



2008



eGain are experts
in using weather forecasts
to control the heating of buildings.

To customers, this means lower costs,
improved comfort and a commitment
to participate in reducing global warming.



Today, often so much as 25% of the total operating costs is costs of energy.

eGain have specialized in simple and safe systems that significantly reduce energy costs without requiring expensive technology or more labor.



How well prepared are you, when energy costs rise ?



Forecast control

is all about using your existing heating system,
adding weather intelligence
to optimize the energy usage
as the weather changes.



Outdoor weather conditions
affects both comfort and costs





Previously it was not possible to consider the importance of weather conditions when calculating the buildings Energy Balance....

- Changing weather conditions
- Thermal mass of building
- Difficulty to adjust the heating control system
- Cold problems when heating season starts
- No knowledge of future needs

.....now you can with eGain Forecast control



The theory behind...

- **Internal heat contribution**
- **Outdoor temperature**
- **Solar energy**
- **Wind cooling**
- **Location of building**
- **Other building characteristics**

Knowing future weather conditions the energy needed is precisely calculated hour by hour.

- **Better energy efficiency**
- **Improved indoor climate**





Net energy needed

is calculated from the balance of :

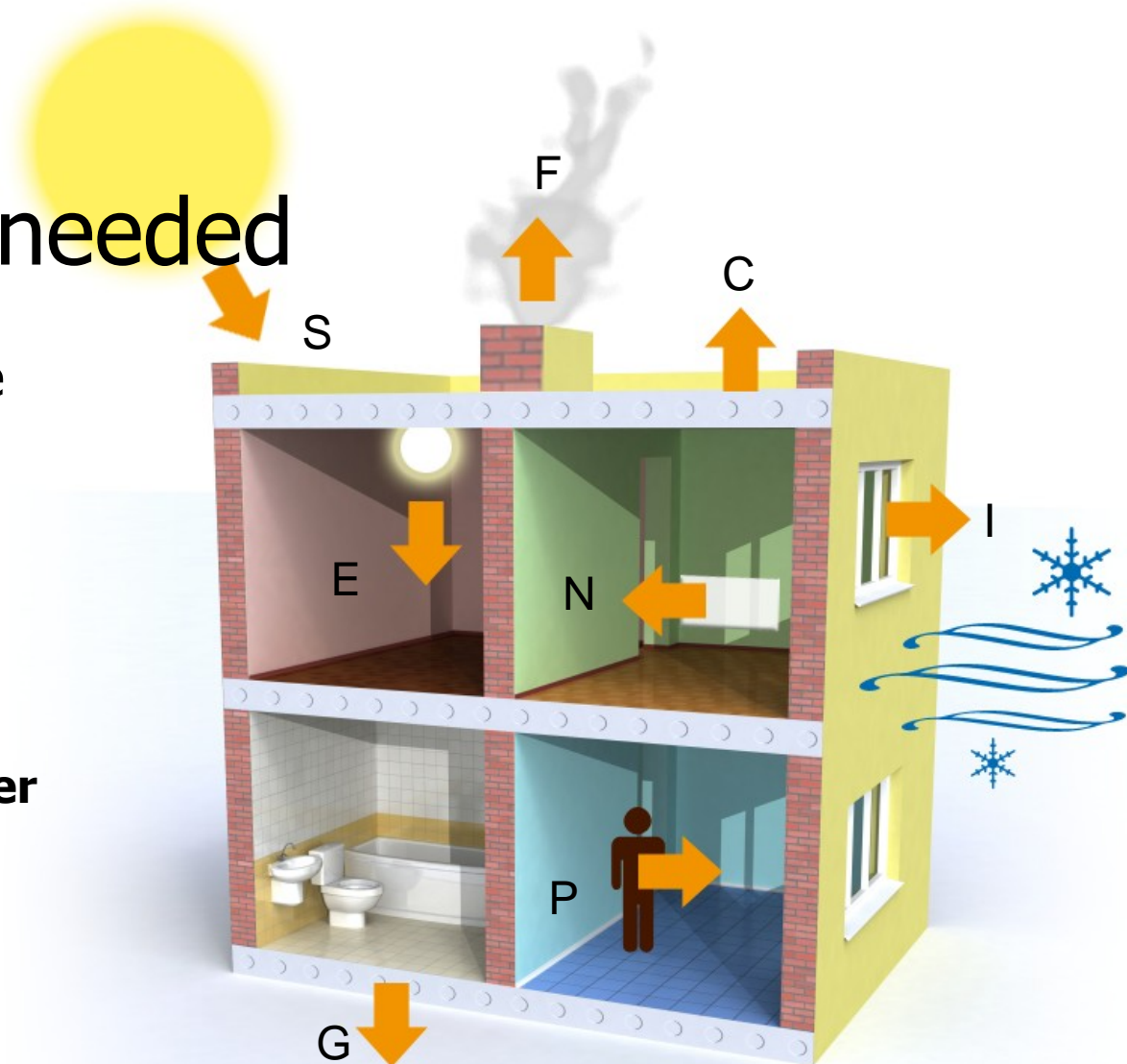
Energy losses:

- **Transmission**
- **Fan evacuation**
- **Natural ventilation**
- **Ground heat transfer**

Energy contributions:

- **Solar energy**
- **Population**
- **Electrical appliances**

$$N = C + G + F + I - (E + P + S)$$





The net energy needed is translated into "Equivalent Temperature"

More wind means it feels colder

Example: A wind speed of 7 m/sec makes 0° C feel like -11 ° C

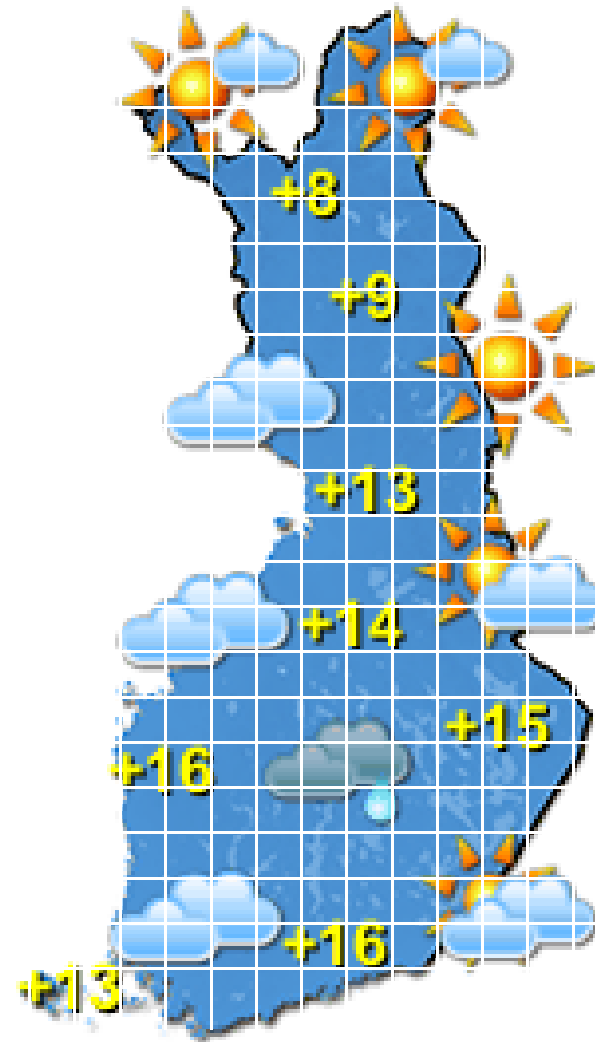


Forecast control

5 day local, detailed and accurate weather forecasts with hourly data.

Based on weather forecast and building characteristics the net energy needed is calculated and expressed in Equivalent Temperature (ET)

ET is directly replacing the outdoor temperature previously used to control the heating of the building.





How it works...

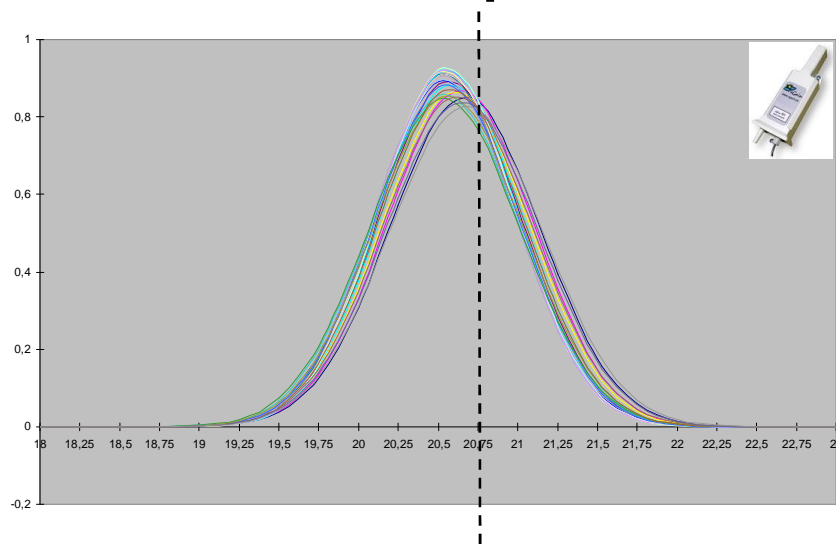
eGain[®] servers collect and calculate Net Energy needed and translates into ET for the next 5 * 24 hours.

The data is transmitted to the eGain 901[®] forecast receiver which is directly connected to the existing control system. eGain 901 has a universal output – Ni1000, Pt1000, NTC, PTC ... which connects directly to all brands of control equipment.



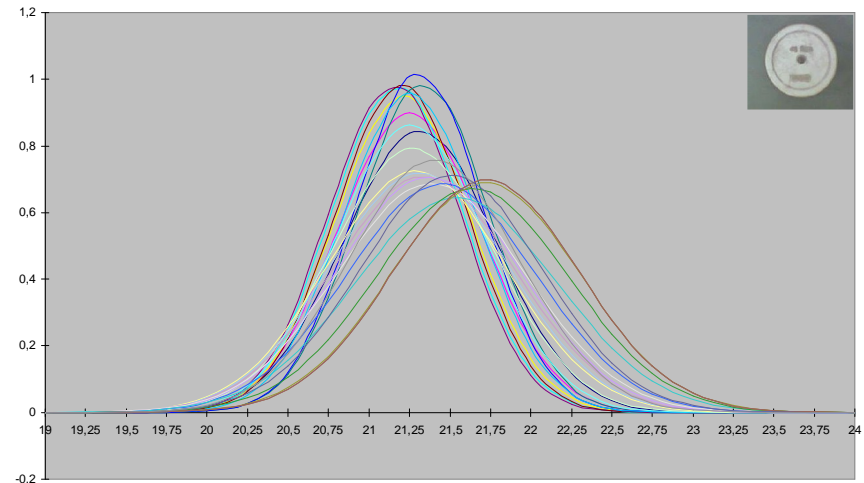


Indoor temperature variation..



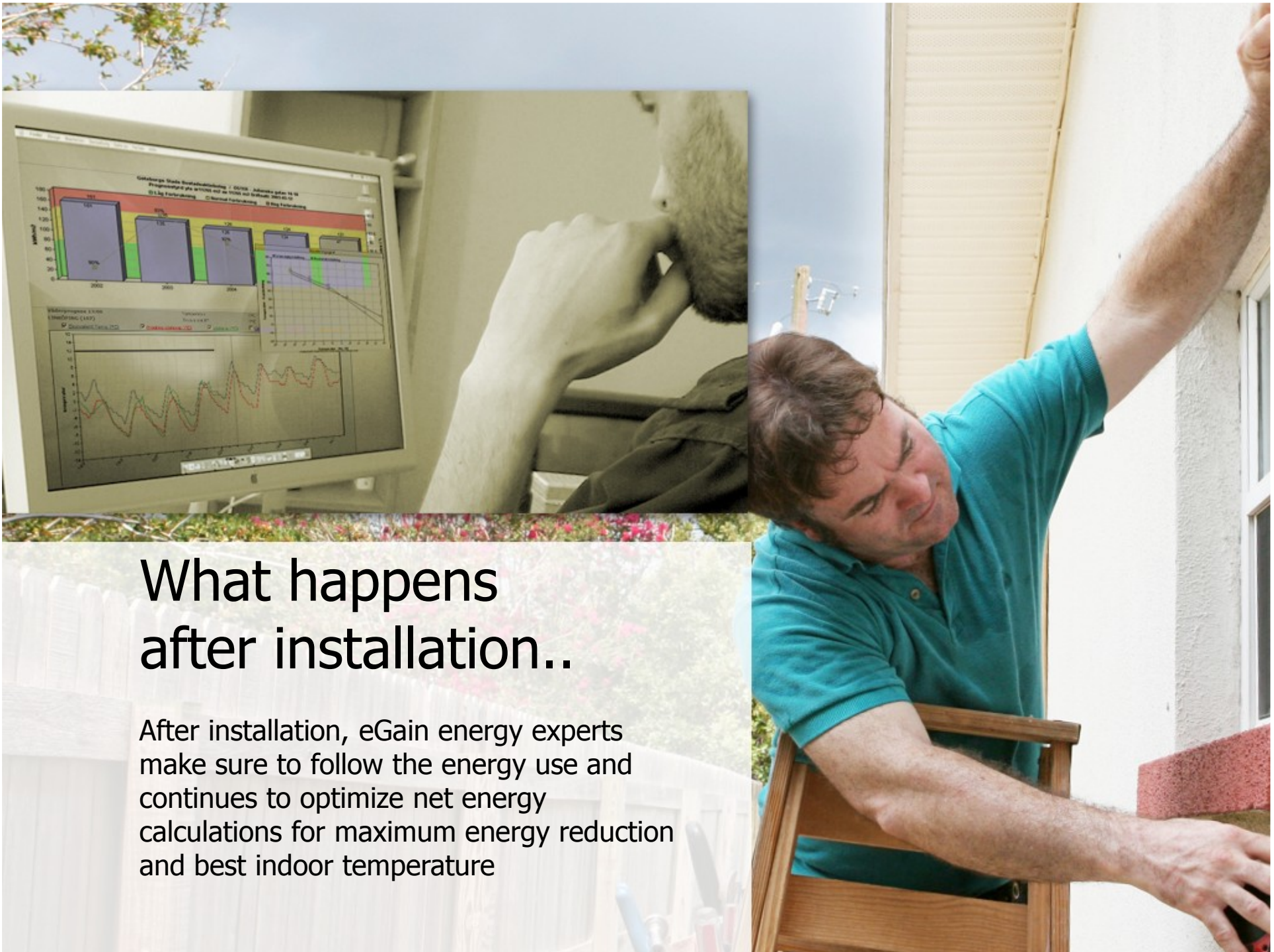
Forecast controlled building

Note the stable and small spread in indoor temperature.



Control based on outdoor temperature

Large indoor temperature spread and clear indication that temperature increases during afternoon and evening hours.



What happens after installation..

After installation, eGain energy experts make sure to follow the energy use and continues to optimize net energy calculations for maximum energy reduction and best indoor temperature



Works eGain Forecast control everywhere ?

Forecast control fits almost all apartment buildings, hospitals and most commercial buildings.

Requirements :

- **Water based heating system, ie District heating, Oil**
- **Good window standard**
- **Normal or heavy thermal mass of building**



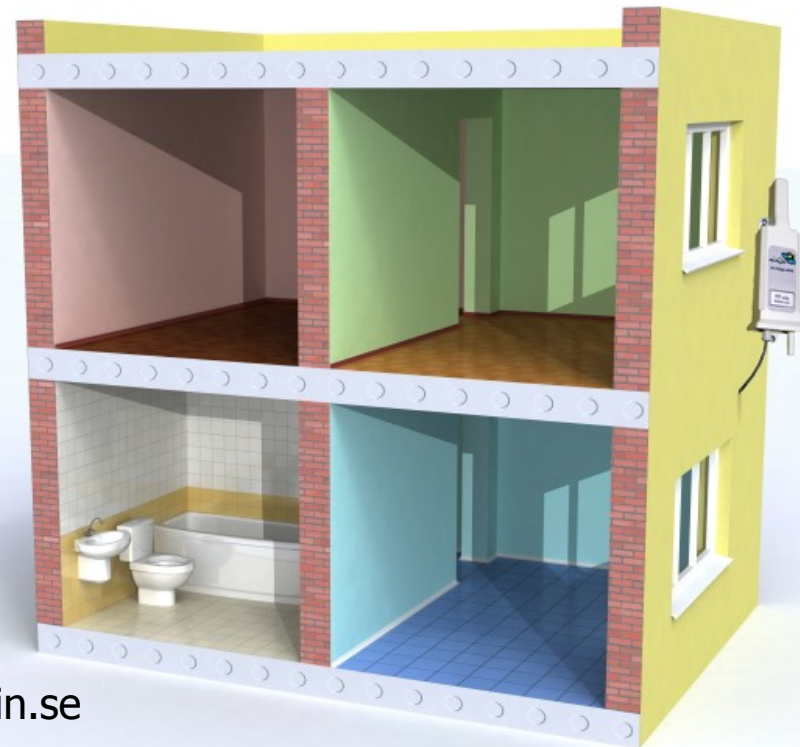
Simple installation of eGain 901[®]

Nothing needs to be changed indoors.

Just replace the outdoor temperature sensor with the forecast receiver eGain 901[®].

Before leaving the building, the installer makes sure that forecasts are transmitted and system operates correctly.

An email is sent confirming system operation with information on how to logon to www.egain.se





Always safe to use...

- Built in temperature sensor
- Validation of temperature forecast
- Enters safe mode automatically when missing or faulty temperature forecast

eGain 901 operates as a temperature sensor when needed.

A close-up photograph of water droplets on a glass surface. The droplets are of various sizes and are scattered across the frame. A bright light source is visible in the center, creating a lens flare effect that illuminates the scene. The background is a soft, out-of-focus blue and white. The text "Winning in all weather conditions" is overlaid in white, sans-serif font in the upper left quadrant.

Winning in all weather conditions