

Technology Procurement: Heat recovery systems in existing apartment blocks Information Seminar

Time and date: 20 April 13.10 – 16.00

Venue: Energimyndigheten, Rosenlundsgatan 9, Stockholm

Attendance:

Chairman: Arne Elmroth
Örjan Ahrenbrandt, Casamja AB
Peter Axelsson, Stockholmshem
Tomas Berggren, Energimyndigheten
Bengt Bergqvist, Energianalys AB
Martin Brunnkvist, AB Svensk Byggtjänst
Kenneth Brygt, Lindab
David Burman, Sweco Systems
Per Eriksson, XF Energy AB
Patrik Eriksson, Schneider Electric
Bertil Forsman, Climate Solutions
Per Forsling, Fastighetsägarna
Patrik Grönqvist, Sweco Systems
Mikael Hallberg, Bravida Klimatservice
Erik Helmenius, VoltAir System
Magnus Isaksson, XF Energy AB
Jan-Ove Lillback, AB CA Östbergs
Ingar Lindholm, Energi & miljötekniska föreningen
Jörgen Lindh, Millibar System AB
Martin Normark, Vattenfall
Linda Söderkvist, Energi & Miljö, RIBA
Calle Rosenqvist, VoltAir System
Therese Rydstedt, SABO
Kenneth Serngard, Lindab
Göran Svensson, Hyresgästföreningen Riksförbundet
Elin Törnqvist, Casamja AB
Helena Ulfsparre, Familjebostäder
Göran Werner, WSP
Åsa Wahlström, CIT Energy Management
Jan Westlund, AB CA Östberg
Additional 5 people that didn't sign the list

1. The participants were welcomed and a short presentation round was put on.
2. Åsa Wahlström presented the technological procurement.
3. Bengt Bergqvist from Energianalys presented air permeability tests and sound level measurement in the seven apartment blocks.

Minutes from the information seminar:

Technological procurement of heat recycling systems in existing apartment blocks

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4. Tomas Berggren gave a brief account of how important technical procurement is from a societal perspective.
5. Discussion now followed with a question-and-answer session led by Arne Elmroth as recounted below.

- a) Question: Why is technical procurement limited to recovery effected from waste air? Why is recycling of waste water not permitted? This means that technology procurement cannot be technologically neutral?

Answer: Recycling heat from waste air is a highly essential energy efficiency measure which needs to be carried out in existing buildings so as to achieve national objectives and halve energy consumption by 2050. Technology procurement is thus being carried out with the aim of establishing complete systems for installation in apartment blocks which can preserve the heat in waste air and recycle it so it is of benefit to the building. Technology procurement is open for technological solutions which can preserve the heat in waste air and is thereby technologically neutral. Present technology procurement is not focusing on finding systems for recycling heat from waste water.

- b) Question: We gather that the trade organisations SVEP, Svensk Ventilation and the Swedish Construction Federation have participated in a workshop in order to discuss a proposal for a requirement specification. Why weren't more trade organisations invited to participate?

Answer: The workshop was held to gather in views on the requirement specification from various players in the sector so as cover differing points of view as far as possible. To make the workshop efficient, the number of participants was limited. With representatives from SVEP, Svensk Ventilation and the Swedish Construction Federation, the commissioning group deemed that the entire range of players would be covered, from contractors and installers to component manufacturers.

- c) Question: Why are energy prices set as SEK 1/kWh for electricity and SEK 0.60/kWh for district heating? Why aren't rates for the specific district applied?

Answer: An average value for district heating rates is applied. Prices are the same for all service providers and for all demonstration buildings in order to facilitate comparison between the various offers.

- d) Question: Is inflation included in the cost calculations?

Answer: No, the actual interest is used for costing purposes. The actual rate of 4% is used, which corresponds to a nominal interest rate of 6% and 2% inflation.

- e) Question: Should prices be quoted ex VAT?

Answer: Yes, VAT is not included in energy prices or investment costs.

- f) Question: Can parts of an offer be classified as secret?

Answer: Yes, if it is possible to classify e.g. a technological solution as secret, which might lead to a patent in the offer. Anything to be classified as secret should be mentioned in the offer.

- g) Question: How many winners can you demonstrate?

Answer: We have seven demonstration buildings. To ensure good quality when assessing, each technological solution needs to be tested and evaluated in at least two buildings. This means that three winning proposals can be demonstrated. Should further interesting offers emerge, we can try to develop more demonstration buildings.

- h) Question: Can we tender for selected apartment blocks or must we quote for all?

Answer: Offers can be submitted for each separate building. As it is important when assessing to demonstrate at least two buildings, it is advantageous to quote for at least two of the selected demonstration buildings.

- i) Question: Is preliminary adjustment included in the task or is it carried out by the block owner?

Answer: Included.

- j) Question: How do you assess the indoor climate, and what happens if the tenants complain that they've previously had e.g. a warm 24° C and after installation they only have e.g. 20° C?

Answer: We measure the indoor temperature in a number of apartments both before and after installation. When assessing indoor questionnaires, account is taken of the measured data. The measurements carried out so far show that the indoor temperature is below 22° C. The idea was not to improve energy efficiency by lowering the indoor temperature, it was to recycle heat from the waste air.

- k) Question: Do the requirements for monitoring the temperatures, flows and energy consumption apply to all units installed in the buildings?

Answer: Yes

- l) Question: Is measurement only for this demonstration property, or does it apply to future installations?

Answer: It's very important to have continuous monitoring to see that heat recycling works in future installations too. In cases where the technological solution is a heat recycling system in each apartment, a lot of cable will need laying to link all transmitters to the control and monitoring system. In such cases the continued technological system may be to have an alarm function which warns if the recycling system is not working and which is connected to the control and monitoring system. All meters should always be present however.

- m) Question: Is it possible to connect to the tenant's electricity system (household electricity) but still connect a meter to the control and monitoring system?

Answer: In technology procurement it is essential for separate measurement of energy consumption to be possible. If the tenant pays for electricity consumption for heat recycling or if it is deducted by some other means is of less importance.

- n) Question: Do we only have to see that it is possible to connect to the control and monitoring system, or should it [actually] be connected?

Answer: It should be connected to the control and monitoring system.

- o) Question: Can you describe the control and monitoring system currently present in the buildings?

Answer: No, I have no information at the moment, but the buildings' owners will be pleased to help with the necessary details and it's possible to visit the buildings.

- p) Question: One requirement is to state the method for sealing channels if it is wished to make use of existing channels, but how good is the air permeability on the existing channels in the buildings?

Answer: We have chosen not to measure the air permeability on existing channels since pressure testing itself could cause damage. The tenderer himself will decide how to carry out sealing or if the channels will need replacing. The owners will be pleased to assist if you want to visit the buildings.

- q) Question: What does it mean when it says the tenderer must show the results of the COP measurements and the temperature efficiency in the laboratory?

Answer: It means that the tenderer must show the results together with details of the test method used and whether measurements were carried out by him or under the auspices of a third party.

- r) Question: Is the installation time fixed for autumn 2010 and winter 2011 or could another time be chosen to reduce disturbance for the tenants and carry out installation when heating is not needed?

Answer: The installation time is fixed for autumn 2010 and winter 2011.

- s) Question: Who can submit an offer, the manufacturer, the installer or the contractor?

Answer: The party submitting the offer must take total responsibility for the entire system solution. This means the projecting, procurement of components, installation and commissioning inclusive of other measures which may be necessary to ensure that the solution works (e.g. sealing the climate screening, the building of ventilation rooms, preliminary adjustment). If the party submitting the offer does not have full competence within his own organisation, the tenderer must collaborate or bring import the missing competence. In other words a manufacturer can submit an offer if in collaboration with outside competence.

6. Åsa Wahlström concluded by saying that offers could be submitted until the 4 August. Queries in writing can be sent until the 15 June. All information about technology procurement is available on www.bebostad.se. Results of measurements taken before installation will also be posted there.

7. Arne Elmroth thanked all participants for a rewarding meeting and reminded them that this was very large future market and that those tendering would have much to gain.

Minutes by:

Åsa Wahlström

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Checked by:

Arne Elmroth

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