

Invitation for the

first Annex Definition Workshop

Large Thermal Energy Storages for District Heating

Wednesday, 23 October, 10:00 – 16:00 h

Vienna, Austria

Dear thermal energy storage and/or district heating expert,

the International Energy Agency Technical Collaboration Program on Energy Conservation through Energy Storage has initialised the definition phase for a new Annex on Large Thermal Energy Storage for District Heating.

Background and aim

Large thermal energy storages (LTES) with volumes over 50,000 m³ mainly have been realised in Denmark and are successfully exploited there, due to good market conditions and benign design boundary conditions. In general, the specific storage costs decrease with increasing storage volume, increasing the benefits for integrating LTES into DH systems. The question arises in which ways it would be possible to realise LTES for district heating systems in other regions than Denmark, with other design boundary conditions and other market structure, and how the conditions change going from the 'smaller' volumes of 50,000 m³ to volumes of 2,000,000 m³ and more.

The proposed Annex would be addressing these problems and challenges.

Possible aspects of the LTES for DH Annex are:

- Development of component and storage design portfolio for different boundary conditions (soil, groundwater depth, temperature level, requirements to lid, etc.) to supply global district heating systems
- Increasing durability of components as well as lifetime of storage systems
- Development of interface portfolio to system integration
- Modelling of storage concepts and system integration
- Optimisation through simulation regarding cost and energy efficiency
- Scalability and exploitation in a global DH perspective
- Definition of Large Thermal Energy Storage Matrix / Handbook
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Annex Definition process

The ECES Executive Committee has given Austria the lead for the Annex Definition and this is executed by AEE INTEC.

The definition process is divided into two phases, each starting with a workshop.

The first phase is aimed at describing the first outline for the LTES for DH Annex, containing the goals, the Annex structure, list of deliverables, timeline and a tentative list of experts. This outline will be presented to and discussed with the ECES Executive Committee at their November meeting in Switzerland.

The second phase will take the ExCo discussion outcome into account and is centred around a two-day workshop in which the detailed work plan for the Annex will be drafted. The work plan will be worked out in the months following and the final draft will be submitted for approval by the ExCo in June 2020. Target would be to start the Annex in late Autumn 2020, after approval by the ExCo.

You are kindly invited to participate in the workshop. There will be a small fee to cover the room and catering costs, which will be invoiced before the meeting.

Registration

For registration, please contact Mrs. Rosa Stranzl: r.stranzl@aee.at

For further information and suggestions for the workshop please contact Wim van Helden, w.vanhelden@aee.at

Experts that are interested in joining and cannot participate in workshop are kindly invited to react also.

Kind regards,

Wim van Helden
group leader, Thermal Energy Storage
AEE INTEC
Gleisdorf, Austria.