

# BEST PRACTICE IN CZECH REPUBLIC – SMART METERING

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## BASIC INFORMATION

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### **Title of the Best Practice:**

Smart metering of indoor climate in 5 schools of the Zlín Region

**Energy efficiency measures implemented in the building:** Installing smart metering system – Indoor measurement of CO<sub>2</sub>, relative humidity and temperature. Including energy management of the buildings from year 2008.

### **Locations:**

**City:** 2x Kroměříž (<https://goo.gl/maps/6vJyu7kptQ92> and <https://goo.gl/maps/78eXA3ns46x>)

Holešov (<https://goo.gl/maps/gyEjuK5JNHM2>),

Vsetín (<https://goo.gl/maps/5Lb8qfL8Wex>),

Valašské Klobouky (<https://goo.gl/maps/FnJmMUYJQTt>)

**Region:** Zlín Region

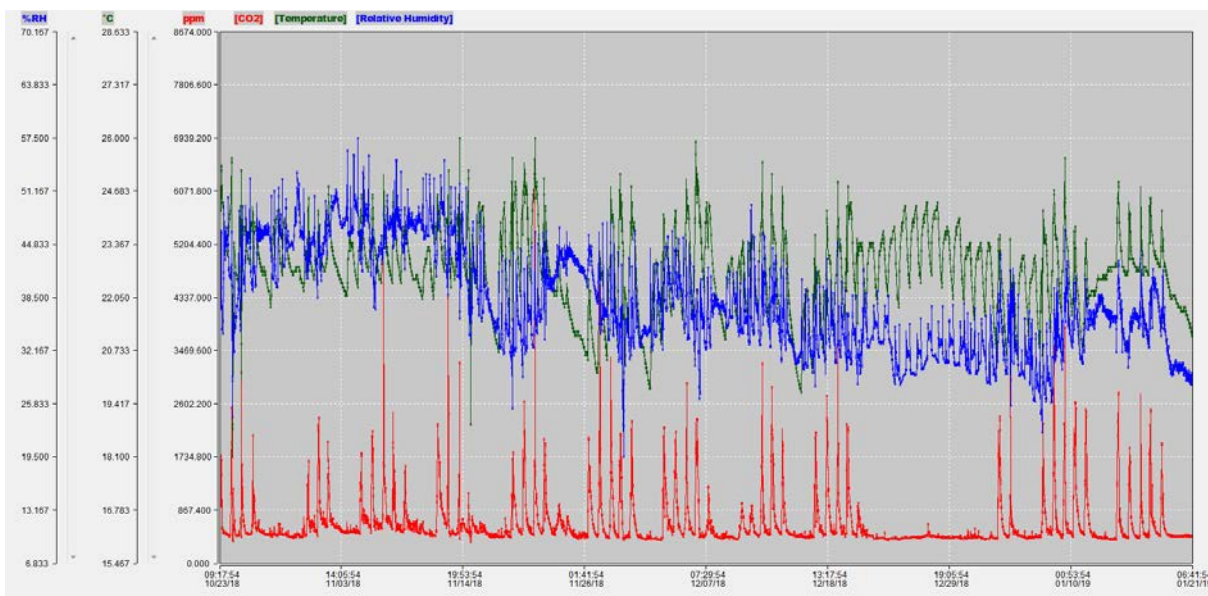
**Country:** Czech Republic

### **Partners involved:**

- o Grammar school Holešov (<https://www.gymhol.cz/>)
- o Secondary pedagogical and social school Kroměříž (<https://www.ped-km.cz/>)
- o Basic school 1. Máje Kroměříž (<http://www.zs1majekromeriz.4fan.cz/>)
- o Grammar school Valašské Klobouky (<https://www.gymnazium-vk.cz/>)
- o Grammar school and secondary medical school Vsetín (<https://www.mgvsetin.cz/index.php?type=Homepage&id=154>)

**Implementation year:** 2017-2018

Photos:



Source: Energy agency of the Zlin region

## Energy management system:

### Spotřeba zemního plynu [m3]

#### Kategorie - školy. Podkategorie - gymnázia.

Gymnázium Valašské Klobouky (IČO 61716707), Valašské Klobouky, Komenského 60, PSČ 76626 , Cepková Eva, RNDr. (ředitelka), e-mail: e.cepkova@gymnazium-vk.cz ,tel.: 577 006 969

Odběrné místo: Valašské Klobouky, Gymnázium - hl. budova, Valašské Klobouky, Komenského 60, Krůželová Jaroslava, Ing., e-mail: j.kruzelova@gymnazium-vk.cz. Jistič: 50, Sazba: C25D



Source: Energy agency of the Zlín region

## SYSTEM CHARACTERISTICS

### Brief Description:

Public authorities like the Zlín Region faced particular challenges resulting from the need to obtain data from multiple organizations to develop and monitor their energy consumption. Energy data is crucial for identifying trends and priority sectors in energy policies, and for tailoring measures in terms of energy efficiency improvements. Energy management is an essential tool in the field of economical as well as therefore environmental friendly energy consumption which leads to low carbon economy. Nowadays 120 organizations from the whole Zlín Region are included in the EM system developed by the Energy agency of Zlín Region. Thanks to the EM the bills for energy consumption are crosschecked and verified and also several malfunctions were indicated from year 2008 like spontaneous leak of water and natural gas, functionless electricity meters etc.

Smart metering was installed in 5 public schools. Metering supports the energy management of buildings with more data and more information leading to the better operation of buildings.

### What does the smart meter measure:

- CO2 concentration
- Relative humidity
- Temperature

### Type of a building where a smart metering (SM) system is installed:

Primary and secondary schools handle the measurement.

**Responsible person for monitoring consumption:**

In every school the respective school caretaker is the responsible person for monitoring. EAZK is responsible for the regular upload of the data to its own complex monitoring system.

**Name of a company which installed the SM system:**

Energy agency of the Zlin Region

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**FINANCIAL SOURCES AND FINANCING DETAILS**

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**Total investment value:** 7.200 EUR

**Sources of financing:** Project BOOSTEE-CE and OP Environment of the Czech Republic

**Electricity savings (MWh/year):** Indirect. Measurement improves the indoor climate and prevents the overheating classrooms.

**Or fuel savings (kg or m<sup>3</sup> or kWh or GJ):** Indirect

**Cost savings (EUR/year):** Indirect

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**PROJECT IMPLEMENTATION BENEFITS**

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Measurement provides several benefits such as monitoring, planning and controlling of indoor climate, which has a positive effect on the students and teachers wellbeing.