



Dear Reader,

Welcome to the third edition of our newsletter, informing you about THERMOSS progress and news. The project reached a milestone of 26 months and we have some exciting news for you. Read more about the new partners on board, new demo site and much more. Enjoy!

DEMO SITE PROGRESS



The Hands-on Job Started at Our Demo Sites

The THERMOSS technologies installation started at our Spanish **Urberoa** complex in July 2018. Built in 1985, the residential Urberoa district heating network connects 65 buildings, including 553 apartments and a sports centre. The high-temperature (70 - 90 °C) main ring consists of seven substations, **two of which will be retrofitted with renewable THERMOSS technologies**. One substation in Urberoa building complex is equipped with the hybrid heat pump, and one substation is equipped with electric heat pump. The first substation provides energy for domestic hot water to 56 apartments, and the second one to 62 apartments. Out of these, altogether 5 apartments will be monitored under the THERMOSS project.

Installation of a hybrid heat pump: including a small boiler, and an electrical component.



Connection of the heat pump to the district heating, using valves, pipes, and pumps.



Installation of the solar panels on the rooftops of the buildings and modification in the existing constellation of the ventilation.



The heat exchanger installation and final plumbing work.



The system with the external unit of the hybrid heat pump has completed. The unit is constantly absorbing heat from the air at the indoor temperatures of 23-27 °C.



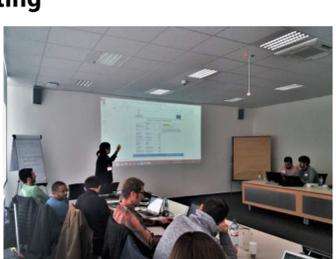
Hot water tanks installed to the buildings (capacity of 5 m³ at a temperature of 55-60 °C), in order to store the hot water produced by the hybrid heat pumps and the solar panels.

THERMOSS CONSORTIUM



THERMOSS General Assembly Meeting

The consortium gathered at the premises of **BOSCH** for the **fifth General Assembly Meeting on 3rd - 5th October 2018 in Lollar, Germany**. We welcomed two new partners – **RIGA TECHNICAL UNIVERSITY** and **SOLIDpower** who introduced themselves and explained their roles in the project. We also discussed project progress and then, later, all partners participated in an exploitation workshop to agree on the future use of the THERMOSS results.



Riga Technical University

Riga Technical University is the largest technological university and the leading multidisciplinary research institution in the Baltic states. The priority areas for research set by RTU are Energy & Environment; Cities & Development; Transport; Materials, Processes & Technologies; Information & Communication; and Security & Defence. The Institute of Power Engineering is a part of the Faculty of Power and Electrical Engineering, conducting both fundamental and applied research in Power Engineering. The Institute employs 50 people. The Institute is the main research institution working on power systems in Latvia. It extensively collaborates with local energy sector players, including electricity producers and power system operators.



1862
RIGA TECHNICAL UNIVERSITY

What is your role in the project?

"We are excited to trial three types of THERMOSS technology packages for heat production and electricity generation in Latvia. It is planned to install micro-CHP plants with fuel cells in two single-family houses in Riga, a gas absorption heat pump in the third house and a hybrid heat pump in the fourth one. Our task is to recruit participants, select suitable demostes and manage the deployment of technologies ensuring that any inconvenience to the residents is kept to minimum."

What do you expect from participating in the THERMOSS project?

"Since the heating season in Latvia lasts for seven months and the consumption of thermal energy is much larger than, for example, that of electricity, the efficiency of heating equipment we use is important for everyone here. We at RTU expect to get valuable insights from the demos, given that the selected innovative technology packages are hardly known or even unavailable in the Latvian market. Benefiting from the large amount of real-life data that will be obtained from the demostes during the project, we are looking forward to assessing the efficiency and cost saving potential of the THERMOSS technology packages in Latvia and compare that to case studies of other countries assessed within THERMOSS."

SOLIDpower

SOLIDpower SpA is the world leader in high efficiency, low cost, natural-gas-fuelled, co-generative appliances. The company was founded in 2006 in Mezzolombardo (Italy). Thanks to the recent acquisition of CFC GmbH in 2015, SOLIDpower can count now on two Manufacturing Plants (Italy and Germany) and three Technology Centres (Switzerland, Italy and Australia) with an overall number of 130 employees. Both German and Italian Manufacturing Plants have the capacity of 2.5 MW per year each on a single shift.



What is your role in the project?

The main role of SOLIDpower in this project is to coordinate the installation of SOLIDpower's co-generators BlueGENs (BlueGEN is a micro CHP system based on fuel cell technology and is optimised for the maximum use and benefit of electricity, to supply buildings with highly efficient power and heat) in the new demostes located in Riga. We will also organize the training activities for the personnel and manage the development of communication between BlueGENs and the THERMOSS cloud.

What do you expect from participating in the THERMOSS project?

Results will confirm BlueGEN's high efficiency and the benefits coming from the installation of SOLIDpower's co-generator in a domestic environment. Distribution in a country where SOLIDpower is not present (Latvia) will help expand and certify the co-generator, by facing different rules and restrictions for another market. The interfacing between BlueGEN and THERMOSS cloud will be beneficial for SOLIDpower for the effort in development and testing of a new communication protocol and it will confirm the flexibility of the system control in communicating with third-parties communication entities.

THERMOSS MONITORING PLATFORM



Engineering and Programming of the THERMOSS Monitoring Platform for the Riga Demo Site

Schneider Electric have been working during the last few months on the conceptualization and pre-programming of the monitoring components for the new Riga demonstration site. The components will be sent to Riga in the upcoming weeks where they will be installed. The specific monitoring infrastructure is a complete solution for a domestic building, including **three gateways** for data collection and transfer, **one electric meter and two thermal meters** (heating and DHW), wireless sensors for indoor temperature and humidity and a complete weather station.



HORIZON 2020 RESEARCH PROJECT
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 723562

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Follow us on social media and our website and get the latest information!



UPCOMING EVENTS



13th - 14th November 2018
Brussels (Belgium)



ECTP Conference

FENIX TNT will present our project at the **ECTP Conference "When EU Construction Industry Shapes High-tech Sustainable Built Environment"**. The 8th ECTP Open Conference will take place in Brussels on **November 13th - 14th, 2018** and will be dedicated to presenting and discussing current and anticipated innovation in the built environment field.

28th February 2019
Wels (Austria)



WSED Conference

We are happy to announce that we are going to organise a cluster workshop at the "Innovation Workshops Energy and Buildings" session within the **World Sustainable Energy Days 2019 (WSED)**. The workshop will be held on **28th February 2019 in Wels, Austria**. We have invited other H2020 projects dealing with the similar topics as the THERMOSS project: **CREATE, HYBUILD, SCORES, and TESSE2B** project. Soon, we will bring more details about the workshop on our website and social media. See you there!

11th - 15th March 2019
Frankfurt (Germany)



ISH Trade Fair

Eight THERMOSS partners (**CEA, CSEM, EXERGY, STAM, FENIX TNT, SCHNEIDER ELECTRIC, GIROA-VEOLIA and SOLIDPOWER**) are going to attend the cluster workshop organised with HEAT4COOL project within the **ISH Trade Fair on 11th - 15th March 2019 in Frankfurt, Germany**. ISH is the world's leading trade fair focusing on the responsible management of water and energy in buildings. Follow our social media where we will soon publish more details.

PAST EVENTS



17th - 19th October 2018
Zaragoza, (Spain)

XXXVI National Hospital Engineering Congress

Digitalization in the Equipment Sector and Thermal System for the Tertiary Sector



Thirty manufacturers of the energy equipment attended the seminar **Digitalization in the Equipment Sector and Thermal System for the Tertiary Sector** during the 27th September 2018 in the facilities of Tecnalia (Zamudio, Spain). Different projects of several companies aimed at the digitalization of facilities were shown.

27th September 2018
Zamudio (Spain)

26th - 28th September 2018
Chicago (Illinois)

2018 Building Performance Analysis Conference and Simbuild

THERMOSS representatives from the **University of Southampton** presented a paper "Unpacking Mid-Season Heating Supply Efficiency in Social Housing" at the **2018 Building Performance Analysis Conference and SimBuild** on **26th - 28th September 2018** in Chicago, Illinois.

20th September 2018
Treviso (Italy)

ECO-Binder Workshop

EUROSUN Conference 2018

CEA presented the THERMOSS project during the **EUROSUN Conference in Rapperswil, Switzerland**. The conference took place from **10th to 13th September 2018**. Our partners had a chance to discuss our project with many visitors during the poster session. Download the conference proceedings [here](#).



10th - 13th September 2018
Rapperswil (Switzerland)

12th September 2018
Southampton (UK)

Sustainable City Expo 2018

Southampton's first sustainability event, **Exhibitors Sustainable City Expo 2018**, took place on **12th September 2018** in **Southampton, UK**. Project representatives from **Southampton University** presented Building and Energy Systems projects and showed sensors and other monitoring equipment from the THERMOSS project.



10th - 12th September 2018
Bilbao (Spain)

Smart Communities

Giroa-Veolia attended the ninth edition of the **European Congress on Energy Efficiency and Sustainability in Architecture and Urbanism** and the **Second International Congress on Advanced Construction** from **10th to 12th September 2018** in **Bilbao, Spain**. The Congress addressed the digitization of infrastructures, the use of advanced materials for energy efficiency, the design of new sustainable spaces and the future of intelligent management of cities.

22nd - 25th August 2018
Hong Kong, China

International Conference on Applied Energy

The 10th edition of the **International Conference on Applied Energy** took place during **August 22nd - 25th, 2018**, in **Hong Kong, China**. Researchers from **Cardiff University** presented a study on defining geo-clusters for energy system planning. This study was performed under the THERMOSS project and resulted in the creation of two tools, helping users in geo-cluster creation and exploration.

27th - 29th June 2018
Aix-les Bains (France)

Sustainable Places Conference 2018

THERMOSS representatives from **EXERGY** presented the THERMOSS project results, namely the bidirectional substation and WARME, during the **Sustainable Places Conference 2018 in Aix-les Bains, France**, from **27th to 29th June 2018**.



26th June 2018
Brno, Czech Republic

China Academy of Building Research in FENIX TNT

XII Conference of Innovation in General Hospital Services

Giroa-Veolia representatives attended the **XII Conference of Innovation in General Hospital Services** on **8th and 9th June 2018** in **Santander, Spain**. The focus of the conference was the management of hospital services and sanitary assistance in general. Our partners welcomed more than 100 people to their stand during the event.



30th May 2018
Pargue, Czech Republic

E2VENT Workshop

Presentation at University of San Carlos

Prof. Bahaj from the **University of Southampton** gave a presentation during the event at the University of San Carlos on **23rd May 2018** in **Cebu, Philippines**. Experts, young engineers, scientist and students were discussing renewable energy at different scales.



23rd May 2018
Cebu, Philippines

25th - 28th April 2018
Brno, Czech Republic

IBF - International Building Fair

FENIX TNT team presented the THERMOSS project at **Building Fairs in Brno, Czech Republic**. From **25th to 28th April 2018** visitors had a chance to see a unique presentation of all aspects of housing and house constructions, building management services, technical solutions and equipment. The event is visited by more than 40 000 people every year.



PARTNERS



PDF VERSION

