



## Kall Ingredients & Kyoto

TES as a means and a competitive advantage – a customer example

13<sup>th</sup> Swiss Symposium for Thermal Energy Storage



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**KYOTO**<sup>TM</sup>



# KALL Ingredients



Europe 's most modern corn processing plant

- ~530 000 tons of non-GMO corn p.a.
- Liquid sugar
- High purity neutral alcohols
- Glucose and starch-derived products

## KALL Ambition:

- Replace fossil-fuelled stem to cut cost, secure supply & sharpen competitiveness

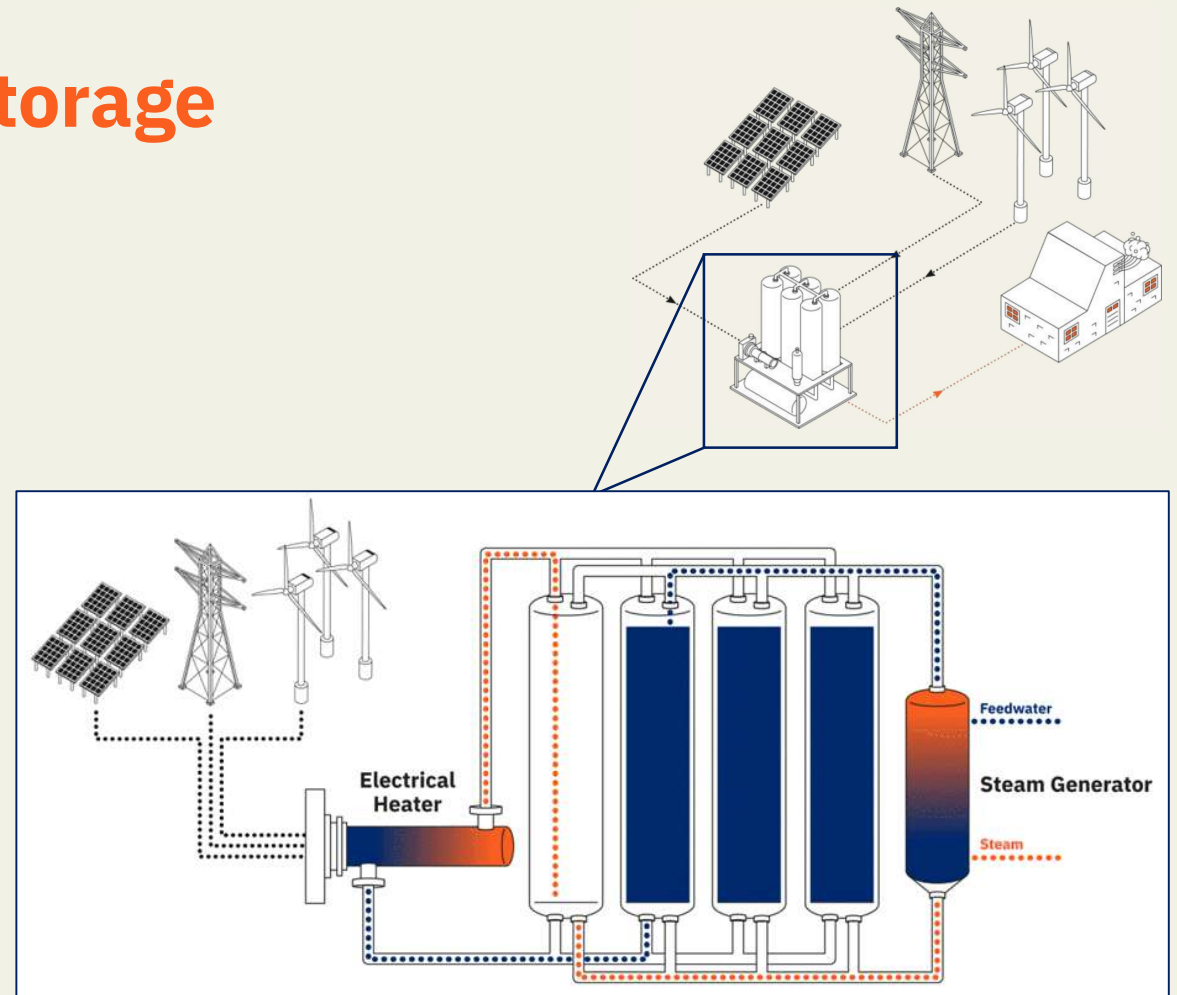


## **The KALL Challenge**

**How to establish  
security of supply  
while  
decarbonising at a  
lower cost?**

# The Solution - **Thermal Storage**

- PROVEN STORAGE TECHNOLOGY
- CERTIFIED FOR FLEXIBILITY
- ZERO EMISSIONS & LOW COST
- 24/7 HEAT DISCHARGE
- PLUG & PLAY



**>93 % energy efficiency** from electricity IN to steam OUT

# The KALL Solution



## Key facts and benefits

**56 MWh**

Storage Capacity

**Hungary**

Location

**10 MWh**

Charge Capacity

**Food processing**

Industry

**7 MWh**

Discharge Capacity

**15 Yrs**

HaaS agreement

**+30 GWh**

Annual steam delivered

**8,000 tonnes**

Annual Co2 reductions

**Proving that the solution works at scale**



DSO accreditation to capture **flex value**



**Guaranteed savings** vs. natural gas



Third party **equity financing partner**



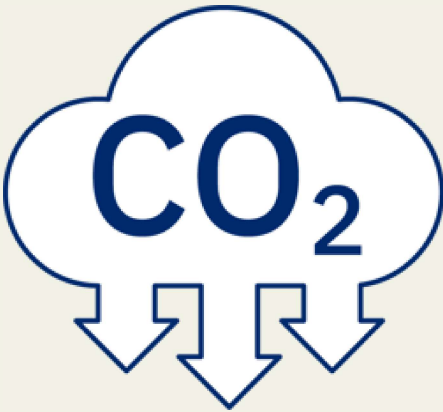
**Local energy trader** on board

# Green heat at guaranteed reduced heat price



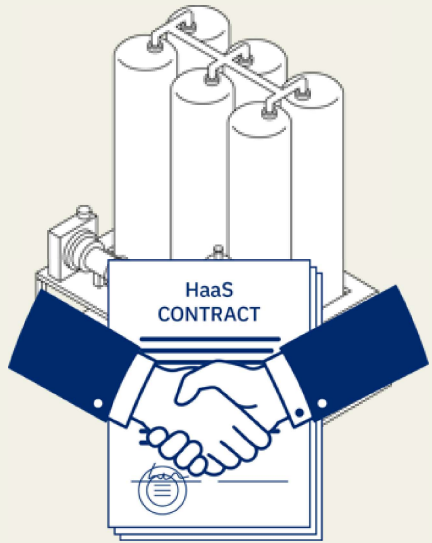
## Guaranteed reduced heatcost

Supply of low-cost clean steam reducing both carbon emissions and energy costs.



## Heat without CO2

Reduces CO2 emissions annually by 2,000 to 15,000 tons.



## Security of Supply

Kyoto removes complexity financial and market risk.

## Heatcube Tisza initial experience

“Heatcube enables us to decarbonise a large share of our sugar production — and unlock new sales opportunities, including customers willing to pay a premium for zero-carbon products.”

- **Maarten Welten**

Managing Director of KALL Ingredients





# Get started today!

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**Low-cost, clean heat. At scale. For Industry**

**KYOTO™**