**IC-Meter data:**

# Monthly Statistics for Energy and Indoor Climate
# August 2015

*Location*: Demo 1: Energy and Water

*Room*: Green Tech House Vejle

*Box ID*: 75C0EACC

*User*: For batch operations Administrator <admin@ic-meter.com>

*Location created*: 25th Mar 2015

*Timezone*: Europe/Copenhagen

## Energy Balance for the Entire Building

| | | |
|---|---|---|
| **Central heat actual indoor temp.** | 1,207 kWh | |
| **Savings if 20 °C indoor** | 926 kWh (77%) | |
| **Passive solar:** | 548 kWh | |
| **Specific heat losses:** | 465 W/°C | |

## Energy label and yearly consumption

**Energy label:**     A 2020 (Calculated after BE10 - Denmark)

**Energy Supply:**     42,183 kWh/year (11 kWh/m²*year)

- Measured data calibrated to 20 °C indoor and standard DK-Weather conditions

## Indoor Climate Meter data - Avg. Values for 6 active hours*
*On workdays between 8:00-14:00

| | | | |
|---|---|---|---|
| **$CO_2$:** | 474 ppm | 🟢 |
| **Temperature:** | 24.0 °C | 🟡 |
| **Relative humidity:** | 51.1 % | 🟡 |

**More Statistics >>>**

Relative distribution for time of the day in workdays and weekends, ventilation key figures and local weather
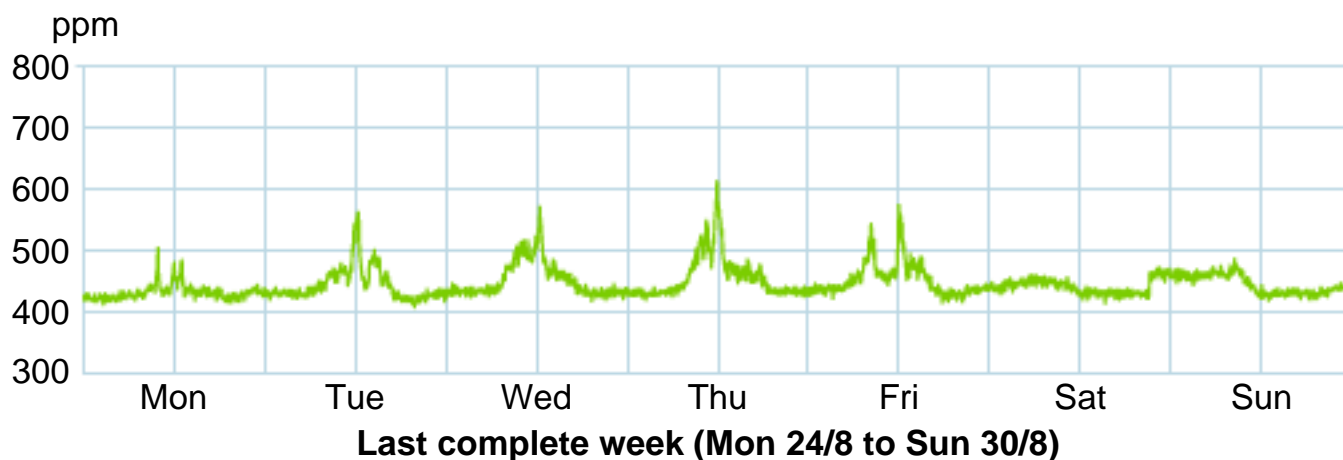
# Classification of indoor climate

All indoor meter data are classified according to a Smiley/traffic light concept, where 🟢 green is good, 🟡 yellow is less good and 🔴 red is bad.

The classification reflects the indoor climate with respect to health, what is good for the building and the climate outside. The thresholds as listed in the table below have been specified by the Technological University of Denmark, Center for Indoor Climate and Energy.

| Indoor climate classes | Bad | Less good | Good | Less good | Bad |
|---|---|---|---|---|---|
| | 🔴 | 🟡 | 🟢 | 🟡 | 🔴 |
| Fresh Air ($CO_2$) ppm | | | Below 800 | 800-1,000 | Above 1,000 |
| Temperature °C | Below 18.2 | 18.2-20.2 | 20.2-23.2 | 23.2-25.2 | Above 25.2 |
| Relative Humidity % | Below 20 | 20-25 | 25-48.5 | 48.5-60.7 | Above 60.7 |

![IC-Meter Indoor Climate logo]

## CO$_2$ - August 2015

ppm



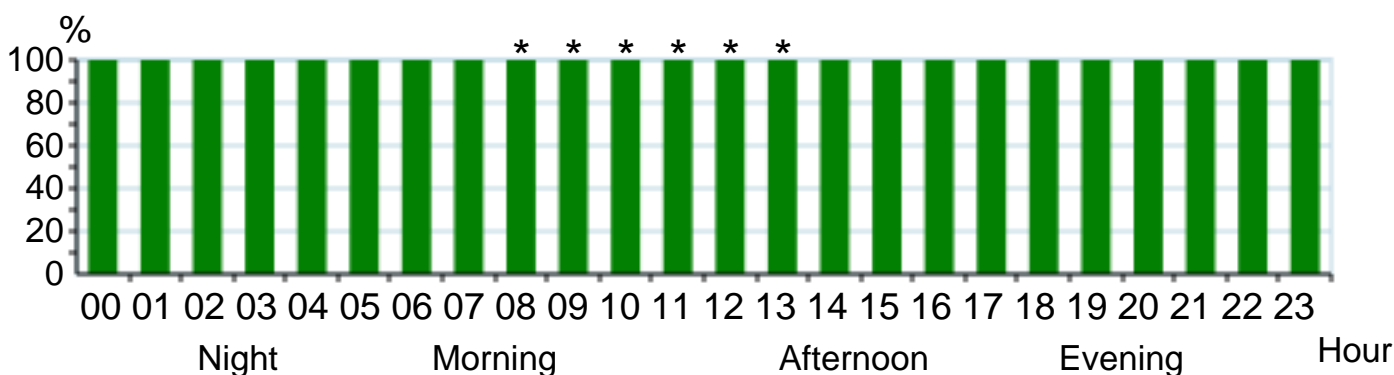**Last complete week (Mon 24/8 to Sun 30/8)**

## CO$_2$ - Workdays

Relative distribution on the three climate classes for the period

| Average CO$_2$ | Good | Less good | Bad |
|---|---|---|---|
| 448 ppm | 🟢 100 % | 🟡 0 % | 🔴 0 % |

Relative distribution for time of the day and climate classes



## CO$_2$ - Weekends

Relative distribution on the three climate classes for the period

| Average CO$_2$ | Good | Less good | Bad |
|---|---|---|---|
| 439 ppm | 🟢 100 % | 🟡 0 % | 🔴 0 % |

Relative distribution for time of the day and climate classes
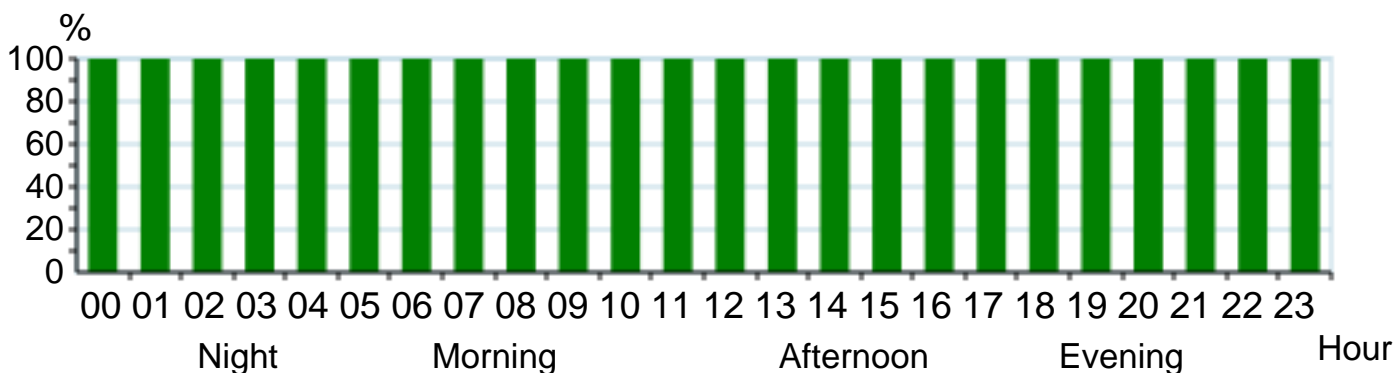
# Temperature - August 2015



°C

**Last complete week (Mon 24/8 to Sun 30/8)**
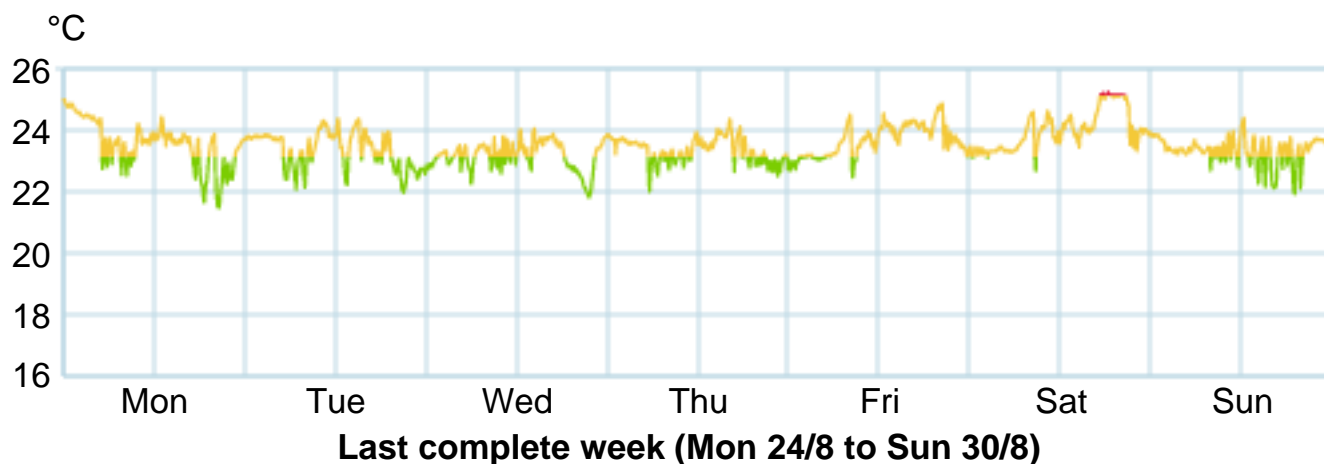
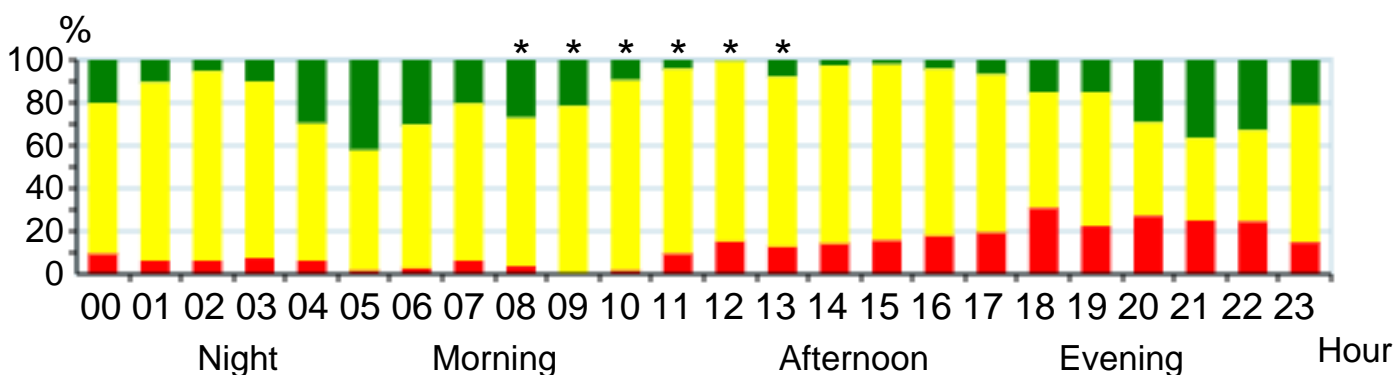## Temperature - Workdays

Relative distribution on the three climate classes for the period

| Average Temperature | Good | Less good | Bad |
|---|---|---|---|
| 24.0 °C | ⬤ 17 % | ⬤ 71 % | ⬤ 12 % |

Relative distribution for time of the day and climate classes



## Temperature - Weekends

Relative distribution on the three climate classes for the period

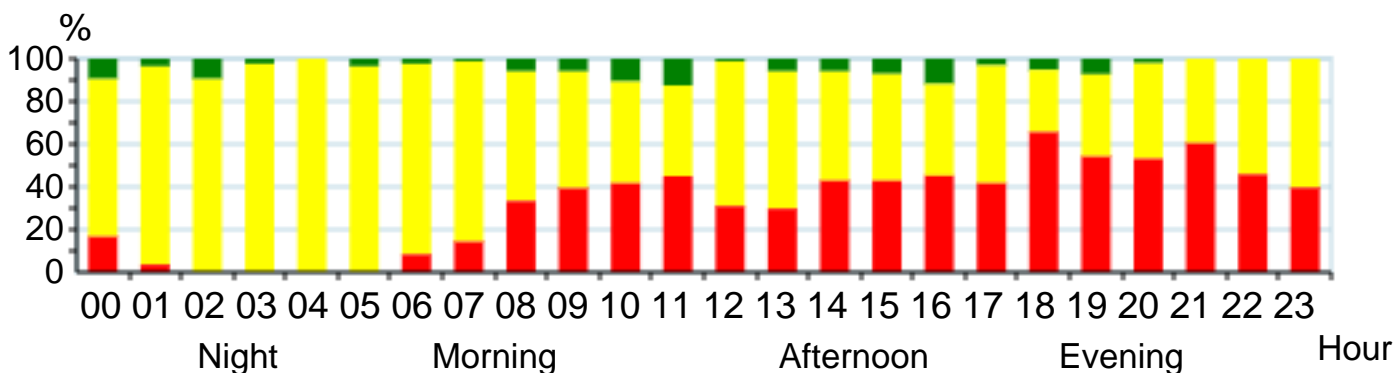| Average Temperature | Good | Less good | Bad |
|---|---|---|---|
| 25.1 °C | ⬤ 5 % | ⬤ 63 % | ⬤ 32 % |

Relative distribution for time of the day and climate classes

## Humidity - August 2015



**Last complete week (Mon 24/8 to Sun 30/8)**
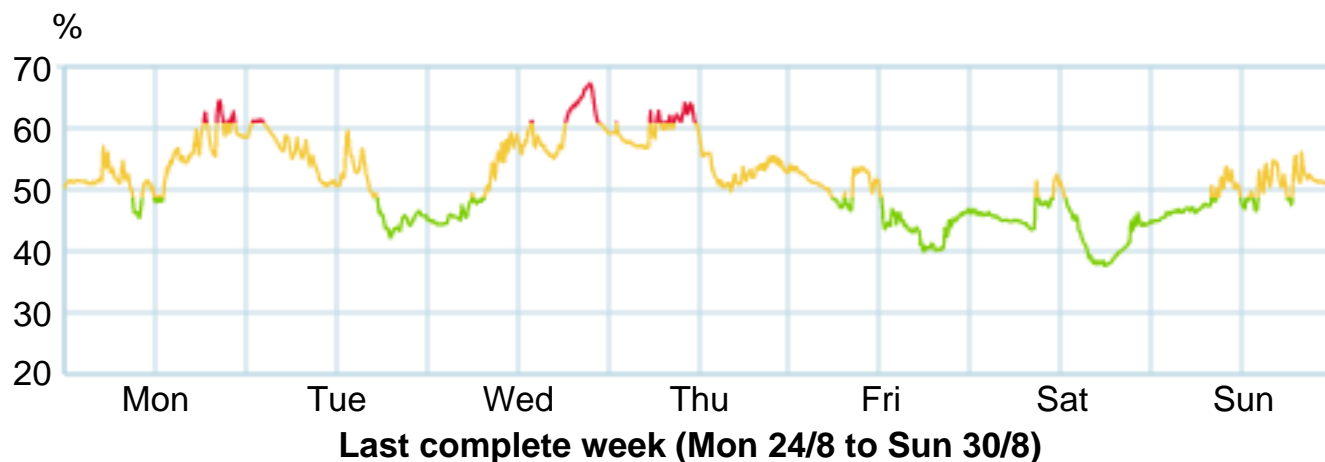
## Humidity - Workdays

Relative distribution on the three climate classes for the period

| Average Humidity | Good | Less good | Bad |
|---|---|---|---|
| 49.5 % | 🟢 43 % | 🟡 54 % | 🔴 3 % |

Relative distribution for time of the day and climate classes
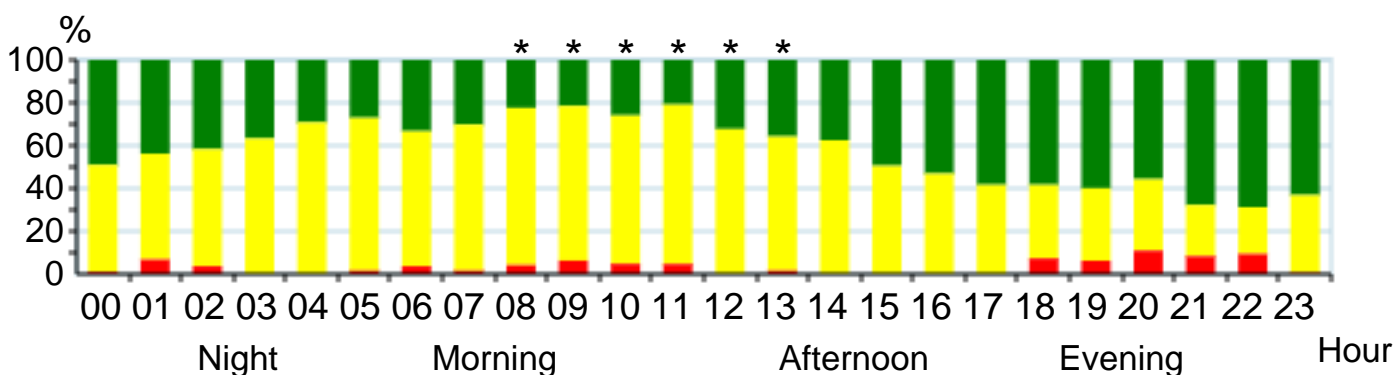


## Humidity - Weekends

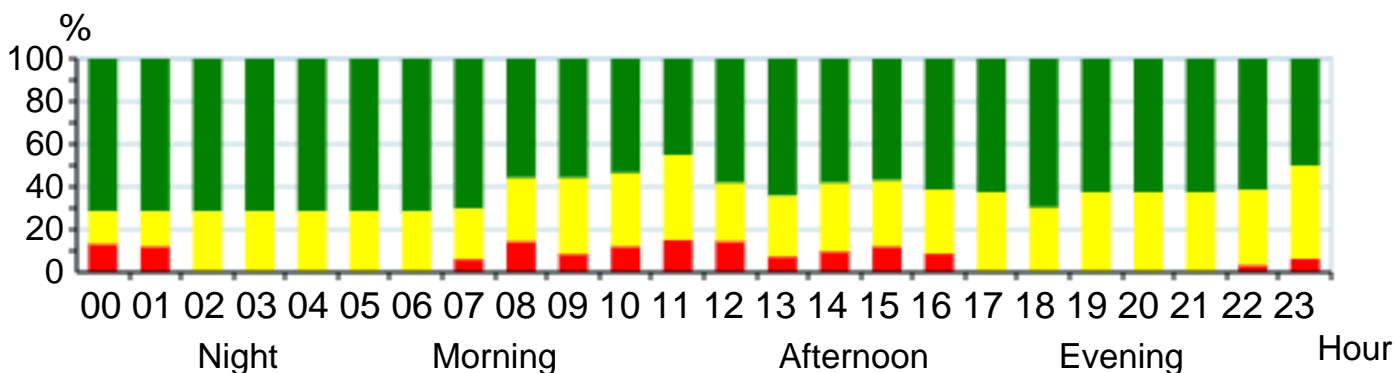Relative distribution on the three climate classes for the period

| Average Humidity | Good | Less good | Bad |
|---|---|---|---|
| 45.6 % | 🟢 63 % | 🟡 31 % | 🔴 6 % |

Relative distribution for time of the day and climate classes

**Period: August 2015**

**Ventilation key figures**
Air change rate: 0.9 /h
2,750.3 m³/h
Heavy ventilation: N/A minutes /day
Vapor production: 1.3 kg /day

IC-Meter calculates four key figures based on measurements from the previous 30 days.

- *Relative air change per hour pct./hour* (Air change rate) indicates how many m³ get replaced in a room during an hour, compared to the volume of the room.

- *Absolute air change per hour m³/hour* indicates how many m³ get replaced in a room during an hour.

- *Heavy ventilation minutes/day* indicates minutes when the relative air change rate is above 3. This corresponds to e.g. two open windows resulting in the air in the room being replaced quickly.

- *Vapor production kg/day* indicates the average total vapor produced in a room to maintain a higher absolute humidity indoor than in the air outside.

**More information**
More information on  www.ic-meter.com

# IC-Meter
## Indoor Climate

**Period: August 2015**

**Local Weather**

| Average temperature | Min | Max |
|---|---|---|
| 17.5 °C | 7.3 °C | 27.7 °C |

| Average humidity | Min | Max |
|---|---|---|
| 73.6 % | 30.8 % | 98.8 % |

| Wind speed m/s | Direction | | |
|---|---|---|---|
| **Average wind speed** | **1.** | **2.** | **3.** |
| 2.3 m/s | E | SE | SV |

Read more about the measurement concept of IC-Meter on    www.ic-meter.com