In english

The purpose of this thesis was to develop a model to identify the energy situation of buildings within municipal administration. This was done by special studies by three of three buildings, an old people’s home built in 1994, a kindergarten built in 1967 and a school built in the early 1900s and completely renovated in 1993. The result was a model for the energy survey that can be used in the context of energy certification.

Energy mapping includes for example:

- Type of building, which provides the basis for further work.
- The types of activities in the building are important information for reference values of the building’s energy use. The reference value can be obtained from tables prepared by ”Statistics Sweden”.
- Actual adjusted normal energy use is to be compared with the reference value.
- Other independent investigations concerns the mandatory ventilation control (OVK), Radon and CO2 – load.
- Evaluation of the need of further investigations. If the actual energy consumption is significantly below the reference value, we believe that a major, costly investigation is not necessary.
- Identification of systems and processes, this makes it necessary to examine the type of heating system, for comfort cooling, etc.
- Visual inspection / investigation of the building with examination of the status of different parts of the buildings service systems. Check of operating times and set values. Interviews with operational personnel, technicians, users, etc. about how the building works.

This work has resulted in a number of insights regarding the model for energy mapping, i.e;

It is easy to initially focus on major dramatic actions that are expensive to implement. Often it may be more profitable to begin by reviewing the system as is. A property that is operated and maintained in a good way can remain cost effective for a long time and also give a good indoor environment.

As to incentives and targeting in order to implement a successful energy efficiency requires knowledge of energy for all people involved in the use of the building (property owners, janitors and tenants). Therefore, it is beneficial to develop the cooperation with users of the buildings, and do information campaigns about energy efficiency. The building users’ incentives for the energy efficiency should also be considered.

Finally, it calls for targeting and a methodical approach to reduce energy use in buildings with high energy demand and create a good indoor climate.