INVESTMENT FACT SHEET

I8 Investment in an energy monitoring system for pilot actions in 6 public buildings in Slovakia (PA8)

Version 1

Project index number and acronym	CE51 TOGETHER
Responsible partner (PP name and number)	Slovak Innovation and Energy Agency (PP8 - SIEA)
Linked to pilot action (number and title)	D.T3.2.8: PA8 design for 7 offices cultural/health center,schools in 4 Aps cities in SK. Report+EN summary
Project website	http://www.interreg-central.eu/Content.Node/TOGETHER.html
Delivery date	20.01.2019

Description and technical characteristics of the investment

The investment consisted of the delivery and installation of smart meters for gas and electricity consumption in selected 6 buildings, including the provision of on-line monitoring of these consumption.

Smart metering systems ensures continuous monitoring of energy consumption (gas and electricity) and temperatures (interior and exterior) in selected pilot buildings that are part of the project until its completion on 31.5.2019.

Main tasks of the installation were following:

- prepare project documentation within the required delivery range
- deliver measuring devices
- perform installation of measuring devices in selected buildings
- provide data collection, visualization, and archiving
- deliver visualization screens
- perform installation of visualization screens
- deliver and install all the necessary technology to ensure data capture and visualization (such as data concentrators, communicators, repeaters ...)
- make all necessary revisions and tests after the installation of the measuring devices
- ensure the possibility of monitoring consumption and temperatures through a monitoring system
- ensure the functionality of the system is at least 31.5.2019 (end of the project) and following 5 more years.

All installed elements are communicating through adequate communication protocols developed by the contracting company called heat2go IOT (using architecture of IOT). Measuring devices (smart meters and thermometers) send the data to the central server – through external communicator/antena. The measured data are collected on central secure server of the service provider. This data can be accessed by users with secure user access (name and password). Data are displayed on the visualization screens in the building thanks to small computer (raspberry) connected to the internet via wi-fi connection.

The system masures:

- real-time (1h interval) electricity consumption in kWh;
- real-time (1h interval) gas consumption in m3
- real-time (1h interval) indoor and outdoor air temperature

The system is also connected with the weather platform to be able to address current consumption to the weather conditions.

Further details about the installation:

- All end elements (electrometer, gas meter, thermometer) contain a remote data communication module (for example for automatic data collection.
- Data collection is done by automatic transmission to the secure central server of the service provider where the data are stored and archived for at least 7 years.
- Data are accessible through secure user access (name and password) from any device with an Internet connection and web browser support. The number of unique user accesses is for now 12 people.
- It is possible to export the data into text as well as table (.xls alternative .xml; .xps) format
- Acquired consumption and temperature data are displayed in a text and graphical view using lists and charts with the choice of different periods and ranges.
- The view allows the comparison of the consumption on the meters in the periods selected by the user

Investment costs (EUR) including a break-down of main cost items

Total investment cost came to 52 374 EUR. Consists of:

- cost of the installation of smart metering systems in 2 public buildings in the municipality of Rišňovce – 20 034,00 EUR, which consists of:
  - ✓ cost of the equipment – 12 384 EUR
  - ✓ cost of the works – 7 650 EUR
- cost of the installation of smart metering systems in 2 public buildings in the municipality of Veľké Kostoľany – 16 170,00 EUR, which consists of:
  - ✓ cost of the equipment – 10 620 EUR
  - ✓ cost of the works – 5 550 EUR
- cost of the installation of smart metering systems in 2 public buildings in the municipality of Výčapy-Opatovce – 16 170,00 EUR, which consists of:
  - ✓ cost of the equipment – 10 620 EUR
  - ✓ cost of the works – 5 550 EUR

All the reported cost are including VAT.

Investment location

NUTS 3	Address (Street, house number, postal code, city, country)	GPS coordinates
SK0214	Kindergarten, P. Jilemnického 748 922 07 Veľké Kostoľany	48°30'32.0"N 17°43'16.3"E
SK0214	Culture house M. R. Štefánika 800/1 922 07 Veľké Kostoľany	48°30'36.3"N 17°43'13.4"E
SK0233	Elementary School, Výčapy-Opatovce 185 951 44 Výčapy-Opatovce	48°24'26.2"N 18°05'08.1"E
SK0233	Municipal office, Výčapy-Opatovce 467 951 44 Výčapy-Opatovce	48°24'40.3"N 18°05'00.2"E
SK0233	Health care centre, Rišňovce 263 951 21 Rišňovce	48°22'07.6"N 17°53'50.1"E
SK0233	Elementary school with kindergarten Rišňovce 427, 951 21 Rišňovce	48°22'08.6"N 17°53'35.7"E

Duration and process of investment implementation

Start date	End date
16.03.2018	10.10.2018

Major milestones of investment implementation

Pre-investment:

- ✓ Preparation oft he documentation for public procurement April 2017 – March 2018
- ✓ Launching of the open tender for the delivery, installation, launching and servicing of smart metering systems in 9 pilot buildings locates in 3 municipalities – 16.03.2018
- ✓ Closing the tender and selection of the contractor – 04.04.2018
- ✓ Submitting the documentation for ex-ante control by national controller 17.04.2018
- ✓ Signing of the contract – 06.07.2018
- ✓ Submitting the documentation for ex-post control by national controller 11.07.2018
- ✓ The entry of the contract to the force (after submitting to central register) 11.7.2018
- ✓ End of ex-post control 02.08.2018

Investment:

- ✓ Starting of the investment – 11.07.2018
- ✓ Finalization of the investment – 10.10.2018

Post-investment

- ✓ Trainings for representatives of SIEA, building owners, building managers and other representatives involved in smart metering concerning the architecture and use of the systems installed
- ✓ Fine-tuning of the contents displayed on the monitors/dashboards

Ownership and durability of the investment (e.g. maintenance, financing)

The systems installed in 6 pilot buildings located in 3 Polish municipalities (APs) are in the ownership of SIEA (PP8). An agreement was signed with APs and the contractor which specify roles and responsibilities of all three parties, as well as highlights that the equipment needs to be used for the project purposes. The municipalities are responsible for the proper operation of the systems and contractor for their maintenance and servicing. Long-term (7 year guarantee) was included in the contract with the systems provided to cover the latter. After this period, equipment might be transferred to APs ownership.

References to related pilot action (output fact sheet) and relevant deliverables (e.g. pilot action report, studies) and web-links. If applicable, additional documentation, pictures or images to be provided as annex

References to the relevant outputs and deliverables:

- O.T3.1 Pilot actions for improving the energy performance of public buildings in involved PAs
- D.T3.2.5 PA5 design for 9 offices, educat/service & cultural buildings in 3 APs cities in PL.

Additional documents (Annex):

- Register of delivered technology (with reg. numbers)
- Pictures of the installed equipment with TOGETHER labels