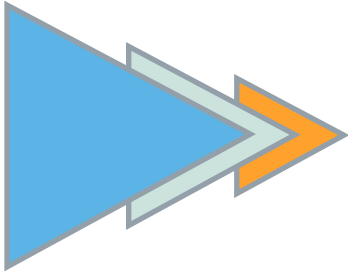
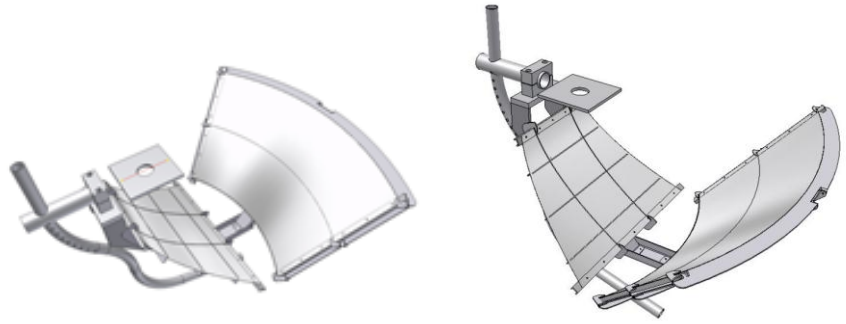


## Solar Oven – Design concepts

Designed in collaboration with ISIS Innovation and manufactured by Dytecna



## 'Albedo' Solar Oven

### Fossil-fuel-free cooking and heating

Dytecna in collaboration with the University of Oxford and with the support of the Leverhulme Trust has designed a novel cooking and heating solution aimed at reducing reliance on fossil fuels.

It is estimated that approximately 1.5m premature deaths occur annually as a result of cooking in smoke filled atmospheres. This system is designed to reduce the health risks of normal everyday cooking while preserving dwindling fuel stocks.

The 'Albedo' Solar Oven is just one of a number of design concepts the ISIS-Dytecna partnership is working to bring to the market.

#### Overview

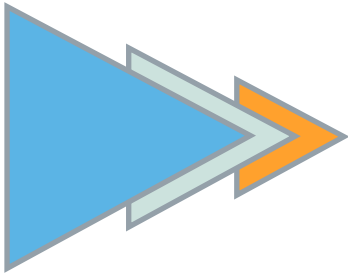
In collaboration with Oxford University and its technology transfer company, ISIS Innovation, Dytecna has developed a patented fossil-fuel-free cooking and heating solution for use in humanitarian aid, developing countries and disaster recovery or refugee scenarios.

The system collects solar light energy in a unique approach using two robust flat mirrored surfaces that are curved by a supporting frame to concentrate the light to a point. The resulting heat is captured on a metal surface inside an insulated box that acts as an oven, temperatures up to 200°C are achievable. Sized to take two large cooking pots the oven provides a family cooking solution. The insulated oven may be removed and the heat surface used as a cooking griddle.

Overnight heating is achieved using a thermal storage system, such as heat bricks, that may be carried into a room inside the oven.

#### Key features

- Smoke free cooking
- Flat-packed and light for ease of portability and storage
- Robust and easy to use
- Family cooking capacity
- Fossil-fuel-free heating, baking and cooking
- No loose items, all units simply slot together
- Includes preparation work table
- No stooping or bending to cook



## 'Albedo' Solar Oven

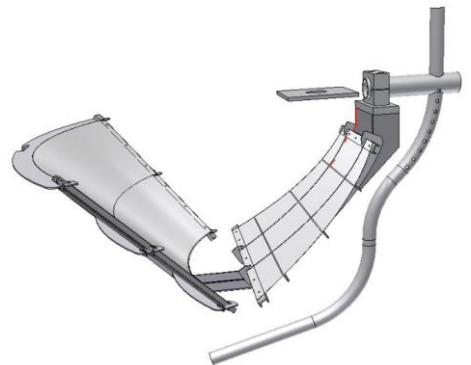
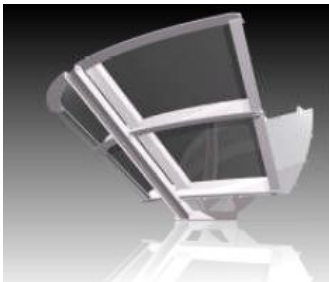
Fossil-fuel-free cooking and heating

### Performance

- Will provide in excess of 350W of power
- Potential for temperature within oven above 200°C
- Estimated as two to three hours 'chicken' cooking time
- Water sterilisation capability (with added components)
- Usable between 2 to 3 hours after sunrise and before sunset

### Project Evolution

This project is still in the concept definition and design phase and all drawings shown and performance indications are subject to change without notice. The drawings below indicate a number of the evolutionary steps considered to date.



For more details contact:

Steve Harrison  
Business Development Manager  
Aspen House  
Malvern Hills Science Park  
Malvern  
WR14 3SZ  
T +44 1938 558224  
M +44 7827 804318

[steve.harrison@dytecna.com](mailto:steve.harrison@dytecna.com)

