Accelerating the development of low-carbon heating & cooling networks in Europe

THERMOS Train-the-Trainer Certification Programme
Instructor Led Webinar No. 3 – October 22th, 2019

Optimising thermal planning with THERMOS
Welcome to the THERMOS Train-the-Trainer Certification Programme!

Agenda for Today

1. 16:00 – 16:00 Welcome (by Daniela Torres, ICLEI)
2. 16:05 – 16:20 Optimizing thermal planning with THERMOS – Warsaw Case Study (by Wojciech Stańczyk, KAPE Poland)
3. 16:20 – 16:30 Q&A - review of THERMOS FAQ
4. 16:30 – 16:45 Programme Status and Final Exercise (by Alis Daniela Torres, ICLEI and Martin Holley, CSE)
Let's Get Started!

Meet the presenters

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Optimizing thermal planning with THERMOS
Wojciech Stańczyk

• THERMOS Specialist and THERMOS Certified Trainer
  – Krajowa Agencja Poszanowania Energii S.A. The Polish National Energy Conservation Agency

• Main activities within THERMOS
  – Design and management of Warsaw case study with THERMOS
  – Technical support to build Berlin case study with THERMOS.
  – Support in the development THERMAL planning processes and scenarios with THERMOS.
  – Technical advisor for KAPE, on sustainable energy, urban infrastructure and air pollution management projects with THERMOS.

• Background
  – Electric Engineer (Technical University of Warsaw)
Martin Holley

- Senior Technical Project Manager: Centre for Sustainable Energy, UK
- Roles within THERMOS
  - Project Coordinator for THERMOS
  - THERMOS Trainer
  - Support for development and delivery of training materials
- Background
  - Senior Technical Project Manager, Centre for Sustainable Energy (2002-present)
  - Environmental Researcher, Corporación Oikos (1996-1997)
  - Test Measurement Engineer, Rolls Royce PLC. (1983-1990)

Tom Hinton

- Software Developer: Centre for Sustainable Energy, UK
- Roles within THERMOS
  - Tool designer and software developer
  - THERMOS Trainer
  - Support on technical deliverables
- Background
  - Software Developer, Centre for Sustainable Energy (2012-present)
  - Scientific Software Engineer, Minimax Labs (2010-12)
  - Contracting Software Engineer to CPFR Solutions (2002-03)
Alis Daniela Torres

- Officer Sustainable Resources, Climate and Resilience. ICLEI Europe.
- Roles within THERMOS
  - THERMOS Train the Trainers programme manager.
  - Support to the development of THERMOS Sustainable Adoption Roadmap
- Background
  - International Consultant, Climate Change and Smart Cities. ITU & GSMA (2015-2018)
  - MSc. Sustainable Energy Development & MSc. City Sciences.

Alexandra Pfohl

- Project Assistant, Communications and Member Relations. ICLEI Europe
- Roles within THERMOS
  - THERMOS communications and capacity building manager
  - Support on technical deliverables on communication, exploitation and stakeholder engagement.
- Background
  - European Committee of the Regions, Assistant in the Cabinet of the President (2016-2018)
  - M.Sc International Relations, Political Science Leiden University
Lets Get Started!

Meet the presenters

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Optimizing thermal planning with THERMOS
<table>
<thead>
<tr>
<th>Method</th>
<th>Module / Content</th>
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| 3 Instructor-Led Webinars. | Webinar 1: Kick-off & energy system mapping and modelling with THERMOS. **COMPLETED Sept 24th, 2019 - CET**  
*Hands on with THERMOS tool.*  
*Every 2 weeks*  
Webinar 2: Embedding THERMOS in your city. **October 8th, 2019 – 16:00 CET** **COMPLETED**  
Webinar 3: Optimizing thermal planning, resources and technologies with THERMOS **Oct 22nd, 2019 – 16:00 CET** **TODAY**  
*Dedication: 1 to 1:30 hours per webinar* |
| Supporting material 3 Recorded Webinars | Recorded Webinar 1: Thermal energy supply and demand in Europe. **COMPLETED 65 trainers!**  
*Recorded Webinar 2: Heating and cooling market and finance** **COMPLETED 48 trainers!**  
Recorded Webinar 3: Local stakeholders involvement for adopting THERMOS  
*+ Follow-up Questionnaire*  
| Self-study Dedication: 4 – 6 hours | 1. Innovation catalogue  
2. THERMOS User Manual  
3. Scientific Publications |
| FINAL EXERCISE Dedication: 6 -8 hours **By 29th. Nov** | Select your preferred option!  
1. THERMOS tool guided exercise  
2. THERMOS tool case study development |
THERMOS TtT Exercise Introduction (2 options)

Option 1
Guided exercise with THERMOS

- Pre-defined problem to explore with THERMOS
- Deep Dive videos with detailed explanations on THERMOS features

Option 2
Case study with THERMOS

- Trainers case study development with support of THERMOS partners
- Practical project based on THERMOS cases
THERMOS TtT Exercise (2 options) as of 22-Oct-2019

Option 1
Guided exercise with THERMOS

41 trainers

Option 2
Case study with THERMOS

12 trainers
Option 1: Guided exercise with THERMOS (process and final deliverable)

Watch step by step guided videos (5 videos)

Develop mini exercises with THERMOS (3 exercises)

Submission of 3 mini-exercises by 29th, Nov 2019.

- Flexible access to videos and mini exercises (weekly release)
- Availability to interact with THERMOS partners for questions and clarifications.
- Around 10 hours of dedication (2 per video + exercise)
Option 1: Guided exercise with THERMOS

EasyClass. Course code: MMJT-9FUY

1. Go to https://www.easyclass.com/

2. Create an account.

3. Join the course

4. Submit your Mini Exercises

Note: You will be able to see the status of your submission and can pose questions, or start discussions with other trainers and instructors in the discussion / comments section.
Option 2: Case study with THERMOS (process and final deliverable)

- Define the Case Study you want to develop
- **CHOICE OF 3 THERMOS USE-CASES**

- Development of the case by 29\textsuperscript{th}, Nov 2019.

- Share your case with THERMOS partners and THERMOS trainers

- Definition of THERMOS case to be developed based on trainers’ interests and tool features available.
- Technical guidance and companionship by THERMOS partners (CSE, CREARA, AALBORG UNIVERSITY, and KAPE)
- Around 16 - 32 hours of dedication based on the type of case study

**LINK WITH THERMOS PARTNER (by November 4\textsuperscript{th})**
Option 2: Case study with THERMOS (choice of 3 use-cases)

1. Expansion of existing district heating and cooling networks to find the best buildings, streets or neighbourhoods to bring into the network
   
   **1 TRAINER**

2. Identifying local energy demands for known energy sources and find the best route for the pipework
   
   **2 TRAINER**

3. Optimising networks between known energy sources and demands. An optimal network solution is sought that matches up available energy sources and demand
   
   **9 TRAINERS**
THERMOS Train-the-Trainer Certification Programme – Status and Next Steps

✓ Webinars Completed
  - E-mail communicating trainers participation.
  - Your evaluation! Quality assessment of the Training Programme. Please respond!

✓ Option 1: Guided Exercise (Via Easy Class)
  - All three mini exercises to be submitted by November 29th, 2019 latest.

✓ Option 2: Case Study with THERMOS
  - Communication of case contact to trainers by November, 4th
  - Submission due by November 29th, 2019

✓ Final Workshop in Berlin (6th of December, 2019) - optional
  - THERMOS certificate delivery
  - Interested trainers invited to Berlin!
THANK YOU

Train-the-Trainer Certification Programme Pathway B!
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement no 723636. The sole responsibility for the content of this presentation lies with its author and in no way reflects the views of the European Union.