PRACTICE ABSTRACT NO. 37

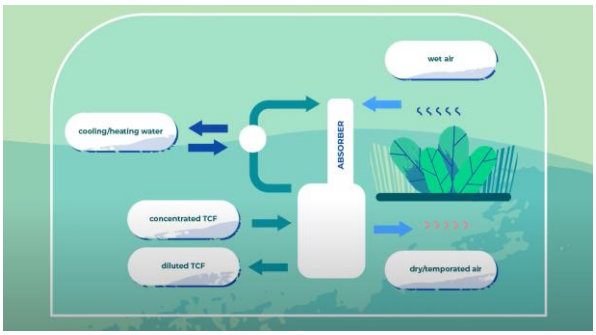
The use of thermochemical fluids

Main results / outcomes

TheGreefa project investigated the use of the salt solution, called thermochemical fluids (TCFs) in agriculture in energy transfer and storage. Multiple processes are required to convert thermal energy to chemical energy and vice versa, and it is essential to increase the efficiency of the TCF systems. The salt solutions have the potential to replace the most common current technologies, like thermal storage based on warm/hot water or phase change material which has high thermal losses and a lower energy density.

Practical recommendations

There is a need to strengthen and expand the EU's commitments to combat climate change and ensure their effective implementation by member states by setting more ambitious targets and promoting the transition to a low-carbon economy through the wide implementation of renewable energy sources. The new policies should support energy efficiency across sectors, also innovations, R&D activities and testing of new technologies. The development of new products, particularly for peak shaving, curtailment prevention, and congestion management, to secure predictable revenue streams for storage, both utility-scale and behind-the-meter should is required.
When planning the energy strategy, EU member states should facilitate and promote the implementation of new efficient solutions. The dual role of the 'consumer-producer' of storage should be considered by applying the EU regulatory framework for energy and removing barriers, including avoiding double taxation and facilitating permitting procedures.
In terms of the agricultural sector, it is needed to encourage the adoption of sustainable agriculture techniques, such as organic farming, pesticide and fertilizer reduction, to encourage to use energy from renewable sources including thermal storage and the application of circular economy principles in the food production and distribution chain.



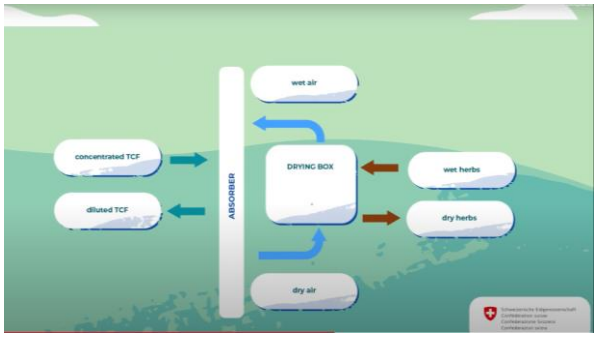


Figure 1 and 2: Caption of TheGreefa promotional video

Further information

TheGreefa promotional video

About this abstract

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AgroFossilFree is a H2020 multi-actor project that will evaluate the current status in EU agriculture regarding energy use and assess existing needs, allowing farmers to optimize agricultural production through more efficient energy use and reduced GHG emissions, resulting in economic, agronomic and environmental benefits. AgroFossilFree will create a framework under which critical stakeholders will cooperate to evaluate and promote the currently available Fossil-Energy-Free Technologies and Strategies (FEFTS) in EU agriculture. The project is running from October 2020 to September 2023.
Website: www.agrofossilfree.eu

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