Third International Conference CONSOLFOOD2020 Advances in Solar Thermal Food Processing 22-23-24 January 2020

INSTITUTE OF ENGINEERING; UNIVERSITY OF ALGARVE; CAMPUS DA PENHA; FARO-PORTUGAL

SunStore Cooker – A battery type solar cooker charged by an automated sun tracking system



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District Heating Plant in Denmark

Heliac Solar Cooker



- Tested in 4 countries
- Cooks at temperatures comparable to biomass

Heliac Solar Cooker

- Challenges
 - the size too big to store and to transport
 - tracking of the sun
 - cooking stops when a cloud appears
- Cultural barrier and behaviour change







The concept of SunStore Cooker

- Solar cooking after dark
- No need to adjust timing of cooking
- Easy use no need for longterm follow up
- Central charging system



SSC facts

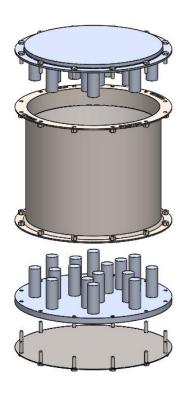


- Content: a mixture of molten salt
- Size (ø25cm, height 25cm)
- Weight 23kg
- Max temperature 300°C
- High heat 2 3 hours
- Lower heat 6 7 hours



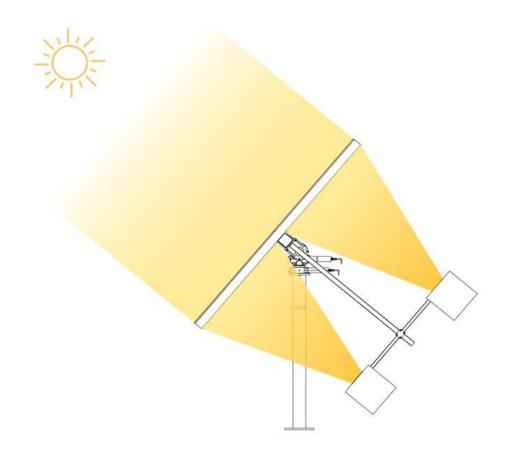
Construction





The charging unit





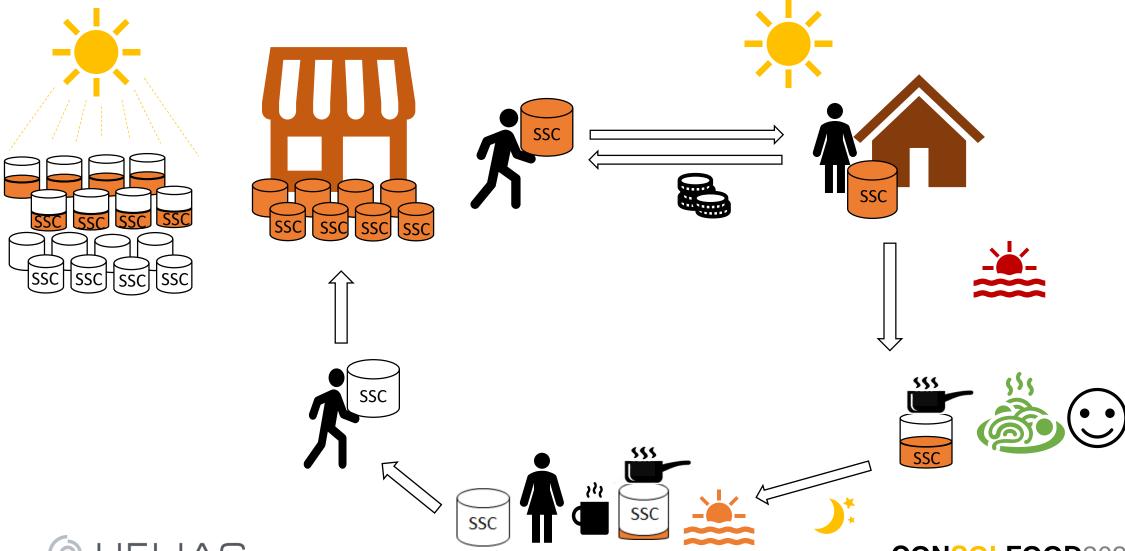
Charging unit – how it works

- 8 lenses 8 SSC charging at once
- Automatic tracking system
- Charging takes 3 4 hours
- Each lens produces 1.2 kW





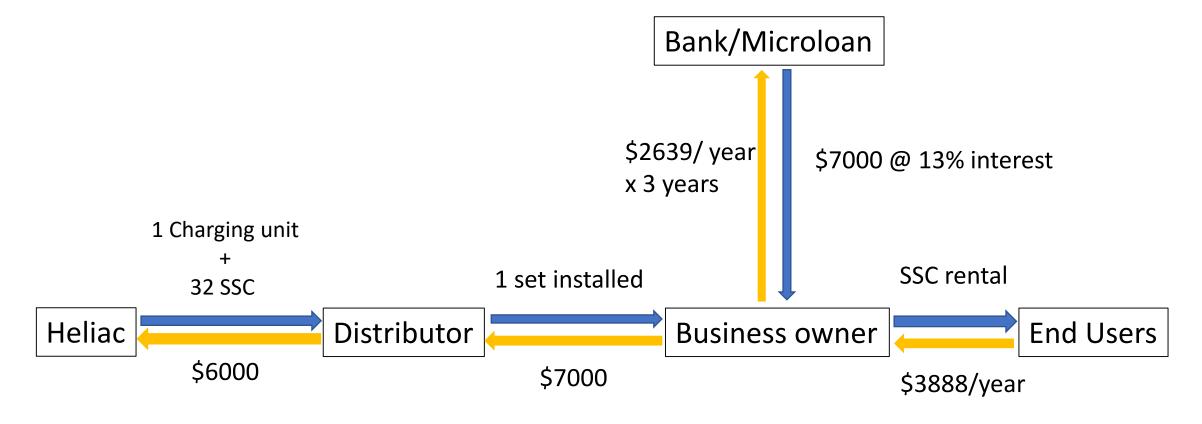
SSC operation model





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Ecosystem





Further development

- Identifying best materials for SSC
- Insulation to keep high heat for a long time
- Develop and test business model







Thank you!

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