EASE and IFIEC: Empowering Energy Intensive Industries: Unleashing Energy Storage Innovations

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24 Oct 2023, Webinar



**European Association for Storage of Energy** 

international federation of industrial energy consumers

ifiec europe



## A Few Reminders:

• Please keep your microphones off!

• The webinar will be recorded.

• Slides and contacts will be circulated after the webinar.



# Agenda

Time	ltem	Lead
16:00	1. Welcome	Isabelle Chaput, IFIEC
16:05	<ul> <li>2. European Association for Storage of Energy – EASE:</li> <li>Overview</li> <li>Thermal Energy Storage</li> </ul>	Margareta Rončević, EASE
16:10 - 16:30	<ul> <li>3. Kyoto Group:</li> <li>Technology presentation</li> <li>Q&amp;A</li> </ul>	Camilla Nilsson, CEO
16:30 - 16:50	<ul> <li>4. UNDA Engineering</li> <li>Technology presentation</li> <li>Q&amp;A</li> </ul>	Emin Selahattin, Co- founder
16:50 - 17:10	<ul> <li>5. Carbonclean</li> <li>Technology presentation</li> <li>Q&amp;A</li> </ul>	Robert Pfab, COO
17:10	6. Closing remarks and additional questions	Margareta Rončević, EASE



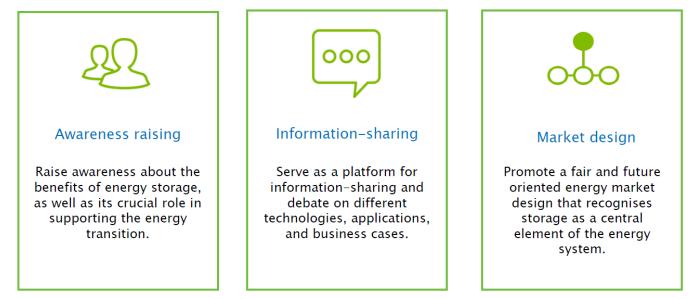
### European Association for Storage of Energy - EASE

#### **Overview**

<u>The European Association for Storage of Energy (EASE)</u> is the **leading member-supported association** representing organisations active across the entire energy storage value chain.

EASE supports the deployment of energy storage to accelerate the cost-effective transition to a resilient, carbon-neutral, and secure energy system.

EASE represents over 70 members including utilities, technology suppliers, research institutes, distribution system operators, and transmission system operators.







# European Association for Storage of Energy – EASE

Overview	Chemical	Electrical
	Ammonia Drop-in Fuels	Supercapacitors Magnetic Energy Storage (SMES)
	Hydrogen Methanol	Storage (SMES)
	Synthetic Fuels Synthetic Natural Gas	Mechanical
		Adiabatic Compressed Air Diabatic Compressed Air
	Electrochemical	Liquid Air Energy Storage Flywheels
	Classic Batteries Flow Batteries	Pumped Hydro
	Lead Acid Li-Ion Vanadium Zn-Br	Thermol
	LI-Polymer LI-S Zn-Fe	Thermal
	Metal Air Na-Ion Hybrid Supercapacitors	Latent Heat Storage Sensible Heat Storage
	Na-NiCl <sub>2</sub> Na-S Electrochemical Recuperator	Thermochemical Storage Ice Storage
	Ni-Cd Ni-MH	



# European Association for Storage of Energy – EASE

**Thermal Energy Storage** 

 refers to means of deferring the final use of thermal energy (or of electrical energy through thermal means) to a moment later than when it was generated, or the conversion of any form of energy into a form of energy which can be stored, the storing of such energy, and the subsequent reconversion of such energy into electrical or thermal energy

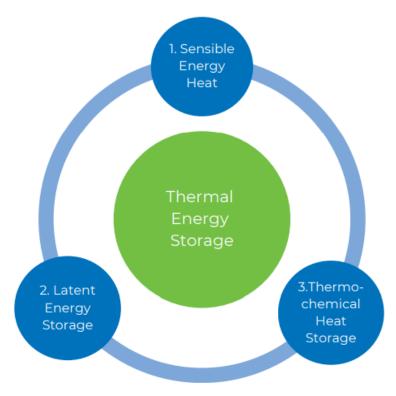


Figure 1: The major types of Thermal Energy Storage, EASE, 2023



### European Association for Storage of Energy – EASE

#### **Thermal Energy Storage**

- Introduction brief elaboration of the need for this policy paper
- Technology Overview detailed division and explanation of three distinct storage principles
- The Added Value of Thermal Energy Storage discussion of distinct benefits of TES within certain markets
- Business Cases global examples of successful TES projects and examples of potential TES utilisation and advancement in different sectors provided by the TF members
- Policy Recommendations recommendations to decisionmakers at the European, national and subnational level
- Conclusion underlined key benefits of TES
- References

