

scientia dominatu

iSERV - Inspection of HVAC systems through continuous monitoring and benchmarking

- Background to why the EC is targeting our industry
- Overview iSERV project
- What Swegon stands to win
- What Swegon can do

Why is the EC targeting our industry

- iSERV: Inspection of HVAC systems through continuous monitoring and benchmarking
- iSERV aims to show how to practically improve the energy performance of HVAC systems in EU MS buildings and address the Inspection requirements in the EPBD.
- EU HVAC 313 TWh electricity (2007)
- 11% of 2,800 TWh electricity (2007)
- (Sweden's total energy use: 400TWh/a)

iSERV Project

- €3.3M, iSERV twice as large as any other project ever funded by the EC.
- Nearly 400 projects applied for funding in this call. iSERV has ~10% of the total budget for this area.
- **Very high political profile.**
- Project has been presented to European Legislators.

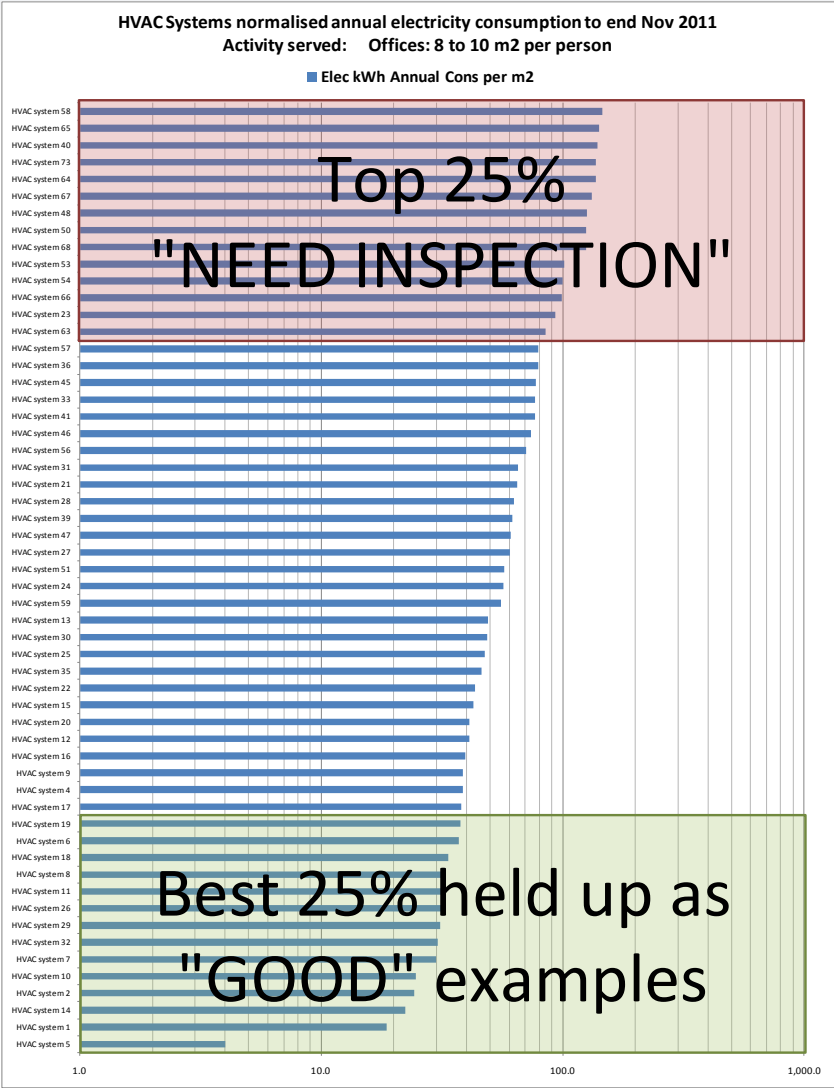
iSERV aims

- Energy savings from continuous monitoring and benchmarking in up to 1600 HVAC systems in +16 EU MS.
- Show remote data monitoring capabilities, complement to mandatory inspections required in the EPBD.
- HVAC energy benchmarking related to building activity.
- Reward building owners when benchmarking shows low energy use.
- Inspections for poor performing systems or those who do not provide system information. Both should expect more costly and detailed Inspections in future.

iSERV Methodology

- 15min data collection; identify ECOs - automatically fed back to owners.
- Concurrent physical Inspections and IAQ measurements on HVAC systems representing good, average and poor energy performers.
- The aim of the IAQ measurements is to ensure that the benchmark boundaries do not come at the expense of IAQ.
- Support to all MS HVAC system owners participating, provided by iSERV.

iSERV outputs



Advantages of the iSERV approach

- Empower owners to understand energy usage.
- Establishing which HVAC system types perform well in real life. Good practice becomes clear and indisputable.
- Establishing independent benchmarks for performance for a given activity.
- Allowing new and more efficient technologies to rapidly prove themselves in the market.
- Enabling statutory physical EPBD2 Inspections of HVAC equipment to be targeted where actually needed.
- Monitoring cheaper than inspections.

SWEGON and post-iSERV opportunities

- Partner in post-iSERV overall system with other HVAC manufacturers.
- New revenue stream from ECOs/ROI analyses – consulting and new installation activities.
 - Good = Gold standard Case Study.
 - Average = opportunity to improve with new installation.
 - Poor = consulting opportunity; identify reasons for poor performance (e.g. may not be AHU – may be system design), followed by a potential sale.
- Pro-active in European legislation with potential for influencing direction based on demonstrated performance.
- Live data on performance of SWEGON products in use allowing identification of what works best in practice.

Resources

- Development cost 30000 euro. (Being invested anyway).
- Sell in to country managers.
- Find projects, intro visit with local sales rep.
- Local service visit, update software, may require install mobile modem, start data collection.
- Retrieve data collection.

Last word

Manufacturers help set the standards and can be seen to be self-regulating transparently by the EU.

Less regulations for co-operating manufacturers.

We can be pro-active and be part of the process or reactive and be controlled by the process.

Future benefits of an HVAC Manufacturer driven database

- EU MS set benchmarks in their own legislation for HVAC system performance, based on reality.
- Good practice becomes clear and indisputable.
- Manufacturers help set the standards and can be seen to be self-regulating transparently by the EU – less regulations for co-operating manufacturers.
- Manufacturers can obtain additional revenue from their clients from the existing data collection capabilities of their equipment.
- The iSERV database; building owner and manufacturer with impartial information on the energy performance of HVAC systems. Clear understanding of where improved performance can be achieved.