



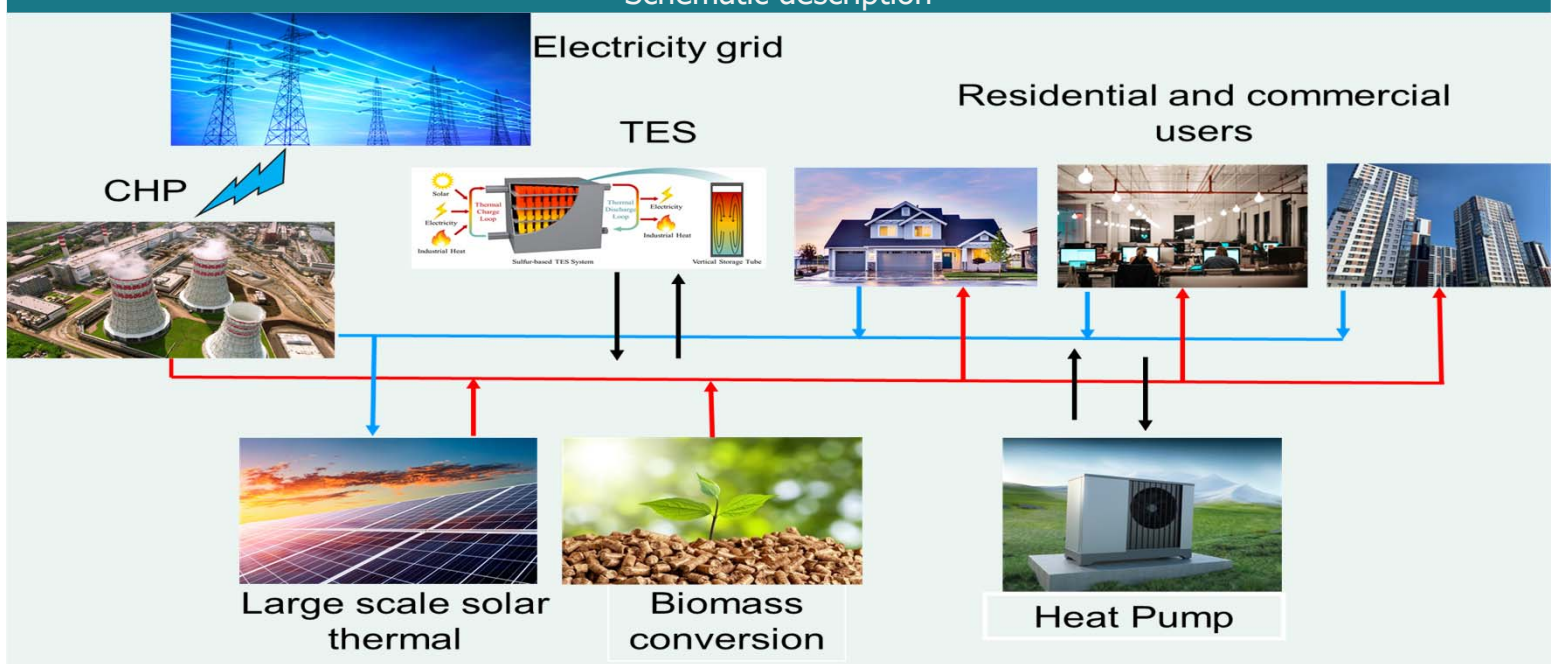
## Development of thermal storage as grid service for increasing renewables penetration

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### Introduction

- This research study will be carried out in the framework of CO-COOL project.
- The aim is to develop low-carbon and storage integrated cooling technologies.
- This study comprises of both simulation and experimental activities.

### Schematic description



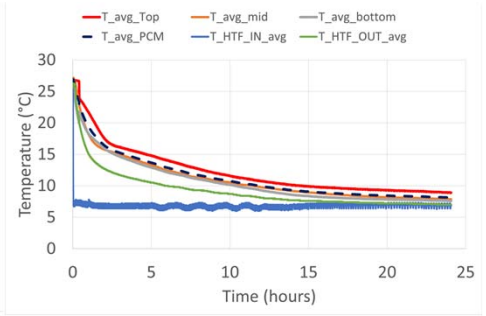
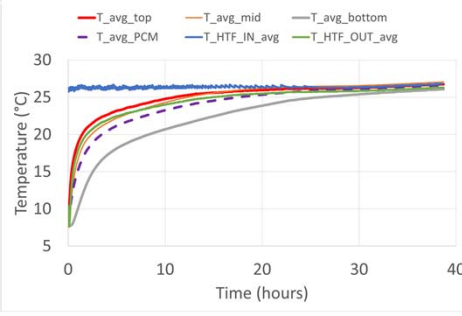
### Materials and methods



- A phase change material (PCM) named PlusICE-17 will be used in experiments.
- This PCM will be filled in three different macro-encapsulations as shown in figure.
- Experiments will be carried out by charging and discharging the PCM.
- Temperature profiles, heat transfer rate and storage capacity will be analysed.

### Results

- Experiments are in progress.
- It is expected that using this PCM will help in developing a storage integrated cooling technology.
- Charging and discharging profiles of PCM are shown in figures on the right.



### AGRADECIMIENTOS



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