

# The Inflatable solar station



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[www.suneyesenergy.com](http://www.suneyesenergy.com)

# Two Problems



Global Problem: How to provide the World with clean and safe electricity with minimal costs?

Local problems in Russia and all the world:



- there are no mobile sources of energy with average power of 50-500W.



- there are no mobile sources of clean great power energy.

# One solution

The mobile lightweight cheap  
"Inflatable Solar Power"



# Who is our customers



- eco-village developers
- electric supply of cottages
- festival organizers
- providing nomadic people with electricity
- electric energy sources for tourism

SunEyes - effective mobile and cheap, don't change the surrounding space





# Potential customers

Our customers: people who want to use clean electric energy and are not ready to deal with serious construction work.



**B2B model**



&

**B2C model**

- central power lines
- eco-village developers
- festival organizers
- village owners

- electric energy sources for nomadic peoples
- electric energy sources for tourism

# Main competitive advantages

|                  | SunEyes   | Other sources of solar energy   |
|------------------|---|---|
| Mobility         |  |  |
| Power efficiency | 30%   | 16% - solar battery   |
| Price per Watt   | 1\$ per Watt<br>in Russia   | 2.5 \$ per watt<br>in Russia  |

# Mobile competitive solutions

|               | Photo  | Power         | Weight  | Installation            | Noise  | Price       |
|---------------|--|---------------|---------|-------------------------|--------|-------------|
| SunEyes       |   | 100–500Watt   | 2–5kg   | 15 minute               | No     | 200–800\$   |
| Solar battery |   | 1–50Watt      | 0,2–3kg | 1 minute                | No     | 1–2000\$    |
| Generator     |   | 1000–3000Watt | 50kg    | 10 minute, needs fuel   | Strong | 1000–3000\$ |
| Micro HPS     |  | 1000–5000Watt | 30kg    | 2–3 hour, needs a river | Yes    | 1000–2500\$ |

# Stationary competitive solutions

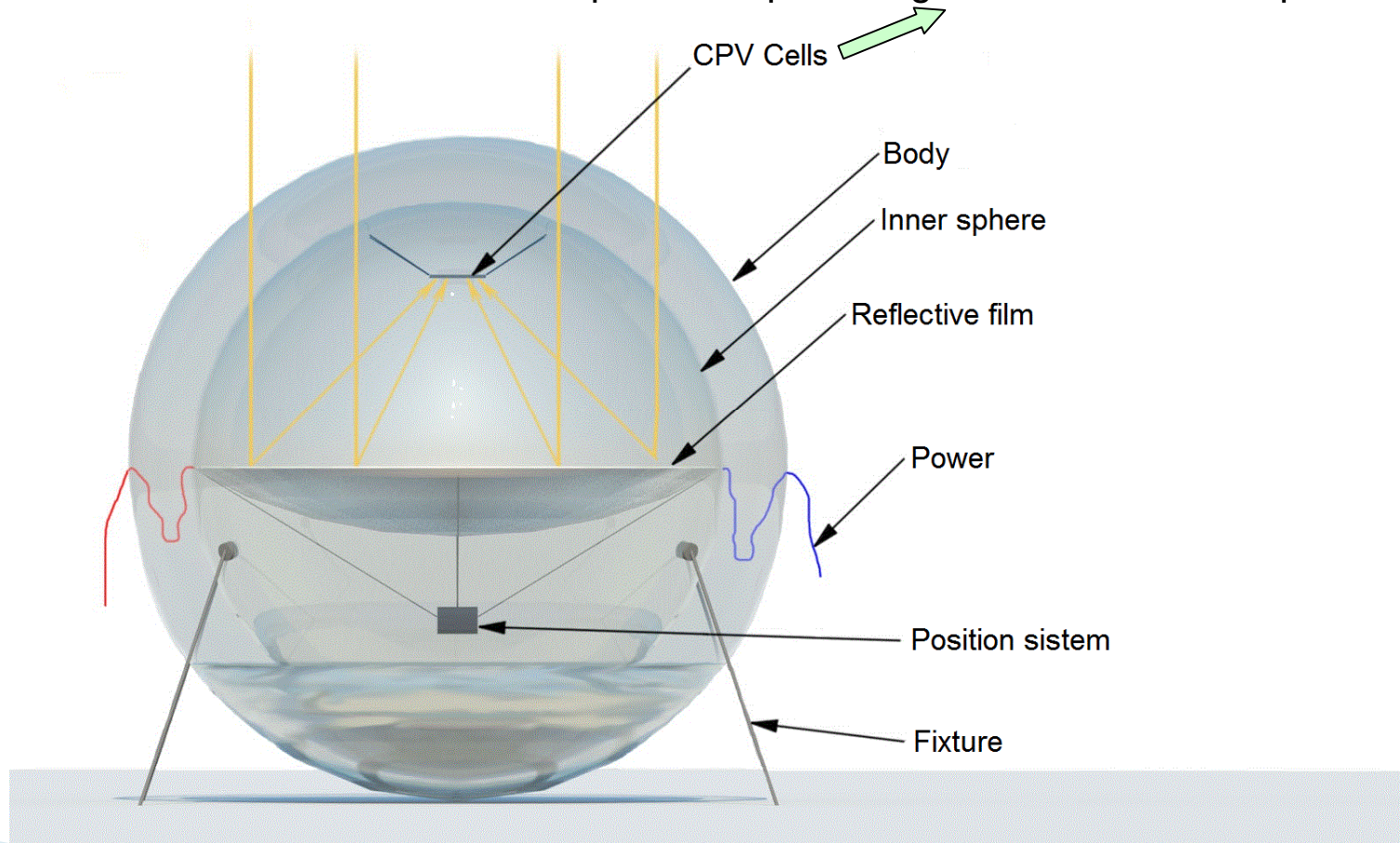
|                            | Photo   | Construction works | efficiency | Service  |
|----------------------------|---|--------------------|------------|--|
| SunEyes                    |    | No                 | 30%        | Every six months: wipe, pump up                |
| Concentrators CPV          |    | Great              | 30%        | Occasionally wipe the mirror                   |
| Silicon battery            |    | Need               | 16%        | Occasionally wipe                              |
| Thermal-solar              |   | Huge               | –          | Constantly needs to be washed. Full monitoring |
| Architectural solar panels |  | Need               | 5%         | Occasionally wash                              |



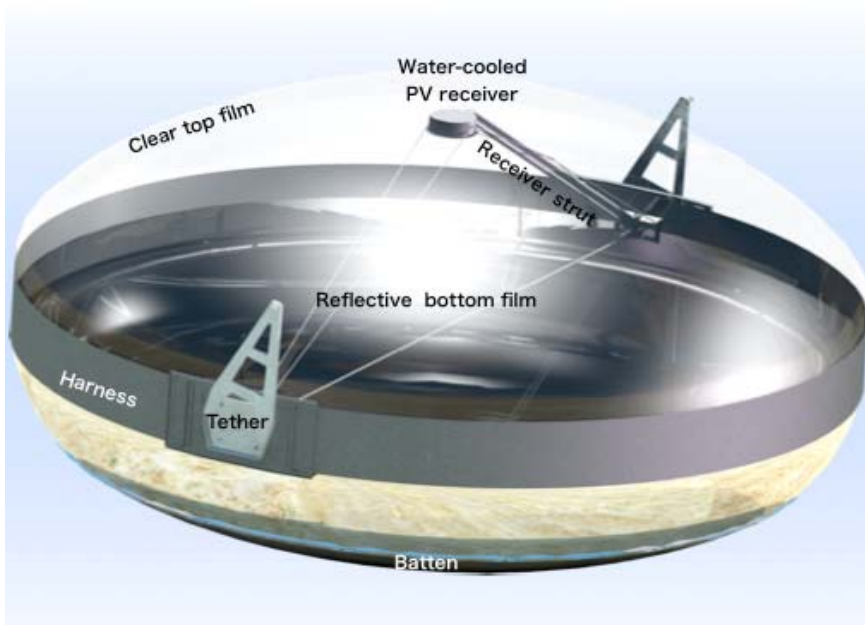
# Technology

Patent Pending: invention; Patent Grated: utility model.

[http://en.wikipedia.org/wiki/Concentrated\\_photovoltaics](http://en.wikipedia.org/wiki/Concentrated_photovoltaics)



# The competing technologies that use the reflective film



## **Cool Earth Solar USA**

+ attracted \$ 21mln of investments

--a dynamic pressure control is needed

--expensive installation

-- not mobile

<http://www.coolearthsolar.com/>

## **Airlight Energy Switzerland**

Giant stations --

A dynamic pressure control is--  
needed

<http://www.airlightenergy.com>



# Innovativeness of our technology

**Our innovation is the combining of three cool technical solutions:**



**-Using cheap films instead of expensive mirrors.**

The reflective film is not inferior to mirrors. At the same time, it has a much lower weight and lower cost.



**-Using the fluid for reducing economic and energy costs.**

The fluid is an ideal bearing, which automatically singles out the horizon. The fluid dampens any vibrations of the concentrator. It is an excellent heat accumulator, being used for cooling cells CPV.



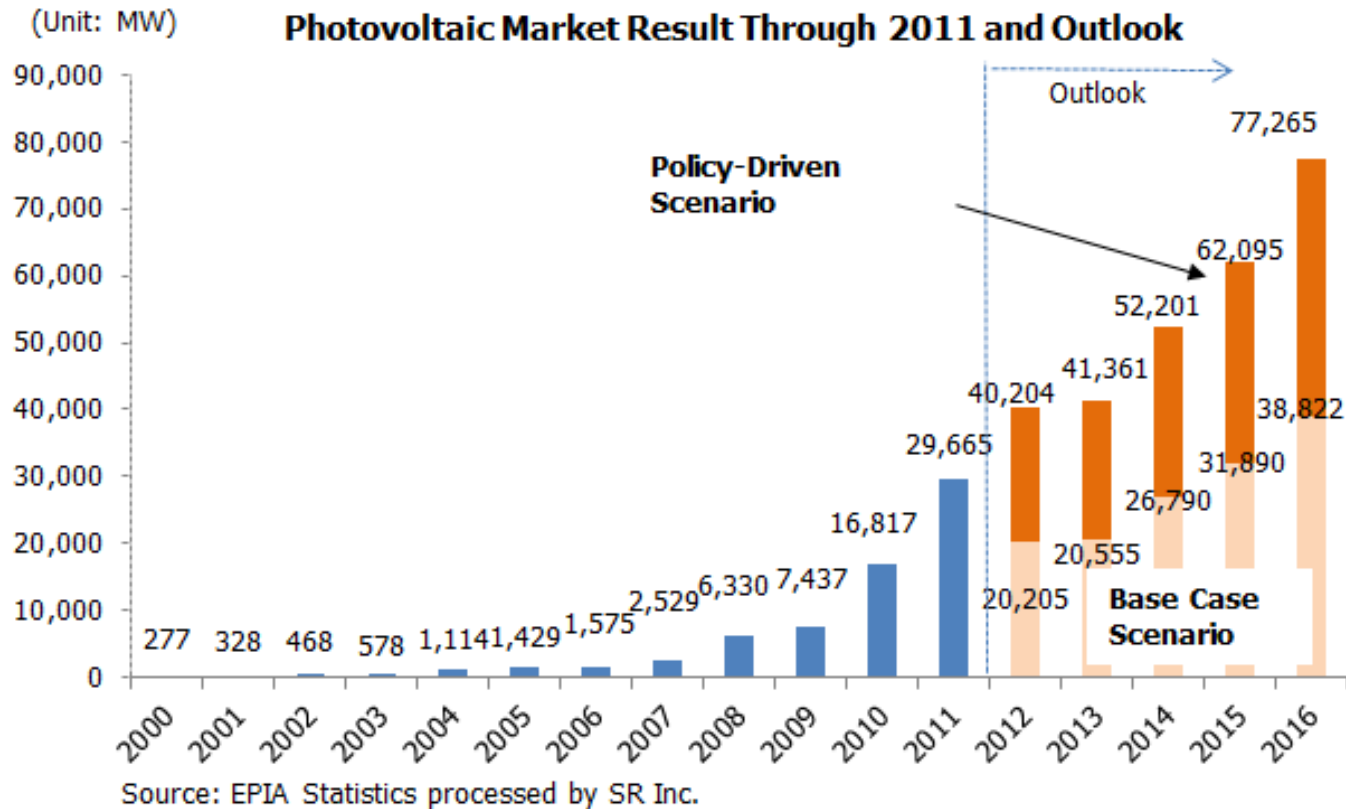
**-Using the concentrated sunlight.**

CPV cells are the same solar panels, only smaller. The smaller size - the less the price. By concentrating the sunlight, you can get more energy from the same power. At the same time, the conversion efficiency of sunlight into electricity also increases.

# Solar energy market

By the 2015 it is expected the annual installation of solar capacities will double, that will make 62GWatt.

At a price of \$ 0.8 per watt it is equivalent to \$ 50 billion



Russian market – less than 0.5% of the world

# The solar concentrators market growth

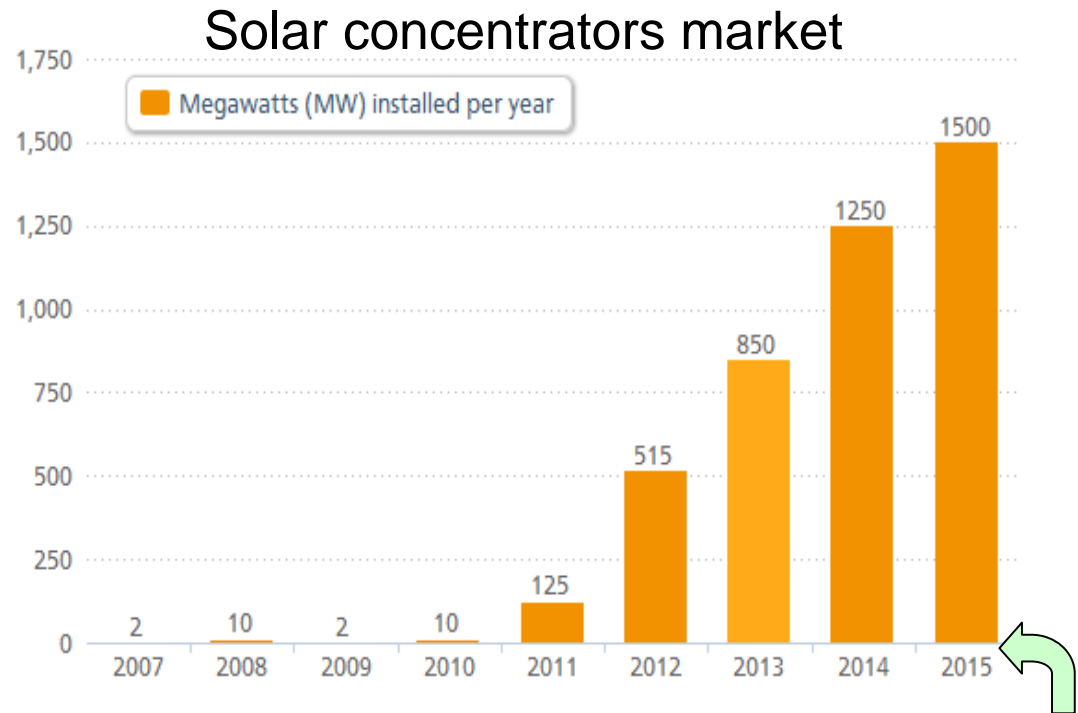
2012 - Market of CPV is rather young and occupies only 5% of the solar energy market.

2015 - Market of CPVs will occupy 10%

2015

Solar energy market -  
\$ 50 billion

Solar concentrators  
market - \$ 5 billion

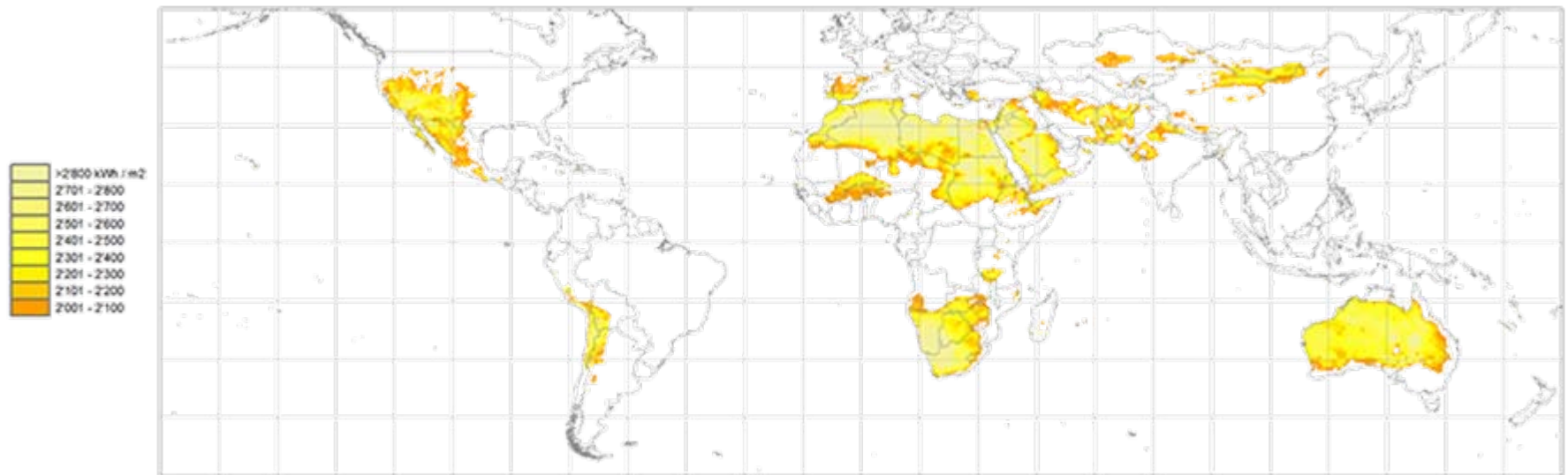


<http://www.soitec.com/en/markets/renewable-energy/>



# The regions of interest for CPV

Technologies, using concentrated sunlight, need a directional solar radiation. The map shows the regions where the directional solar radiation exceeds the average scattered sunlight per year. However, the technologies that use concentrated sunlight, have a record power efficiency and collects more energy during the day.



The regions, attractive for installing of large solar power stations, based on solar concentrators are: Kazakhstan, the U.S., Spain, Australia, China, the Middle East, India, Africa.

# Team

Eflov Petr



- More than 1,5year in field of the solar energy. MSU, mechanics&matematics faculty

Kondrakhin Denis

Mentor - Successful Hi-Tech investments



Yakubenko Anna



- Professional engineer MSU, mechanics&matematics faculty

Soroko Anastasiya



Regional manager - Businessman since 14year old



SunEyes

# Contact us



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