

CB 7 - Energy Agency for Southeast Sweden - ESS

Country: SE



SUMMARY

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1. Slottsgården

1/ Identification of the partner

Name of RCHEP : Slottsgården

2/ RCHEP main issues

The residential care home Slottsgården in Sölvesborg municipality has 45 residents. It was built in 1982 and refurbished and extended in 2001. The total area of the building is 5 073 m².

3/Action plan of RCEHP

Action plan for Slottsgården:

Building improvements	<ul style="list-style-type: none">- Insulation- Ventilation- Heat system- Lighting
Information	<ul style="list-style-type: none">- Get information about energy consumption of installations/appliances- Make this information easy to access close to where it is used
Training	<ul style="list-style-type: none">- Awareness raising- Motivation

4/ Energy efficiency activities implemented in the RCHEP

Energy Efficiency Training 26 October 2011

Training about energy efficiency in buildings was held with caretakers of premises and municipal staff from Sölvesborg participating. Training was held by Peter Karlsson, Eva Karlsson and Kent Andersson. Programme: methods to determine energy use; the building and its energy flows, lighting, motors, pumps, idle effect. There was also practical training.

5/ Behavioural measure for residents and visitors

Training care home staff 14 November 2012

Training in energy saving was held at Slottsgården by Energy Agency for Southeast Sweden. The day was divided in three parts.

- As part of the introduction practical training was performed to illustrate the concept of energy in general, which was amusing and at the same time worth considering.
- The second part was more specifically about energy saving: Why save? – motivation for energy saving, a film about energy saving in care homes and discussion on specific energy saving issues and which are most relevant on Slottsgården.
- The day ended with presentation about how to make energy rounds around the workplace with a checklist and detect where energy is wasted. The possibility of the staff making energy rounds after the project is finished was discussed.

Visibility signs

Different kinds of information materials were sent to the residential care home, e.g. stickers.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and heating) 2012 was compared with the energy consumption 2009, all data adjusted for temperature with degree days method. Energy savings at Slottsgården according to this amounted to 10.6%. There are however many uncertainties influencing the comparison. Some of these, influencing energy use, are varying number of residents, and different needs, since many of the residents at Swedish residential care homes have multiple diseases, and sometimes also dementia. The local climate and hence degree days around Slottsgården may differ from the place where the temperature measurements are made. Only the energy consumption for heating (hot water and electricity excluded) should be temperature adjusted, but this data was not possible get-

Energy efficient behaviour of staff

Nowadays, after the training, persons from the staff look at and reflect on the energy bills. E.g. after looking at the electricity bills the size of main fuses has been changed. When replacing appliances and equipment the energy consumption is considered. Persons from the staff who were interviewed at the beginning of the project had already started thinking energy saving, and since this is a continuing process, the training has inspired more of this – there is always more to learn. They were introduced to Energy Rounds, an easy way of checking for energy waste at the workplace. This will have double effect since they can do it at home as well.

7/ Conclusion

Main difficulties

According to the manager a large obstacle for energy saving is a lack of awareness. This could explain why parts of the staff are weakly committed to energy efficient behaviour. There is mostly no information available about energy consumption of appliances, and no training. The technical staffs say the installations and equipment are old.

Main success

Since the management and the staff were already interested in energy savings, the message was well received. They now aim at practising what they learned at the appreciated training, and start working with energy rounds and check lists to detect energy waste.

2. Gerbogården

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Gerbogården

2/ RCHEP main issues

The residential care home Gerbogården in Sölvesborg municipality has 57 residents. It was built in 1930 and refurbished and extended in 1984. The total area of the building is 4 069 m².

3/Action plan of RCEHP

Action plan for Gerbogården

Building	- roof insulation - windows - ventilation
Equipment	- replacement of the large washing machines
Training	- energy efficiency and behaviour changing

4/ Energy efficiency activities implemented in the RCHEP

Energy Efficiency Training 26 October 2011

Training about energy efficiency in buildings was held with caretakers of premises and municipal staff from Sölvesborg participating. Training was held by Peter Karlsson, Eva Karlsson and Kent Andersson. Programme: methods to determine energy use; the building and its energy flows, lighting, motors, pumps, idle effect. There was also practical training.

5/ Behavioural measure for residents and visitors

Training care home staff 14 November 2012

Training in energy saving was held at Gerbogården by Energy Agency for Southeast Sweden. The day was divided in three parts.

- As part of the introduction practical training was performed to illustrate the concept of energy in general, which was amusing and at the same time worth considering.
- The second part was more specifically about energy saving: Why save? – motivation for energy saving, a film about energy saving in care homes and discussion on specific energy saving issues and which are most relevant on Gerbogården.
- The day ended with presentation about how to make energy rounds around the workplace with a checklist and detect where energy is wasted. The possibility of the staff making energy rounds after the project is finished was discussed.

Visibility signs

Different kinds of information materials were sent to the residential care home, e.g. stickers.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and heating) 2012 was compared with the average energy consumption 2007–2009, all data adjusted for temperature with degree days method. Energy savings at Gerbogården according to this amounted to 3.6%. There are however many uncertainties influencing the comparison. Some of these, influencing energy use, are varying number of residents, and different needs, since many of the residents at Swedish residential care homes have multiple diseases, and sometimes dementia. The local climate and hence degree days around Gerbogården may differ from the place where the temperature measurements are made. Only the energy consumption for heating (hot water and electricity excluded) should be temperature adjusted, but this data was not possible to get.

Energy efficient behaviour of staff

After the energy saving training, the staffs look at and reflect on the energy bills. E.g. after looking at the electricity bills the size of main fuses has been changed. When replacing appliances and equipment the energy consumption is considered. Persons from the staff who were interviewed at the beginning of the project had already started thinking energy saving, and since this is a continuing process, the training has inspired more of this – there is always more to learn. Furthermore they were introduced to check for energy waste by making Energy Rounds at the workplace – and to get double effect also at home.

7/ Conclusion

Main difficulties

The main obstacle for investments in energy efficiency according to the management is lack of economic resources. At Gerbogården, also shortage of staff is mentioned as a difficulty hindering energy saving. There are real difficulties to include energy saving in the running activities.

Main success

The participation at the energy saving training was good, despite shortage of staff and economic resources. Afterwards they said that the training was very inspiring and very good. There was a large interest, and the general opinion was that the knowledge and motivation for new habits will be useful and profitable when it is being practised.

3. Kvillgården

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Kvillgården

2/ RCHEP main issues

The residential care home Kvillgården in Högsby municipality has 36 residents. It was built in 1964 and refurbished and extended in 1995. The total area of the building is 3 777 m².

3/Action plan of RCEHP

Action plan for Kvillgården

Ventilation	<ul style="list-style-type: none">- Check ventilation system's heat recovery- Monitor ventilation system
Seal and insulation	<ul style="list-style-type: none">- Seal or replace windows and doors
Lighting	<ul style="list-style-type: none">- Monitor lighting control system- Behaviour changes: switch off when not in use
Training	<ul style="list-style-type: none">- Inform and motivate all personnel about cost free energy saving measures- Make simple check lists for energy saving

4/ Energy efficiency activities implemented in the RCHEP

Energy Efficiency Training 7 September 2010:

Training about energy efficiency in buildings was held with caretakers of premises and municipal staff from Högsby participating. Programme: building climate shell, ventilation, heating systems, lighting, energy analysis methods, best practise examples, simple LCC calculations. There was also practical training.

Energy review 23 January 2012

Kvillgården was visited by Roger Gunnarsson and Kent Andersson from the Energy Agency for Southeast Sweden and Anders Ivansson from Högsby municipality. The day started with a short presentation and analysis of available energy statistics documents that were analysed and discussed. After that an energy review was made. The following notations and recommendations were made during the day, to facilitate the staff's further energy efficiency work.

Energy statistics: The total energy consumption of 287 kWh/m²,year in the starting situation (electricity and district heating,) was relatively high compared to a benchmark value 212 kWh/m²,year. The benchmark value was adjusted with heating degree days etc. to be able to compare buildings of different age and characteristics all over EU.

Lighting: Much of the lighting is never switched off, even if it is not used, including light bulbs. The lighting control system should be monitored immediately. Automatic lighting control with presence detectors and maybe daylight control should be installed in all common premises and spaces and those used only a few times every day. A review of types of lightings and light sources should be made. Probably a standard purchase routine for suitable energy efficient lighting should be made could help reduce lighting costs. The estimated energy saving potential with only small investments in automatic lighting and other types of light sources is 20 000–35 000 kWh/year. Besides reduced costs this will also lead to a better work environment and reduced need for maintenance.

Ventilation: The design, function and control of ventilation should be monitored, most important in common spaces, some specific rooms and e.g. washroom, linen room. The heat recovery from the ventilation system must be checked directly.

Seal and insulation: Some front doors should be sealed, insulated or replaced.

Behavioural issues: Training of staff about following issues is needed: the importance to reduce standby consumption, switch off printers, computers etc. when not in use and also make simple checklists for energy saving.

5/ Behavioural measure for residents and visitors

Training care home staff 28 March 2012

Training in energy saving was held at Kvillgården by Jan Sjökvist and Kent Andersson, Energy Agency for Southeast Sweden. The day was divided in three parts.

- As part of the introduction practical training was performed to illustrate the concept of energy in general, which was amusing and at the same time worth considering.
- The second part was more specifically about energy saving: Why save? – motivation for energy saving, a film about energy saving in care homes and discussion on specific energy saving issues and which are most relevant on Kvillgården.
- The day ended with presentation about how to make energy rounds around the workplace with a checklist and detect where energy is wasted. The possibility of the staff making energy rounds after the project is finished was discussed.

Visibility signs

Different kinds of information materials were sent to the residential care home, e.g. stickers.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and district heating) 2012 was compared with the average energy consumption 2007–2009, all data adjusted for temperature with degree days method. Energy savings at Kvillgården according to this amounted to 1.6%. There are however many uncertainties influencing the comparison. Some of these, influencing energy use, are varying number of residents, and different needs, since many of the residents at Swedish residential care homes have multiple diseases, sometimes dementia. The local climate and hence degree days around the care home may differ from the place where the temperature measurements are made. Only the energy consumption for

heating (hot water and electricity excluded) should be temperature adjusted, but this data was not possible get.

7/ Conclusion

Main difficulties

Elderly persons living in care homes mostly have too many health problems to be cared for by home care service in their own homes. Elderly people in Sweden are mostly staying in their own homes where the home care staffs visit them. Usually they do not move in to a care home until the very last phase in life. Therefore it was difficult to involve the residents in the energy efficiency training and energy saving to a larger extent, so mainly the personnel were targeted, and energy saving was made visible to their relatives. Fortunately these persons age 80+ and 90+ persons have lived large part of their lives in a time when it was natural to save energy and resources. Another difficulty was to motivate the care home's management to allow enough time for the staff to participate in the training.

Main success

Despite difficulties to get enough time to train the staff, this was eventually successful. In the end the training was the most successful part, with the broadest impact. The persons working at care homes seldom get more internal training than what is connected with their actual work tasks. When it was possible to have the training the attendance was good, and the participants said that the training had been very worthwhile and useful, professionally as well as applied at home.

Further activities to be implemented

Refurbishment of Kvillgården is planned to take place within a few years, which leaves a possibility for real improvements of energy efficiency and future energy savings.

4. Vålengården

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Vålengården

2/ RCHEP main issues

The residential care home Vålengården in Högsby municipality has 24 residents. It was built in 1974. The total area of the building is 2 803 m².

3/Action plan of RCEHP

Action plan for Vålengården:

Monitor energy consumption	<ul style="list-style-type: none">- Get information on energy consumption of installations/equipment and make it visible- When replacing kitchen, laundry, office, multimedia etc. installations/equipment, choose the best possible with EU Energy label A, A+, A++ or A+++- Preventive maintenance of oil boiler
Training	<ul style="list-style-type: none">- There is a large need for training: Persons in charge of maintenance, working in kitchen, office, with cleaning etc. say that they lack training
Lighting	<ul style="list-style-type: none">- Monitor lighting control system- Review of types of lightings and light sources, don't forget to combine with best possible working and living environment- Replace with more energy efficient light sources

4/ Energy efficiency activities implemented in the RCHEP

Energy review 23 January 2012

Vålengården was visited by Roger Gunnarsson and Kent Andersson from the Energy Agency for Southeast Sweden and Anders Ivansson from Högsby municipality. The day started with a short presentation and analysis of available energy statistics documents that were analysed and discussed. After that an energy review was made. The following notations and recommendations were made during the day, to facilitate the staff's further energy efficiency work.

Energy statistics: The total energy consumption of 228 kWh/m²,year in the starting situation (electricity and district heating,) was relatively good compared to a benchmark value 236 kWh/m²,year. The benchmark value was adjusted with heating degree days etc. to be able to compare buildings of different age and characteristics all over EU.

Lighting: Much of the lighting is never switched off, even if it is not used, including light bulbs. The lighting control system should be monitored immediately. Automatic lighting control with presence detectors and maybe daylight control should be installed in all common premises and spaces and those used only a few times every day. A review of types of lightings and light sources should be made. Probably a standard purchase routine for suitable energy efficient lighting should be made could help reduce lighting costs. The estimated energy saving potential with only small investments in automatic lighting and other types of light sources is 15 000–25 000 kWh/year. Besides reduced costs this will also lead to a better work environment and reduced need for maintenance.

Behavioural issues: Training of staff about following issues is needed: the importance to reduce standby consumption, switch off printers, computers etc. when not in use and also make simple checklists for energy saving.

5/ Behavioural measure for residents and visitors

Training care home staff 28 March 2012

Training in energy saving was held at Vålengården by Jan Sjökvist and Kent Andersson, Energy Agency for Southeast Sweden. The day was divided in three parts.

- As part of the introduction practical training was performed to illustrate the concept of energy in general, which was amusing and at the same time worth considering.
- The second part was more specifically about energy saving: Why save? – motivation for energy saving, a film about energy saving in care homes and discussion on specific energy saving issues and which are most relevant on Vålengården.
- The day ended with presentation about how to make energy rounds around the workplace with a checklist and detect where energy is wasted. The possibility of the staff making energy rounds after the project is finished was discussed.

Visibility signs

Different kinds of information materials were sent to the residential care home, e.g. stickers.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and oil) 2012 was compared with the average energy consumption 2007–2009, all data adjusted for temperature with degree days method. Energy savings at Vålengården were 42%. The largest part of this could however be due to a reduction in the number of residents of 20%–33% since 2007–2009. During 2009 the number of residents was reduced to 20, and today there are 24 residents. Besides this there are uncertainties, e.g. the total energy consumption for heating temperature adjusted, while hot water and electricity consumption should actually be excluded, and differences between the local climate at the care home and the place where the temperature measurements that the degree day calculation is based on are made.

7/ Conclusion

Main difficulties

Välengården is a residential care home for persons with dementia disease. It is very difficult to involve these residents in energy efficiency training. The very heavy work load and the large need for care that involves energy consumption is an obstacle for energy saving. Also the focus on managing core activities with short resources makes it difficult to encourage the management at care homes to let their staff participate in energy efficiency training.

Main success

The training was very successful; however it was difficult to allow time to train the staff at the residential care home. They showed great interest to learn more about energy and energy saving and use this knowledge in their everyday life at work and at home. This will lead to more energy saved. The care workers, who are not used to having very much internal training, were inspired by the new knowledge from the very entertaining presentation.

Further activities to be implemented

It is urgent to improve the heat system at Välengården. A good alternative to oil and electricity is biofuel based district heating or nearby heating, which is the municipal energy company's responsibility to build.

5. Ekebo

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Ekebo

2/ RCHEP main issues

The residential care home Ekebo in Älmhult municipality has 27 residents. It was built in 1956, 1992 and 2008, and the oldest part refurbished in 2008. The total area of the building is 2 843 m².

3/Action plan of RCEHP

Action plan for Ekebo:

Ventilation, air conditioning	- monitor ventilation system, check heat recovery and fans - adjust heat system after changes in ventilation system
Training	- energy consumption data available in connection to equipment and installations - more training and information for all categories of personnel

4/ Energy efficiency activities implemented in the RCHEP

At the activity describe in next part, 5/, energy efficiency issues were included.

5/ Behavioural measure for residents and visitors

Training care home staff

The project partner visited Ekebo in February 2011 in order to make an energy survey. Representatives from personnel working with different areas gathered and shared knowledge about energy efficiency and energy saving measures, relevant for Ekebo, together with project partner. The project partner's training was naturally intermixed in the discussions and aimed at inspiring and motivating further energy efficiency measures and energy saving behaviour.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and district heating) 2012 was compared with the energy consumption 2009 (since part of Ekebo was built in 2008, and part refurbished 2008), all data adjusted for temperature with degree days method. Energy savings at Ekebo according to this amounted to 11.2%. There are however many uncertainties influencing the comparison. Some of these, influencing energy use, are varying number of residents, and different needs, since many of the residents at Swedish residential care homes have multiple diseases, sometimes dementia. The local climate and hence degree days around the care home may differ from the place where the temperature

measurements are made. Only the energy consumption for heating (hot water and electricity excluded) should be temperature adjusted, but this data was not possible get.

Energy efficient behaviour of staff

At Ekebo the understanding and motivation for changing energy behaviour was further enhanced since the home care service, which is another part of Ekebo, had training about energy efficient transports. A study of their transports to the care takers' homes was made. Part of the staff was trained in EcoDriving, and the unit was also provided with e-bikes for two weeks testing. Concrete measures like this tend to make people think "Just do it!" and start saving energy.

7/ Conclusion

Main difficulties

Residents living at elderly care homes in Sweden today have heavy health problems. At Ekebo it is estimated that their average need for assistance is 100%. In Älmhult municipality there are no special care homes for persons with dementia diagnosis yet. Taken together, this means that the personnel have a very heavy work load. The public resources for elderly care have been decreasing in Sweden, especially related to the increased number of elderly persons. The number of elderly persons receiving elderly care has decreased while at the same time the number of elderly people has grown, which again points at the heavy work load for personnel at elderly care homes. Many care homes are sold off and privatised, which also influences the municipal care homes' resources and hence work load.

Main success

The main success was the collaboration between staff and project partner to identify energy waste, and their interest to change habits to save energy, which will also save money.

Further activities to be implemented

Älmhult municipality is planning to refurbish all their elderly care home premises to reduce energy consumption.

6. Nicklagården

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Nicklagården

2/ RCHEP main issues

The residential care home Nicklagården in Älmhult municipality has 78 residents. It was built in 1992, with an old building from about 1960. The total area of the building is 5 624 m².

3/Action plan of RCEHP

Action plan for Nicklagården:

Ventilation	- replace ventilation devices - replace fans
Heat system	- replace thermostats - adjust heat system after other measures
Lighting	- replace old light sources with LED-light in corridors - presence detectors in equipment rooms for storage

4/ Energy efficiency activities implemented in the RCHEP

Energy mapping made 2013 shows that the buildings' climate shells are in a good condition. Calculations show that energy efficiency measures concerning installations can further reduce energy consumption by more than 20%.

5/ Behavioural measure for residents and visitors

Training care home staff

When detailed interviews were made about energy efficiency and energy saving issues at Nicklagården in February 2011, this was done mixed with training and awareness raising discussions to motivate more energy efficient behaviour.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and district heating) 2012 was compared with the average energy consumption 2007–2009, all data adjusted for temperature with degree days method. Energy savings at Nicklagården according to this amounted to 10.3%. There are however many uncertainties influencing the comparison. Some of these, influencing energy use, are varying number of residents, and different needs, since many of the residents at Swedish residential care homes have multiple diseases, sometimes dementia. The local climate and hence degree days around the care home may

differ from the place where the temperature measurements are made. Only the energy consumption for heating (hot water and electricity excluded) should be temperature adjusted, but this data was not possible get.

Energy efficient behaviour of staff

Changes in energy behaviour are successful at Nicklagården. They also got possibility to widen their energy awareness by testing e-bikes for one day. This was real inspiration to take further steps from awareness to action.

7/ Conclusion

Main difficulties

Residents living at elderly care homes in Sweden today have heavy health problems. At Nicklagården it is estimated that their average need for assistance is 60%. The personnel's work load is very heavy. The public resources for elderly care have been decreasing in Sweden. Many care homes are sold off and privatised, and also the municipal care homes have to save money in different ways, which means reduce worked hours since that is the largest cost.

Main success

The main success was the participation, the interest and the commitment.

Further activities to be implemented

Älmhult municipality is planning to refurbish all their elderly care home premises to reduce energy consumption.

7. Almgården

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Almgården

2/ RCHEP main issues

The residential care home Almgården in Älmhult municipality has 49 residents. It was built in 1962 and refurbished in 1991 and 1994. The total area of the building is 6 843 m².

3/Action plan of RCEHP

Action plan for Almgården:

Lighting	- replace old light sources
Equipment, appliances	- check for European Energy Labels, update knowledge about new more severe demands, and then choose most energy efficient devices when replacing electric equipment
Training	- energy consumption data, placed easy to find - more training and motivation

4/ Energy efficiency activities implemented in the RCHEP

At the activity describe in next part, 5/, energy efficiency issues at Almgården are included.

5/ Behavioural measure for residents and visitors

Training care home staff

When the detailed energy surveys were made at Almgården in February 2011, different personnel categories met and together discussed energy efficiency and energy saving issues. Their exchange of data, knowledge and energy saving tips applicable for Almgården provided a natural frame for training and motivation, given by project partner. This enhanced energy awareness and will lead to improved energy saving behaviour.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and district heating) 2012 was compared with the average energy consumption 2007–2009, all data adjusted for temperature with degree days method. Energy savings at Almgården according to this amounted to 1.3%. There are however many uncertainties influencing the comparison. Some of these, influencing energy use, are varying number of residents, and different needs, since many of the residents at Swedish residential care homes have multiple diseases, sometimes dementia. The local climate and hence degree days around the care home may

differ from the place where the temperature measurements are made. Only the energy consumption for heating (hot water and electricity excluded) should be temperature adjusted, but this data was not possible get.

7/ Conclusion

Main difficulties

Residents living at elderly care homes in Sweden today have heavy health problems. At Almgården it is estimated that their average need for assistance is 75%. In Älmhult municipality there are no special care homes for persons with dementia diagnosis yet, which makes the work load even heavier, and more difficult to save energy since the residents' conditions make energy use very important. The public resources for elderly care have been decreasing in Sweden, especially related to the increased number of elderly persons. Fewer elderly persons receive elderly care, and those of them who do, have to stay as long as possible in their homes and have home care service, until they have very heavy health problems. Many care homes are sold off and privatised, which also influences the municipal care homes' economic resources and leads to a heavy work load for the personnel.

Main success

The main success was that management and staff took their time to participate in energy saving activities.

Further activities to be implemented

Älmhult municipality is planning to refurbish all their elderly care home premises to reduce energy consumption.

8. Mogården

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Mogården

2/ RCHEP main issues

The residential care home Mogården in Högsby municipality has 50 residents. The total area of the building is 6 506 m².

3/Action plan of RCEHP

Action plan for Mogården:

Training	<ul style="list-style-type: none">- Train all categories of personnel- Inspire and motivate to raise level of commitment in energy saving- Make information on energy consumption of installations/equipment visible
Lighting	<ul style="list-style-type: none">- Monitor lighting control system- Install automatic presence detectors where relevant- Review types of lightings and light sources
Seal	<ul style="list-style-type: none">- Check windows and front doors, seal

4/ Energy efficiency activities implemented in the RCHEP

Energy review 23 January 2012

Mogården was visited by Roger Gunnarsson and Kent Andersson from the Energy Agency for Southeast Sweden and Anders Ivansson from Högsby municipality. The day started with a short presentation and analysis of available energy statistics documents that were analysed and discussed. After that an energy review was made. The following notations and recommendations were made during the day, to facilitate the staff's further energy efficiency work.

Energy statistics: The total energy consumption of 281 kWh/m²,year in the starting situation (electricity and district heating,) was relatively high compared to a benchmark value 176 kWh/m²,year. The benchmark value was adjusted with heating degree days etc. to be able to compare buildings of different age and characteristics all over EU.

Lighting: Much of the lighting is never switched off, even if it is not used, including light bulbs. The lighting control system should be monitored immediately. Automatic lighting control with presence detectors and maybe daylight control should be installed in all common premises and spaces and those used only a few times every day. A review of types of lightings and light sources should be made. Probably a standard purchase routine for suitable energy efficient lighting should be made could help reduce lighting costs. The estimated energy saving potential with only small investments in automatic

lighting and other types of light sources is 25 000–35 000 kWh/year. Besides reduced costs this will also lead to a better work environment and reduced need for maintenance.

Seal: Check the need for seal in windows and front doors. This is an easy measure that will pay off fast

Behavioural issues: Training of staff about following issues is needed: the importance to reduce standby consumption, switch off printers, computers etc. when not in use and also make simple checklists for energy saving.

5/ Behavioural measure for residents and visitors

Training care home staff 21 March and 28 March 2012

Training in energy saving was held at Mogården by Jan Sjökvist and Kent Andersson, Energy Agency for Southeast Sweden. The day was divided in three parts.

- As part of the introduction practical training was performed to illustrate the concept of energy in general, which was amusing and at the same time worth considering.
- The second part was more specifically about energy saving: Why save? – motivation for energy saving, a film about energy saving in care homes and discussion on specific energy saving issues and which are most relevant on Mogården.
- The day ended with presentation about how to make energy rounds around the workplace with a checklist and detect where energy is wasted. The possibility of the staff making energy rounds after the project is finished was discussed.

Visibility sign

Different kinds of information materials were sent to the residential care home, e.g. stickers.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and district heating) 2012 was compared with the average energy consumption 2007–2009, all data adjusted for temperature with degree days method. There was no energy savings at Mogården, the energy consumption had increased by 1.6%. We have no data about varying circumstances that could explain this. There are some larger sources of errors for a comparison, e.g. the local climate around the care home may differ from the place where the degree day measurements were made, and that energy consumption for hot water and electricity was not excluded when energy consumption was degree day adjusted (only heat consumption should be temperature adjusted).

Energy efficient behaviour of staff

The awareness on energy saving has grown at Mogården, and the staff is working to change behaviour, like switch off TV and lighting. The lighting has been changed to low-energy bulbs.

7/ Conclusion

Main difficulties

At Mogården there is one dementia unit with 16 residents, one unit for elderly persons with severe somatic diseases with 24 residents and rehabilitation and short time unit with 10 residents. This provides different conditions for energy saving. Due to their heavy health problems residents, and the staff with their heavy work load, had very little time left to engage in energy efficiency training and energy saving. Elderly people in Sweden, even with high age and severe health problems, are taken care of by home care services in their own homes. When they eventually move into the care home they probably cannot participate in energy efficiency training. Concerning the elderly people it is not a question of energy wasting, other than what is needed for their different kinds of demands for special care. Based on experiences from a long life they are often well aware of energy saving and have good habits.

Main success

The energy efficiency training at the residential care home was successful, even if it was hard for the management to find time for their care workers to participate. There was a large interest for energy saving through behaviour changing and understanding of its large potential. The training was very much appreciated, not least since they usually don't have internal training about anything else but their core activities, but also this knowledge can be useful.

Further activities to be implemented

Mogården will be refurnished, beginning in 2014, which gives a good possibility to reduce energy consumption through technical measures.

9. Svalan

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Svalan

2/ RCHEP main issues

The residential care home Svalan in Sölvesborg municipality has 47 residents. It was built in 1993. The total area of the building is 4 069 m².

3/Action plan of RCEHP

Action plan for Svalan:

Building	<ul style="list-style-type: none">- windows- heat system- ventilation- lighting- kitchen appliances
Training	<ul style="list-style-type: none">- energy efficiency training- information about energy consumption

4/ Energy efficiency activities implemented in the RCHEP

Energy Efficiency Training 26 October 2011

Training about energy efficiency in buildings was held with caretakers of premises and municipal staff from Sölvesborg participating. Training was held by Peter Karlsson, Eva Karlsson and Kent Andersson. Programme: methods to determine energy use; the building and its energy flows, lighting, motors, pumps, idle effect. There was also practical training.

5/ Behavioural measure for residents and visitors

Training care home staff 14 November 2012

Training in energy saving was held at Svalan by Energy Agency for Southeast Sweden. The day was divided in three parts.

- As part of the introduction practical training was performed to illustrate the concept of energy in general, which was amusing and at the same time worth considering.
- The second part was more specifically about energy saving: Why save? – motivation for energy saving, a film about energy saving in care homes and discussion on specific energy saving issues and which are most relevant on Svalan.
- The day ended with presentation about how to make energy rounds around the workplace with a checklist and detect where energy is wasted. The possibility of the staff making energy rounds after the project is finished was discussed.

Visibility signs

Different kinds of information materials were sent to the residential care home, e.g. stickers.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and heating) 2012 was compared with the average energy consumption 2007–2009, all data adjusted for temperature with degree days method. Energy savings at Svalan according to this amounted to 5.7%. There are however many uncertainties influencing the comparison. Some of these, influencing energy use, are varying number of residents, and different needs, since many of the residents at Swedish residential care homes have multiple diseases, sometimes dementia. The local climate and hence degree days around Svalan may differ from the place where the temperature measurements are made. Only the energy consumption for heating (hot water and electricity excluded) should be temperature adjusted, but this data was not possible to get.

Energy efficient behaviour of staff

The staff has started looking at and reflecting on the energy bills. E.g. the size of main fuses has been changed. When replacing appliances and equipment the energy consumption is considered. At the beginning of the project, the persons interviewed about their energy behaviour had already started thinking energy saving, and after the training they make progress based on new knowledge and inspiration. They learnt about making Energy Rounds, an easy way to check for energy waste at the workplace – and at home as well.

7/ Conclusion

Main difficulties

Besides lack of information and training in energy saving the main difficulty according to the management at Svalan is lack of economic resources. Although there is a strong commitment, there is also a risk that choice of energy efficient equipment cannot be considered when e.g. the old kitchen appliances will be replaced.

Main success

The energy saving was held with large participation from the staff.

10. Tärnan

1/ Identification of the partner

Name of partner : Energy Agency for Southeast Sweden

Name of RCHEP : Tärnan

2/ RCHEP main issues

The residential care home Tärnan in Sölvesborg municipality has 21 residents. It was built in 1975 and refurbished in 1993. The total area of the building is 2 061 m².

3/Action plan of RCEHP

Action plan for Tärnan:

Heat system	- control of heat system - thermostats
Ventilation	- ventilation control
Laundry equipment	- replace old equipment with more energy efficient
Training	- more training is needed - information on installations' and appliances' energy consumption must be available

4/ Energy efficiency activities implemented in the RCHEP

Energy Efficiency Training 26 October 2011

Training about energy efficiency in buildings was held with caretakers of premises and municipal staff from Sölvesborg participating. Training was held by Peter Karlsson, Eva Karlsson and Kent Andersson. Programme: methods to determine energy use; the building and its energy flows, lighting, motors, pumps, idle effect. There was also practical training.

5/ Behavioural measure for residents and visitors

Training care home staff 14 November 2012

Training in energy saving was held at Tärnan by Energy Agency for Southeast Sweden. The day was divided in three parts.

- As part of the introduction practical training was performed to illustrate the concept of energy in general, which was amusing and at the same time worth considering.
- The second part was more specifically about energy saving: Why save? – motivation for energy saving, a film about energy saving in care homes and discussion on specific energy saving issues and which are most relevant on Tärnan.
- The day ended with presentation about how to make energy rounds around the workplace with a checklist and detect where energy is wasted. The possibility of the staff making energy rounds after the project is finished was discussed.

Visibility signs

Different kinds of information materials were sent to the residential care home, e.g. stickers.

6/ Monitoring when available

Energy savings

The total energy consumption (electricity and heating) 2012 was compared with the average energy consumption 2007–2009, all data adjusted for temperature with degree days method. Energy savings at Tärnan according to this amounted to 3.2%. There are however many uncertainties influencing the comparison. Some of these, influencing energy use, are varying number of residents, and different needs, since many of the residents at Swedish residential care homes have multiple diseases. At Tärnan the residents suffer from dementia. The local climate and hence degree days around Tärnan may differ from the place where the temperature measurements are made. Only the energy consumption for heating (hot water and electricity excluded) should be temperature adjusted, but this data was not possible get.

Energy efficient behaviour of staff and residents

It is not possible to work with residents' behaviour since they have a diagnosis of dementia. Persons from the staff who were interviewed at the beginning of the project had already started thinking about energy saving, and since this is a continuing process, the training has inspired more of this – there is always more to learn. After the training, persons from the staff look at and reflect on the energy bills, e.g. after looking at the electricity bills the size of main fuses has been changed. When replacing appliances and equipment the energy consumption is considered. They were also introduced to Energy Rounds, an easy way of checking for energy waste at the workplace, and useful also at home.

7/ Conclusion

Main difficulties

There are more difficulties when working with energy saving at residential care homes for elderly people with dementia disease. The management at Tärnan is afraid that energy saving measures result in a loss of comfort, which is so important in care of old people where comfort aspects are more important than energy saving. According to the technical staff there is not enough money available to cover the need for maintenance at Tärnan. The management also points at lack of financing and lack of awareness. In the kitchen besides lack of training, there are old and energy inefficient installations and equipment combined with old habits. In the office energy saving is an issue of prioritizing.

Main success

Many interested participants attended the training, despite their heavy work load and lack of time.