



Energy International Systems Ltd.

***Using renewable technologies for
powering the DG snow maker***

Mr. F. Best, Technical Director
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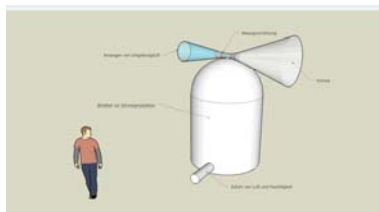
ENERGY REQUIREMENTS OF SNOW PRODUCING DEVICES



500 kg/m³ snow

Conversion from water to ice: Energy obtained from the environment – *FREE*

Compressor, fans etc.: Energy required typically 0.5 kWh/m³ machine made snow (balls of ice, UNESCO Snow Classification)



200 kg/m³ snow

Conversion from water to ice: Energy obtained from the environment – *FREE*

Pumps, fans etc.: Energy required typically 0.1 kWh/m³ snow

HOW CAN WE PRODUCE THE ENERGY NEEDED FROM RENEWABLE SOURCES

1. Wind

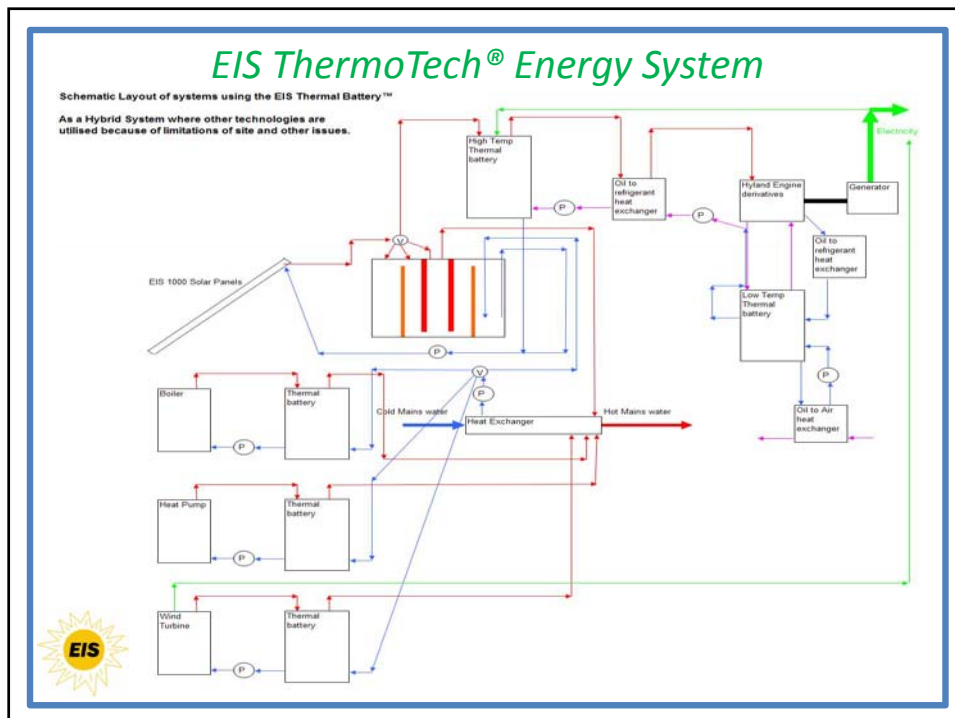
- a) direct drive (old windmill type technology)
- b) turbine (conversion to electricity)
- c) electrical and mechanical energy will require storage media


2. Solar (photovoltaic)

- a) direct conversion to electricity
- b) electrical energy will require storage media

3. Solar (thermal)

- a) direct conversion to thermal energy
- b) thermal energy will require storage media
- c) thermal energy can be converted into mechanical, electrical energy plus heating and cooling should this be necessary






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EIS 500 Vacuum Super Insulation (VSI)

EIS 500 Vacuum Super Insulation – Key Features

- A thermal insulation panel which lets virtually no heat to pass through it.
- The product has a patented edge that helps to improve the overall efficiency.
- It is both very light and very strong.
- It is much thinner than other forms of insulation.
- It is highly cost effective and has a useful life expectancy of more than 100 years.




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EIS 500 Vacuum Super Insulation (VSI)

EIS 500 Vacuum Super Insulation – Key Benefits

- It keeps things warm
- It keeps things cold too
- In summary it can contain thermal energy and prevent it escaping from or intruding into a temperature controlled environment
- In general it saves energy
- It considerably reduces CO₂ production wherever it is used



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EIS 500 Vacuum Super Insulation (VSI)

EIS 500 Vacuum Super Insulation – Potential Applications

- Heat Battery or thermal energy store – This product allows large amounts of thermal energy to be stored in a relatively small space. For example a unit the same size as a bedside cabinet could store enough thermal energy for a typical UK house for up to 5 days.
- Cladding for Buildings – VSI panels can be used like an overcoat for existing buildings which would greatly enhance their energy efficiency
- Forward bases for military operations – field hospitals and accommodation
- Temporary housing in disaster areas – again the panels are both light and strong and would be suitable for transportation



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EIS Technologies - A new perspective on renewable energy generation and application...

- ***EIS ThermoTech® Thermal Battery***
- ***EIS 1000 Solar Thermal Panel***
- ***EIS 500 Vacuum Super Insulation (VSI)***
- ***EIS SolMax® Special Coating***
- ***EIS ThermoTech® Solar Thermal Desalination Unit***
- ***EIS ThermoTech® Dendritic Generator***
- ***EIS ThermoTech® Non-Electric Air Conditioning Unit***
- ***EIS ThermoTech® Energy System***



SUPER
VSI
SuperLine Ltd.

The EIS 2000 Super Solar Panel was developed at The University of Wales, Cardiff. This photograph, taken at the Heliodon facility, shows a prototype panel rig being tested.

