

5. Conclusion

A complete model to simulate SAHP with PVT panels and seasonal storage has been presented. Results indicate that, in a first step, to optimize the basic parameters of the sizing is a key point in the analysis. The simulation allows describing the expected performance of the system. Additionally, this tool constitutes a powerful tool for the industry developing and selling the equipment, as well as to the research on the energy efficiency and renewable energies integration field.

Specifically, it is clear that when there is a higher temperature in the accumulation than in air or soil, the COP of the heat pump is higher than in the rest of the technologies.

The seasonal storage facilitates the operation of the HP with lower electricity demand, both because of the higher temperature on the cold focus and because of the electricity produced by the PV devices.

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