

CETP Pitching & Matchmaking Event for Integrated Industrial Energy Systems

Thermoflex Power System

KSHITIZ AGARWAL



Challenging The Accepted



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Pitch for the Kshitiz Agarwal 1/5

Name of the project idea (and acronym if you already have one)

Thermoflex Power System

Consortium partners

- Coordinating organisation: KA Advisors
- Main contact person: Kshitiz Agarwal
- List of consortium partners: Net Zero Energy Systems, UK
Munster Technological University, Ireland – Under Discussion



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Challenge

- Electrical Equipment – lower overall efficiency.
- Higher degradation – Equipment life
- Electrical equipment flexibility

Technical Challenges



- More generation, storage and T&D infrastructure and capacity will be required
- Localized flexibility

System Level Challenges



- Higher Energy Cost
- Higher Maintenance Costs
- Zonal and Industrial Pricing e.g. in UK
- Capital Investment – upgradation required for electrifications.

Economic Challenges



Electricity Network

Grid Connection /
 TSO / Domestic
 Substation

Facility /
 Plant

Overall Increase in Electricity Demand

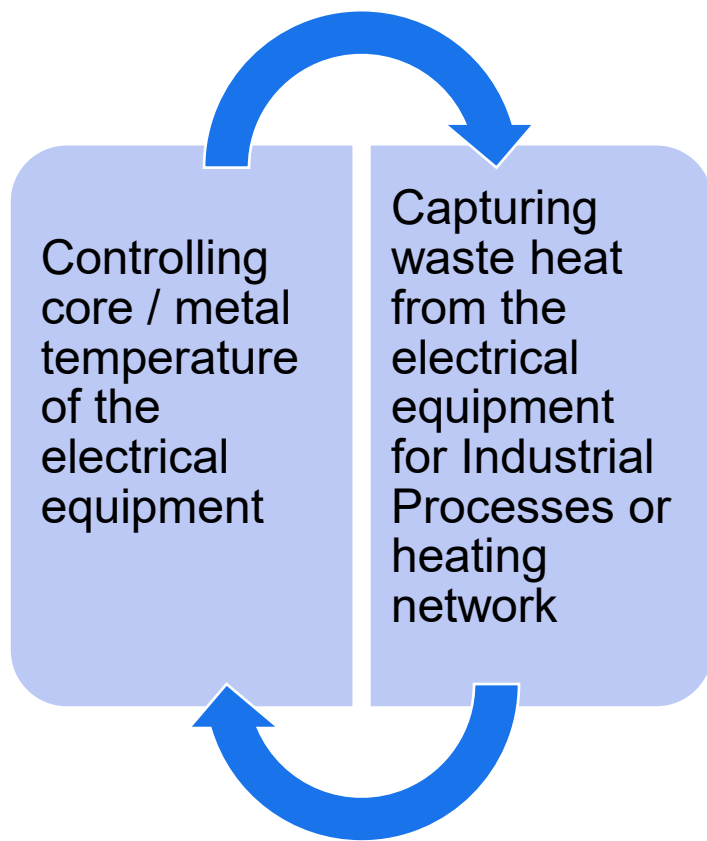


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Solutions Proposed



The proposed solution targets:

- Preliminary
 - HV / MV transformers
- Secondary
 - HV / MV Switchgear
- Tertiary – Other Electrical Equipment

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Next Step activities for proposal submissions to CETP JC2025

Literature Review and
Thermo-Electrical Modelling

Heat exchanger design
selection

Controls design selection

Techno - economic feasibility
study

MVP Testing – Lab –
Industrial demos (Not Pilot)

Collaboration / Partners:

- Research Institution-
 - Electrical
 - Thermodynamic
 - Lab testing
- Electrical Equipment OEM – transformer / switchgear
- Industrial Partner – large electricity consumer
- Investors / funder



Pitch for the Thermoflex Power System 5/5

Thank you for your Interest

Kshitiz Agarwal

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