS'es. We do not see the same in Ecorid 2.0

From HS1 we learned that most of the problems was solved and the systems that goes offline has a logical explanation.

The support issues in HS2 confirmes this.

- Network connections are unstable (and turned off by customers)
- A new ISP has equipment conflicting with some EcoGrid equipment
- Connectivity in the houses are based on home solutions and this is known to be unstable over time.
- Batteries runs out of power. (we have added more pickup places)
- We have in this HS seen a few Siemens houses acting strange.



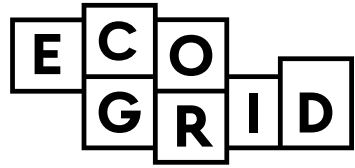
## The platform and stability

The Meterissue:

After the breakdown in march 2017, Landis promised to solve the issues and make optimizations for the meters.

The meters broke down again in january, but was back online within a week.

We are still struggeling with long intervals in collecting data – and L&G has closed their support in DK. Support is made from Finland



**Thank you for your time -  
questions**



# E C O G R I D

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