

Innovative Ltd. - Profile



- Founded in 2006 by Ron Chen
- Privately owned
- Mission – Patents Development:
 - Tisteron© - Investment raised, Prototype & pilot tests finalized
 - BumperOn© - Local electrical power manufacturing

Product Strength



- Extremely low electricity production costs
- Local, “green” electrical power production
- High Return On Investment (ROI)
- Very high growth potential
- Win-win situation: Investors, city authorities, drivers

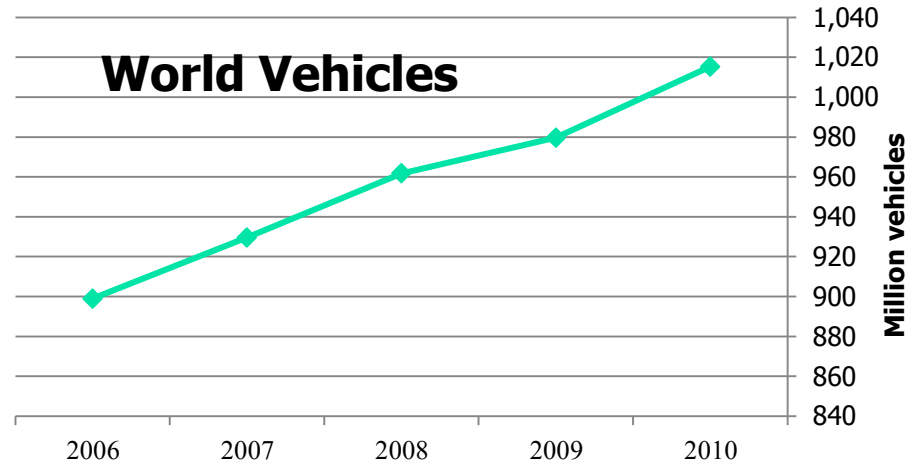
Problem 1 – Energy costs

Crude oil prices over the last decade



Problem 2 – Traffic Volume

Traffic volume constantly increase



Moscow: 3 Million cars



Milan: 120,000 cars



Problem 3 – Road Safety

Safety and Accidents prevention

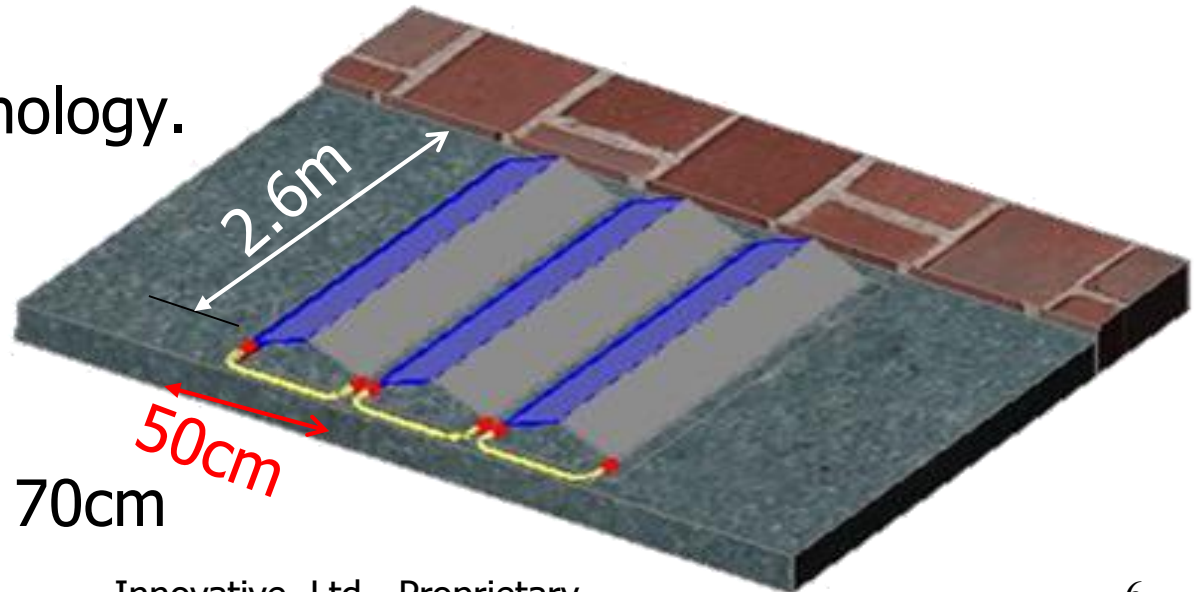
Country	Fatalities per 100k Vehicles	Total Fatalities	Injury Crashes 2010
USA	13	32,900	1,546,000
Germany	7.2	3,650	288,300
Italy	8	4,090	211,400
Russia	55.3	26,600	

“We repair roads, fill the potholes, but accidents rise. You won't drive fast on a bumpy road”,
(Vladimir Fyodorov, former traffic police chief, Moscow)

BumperOn[©]

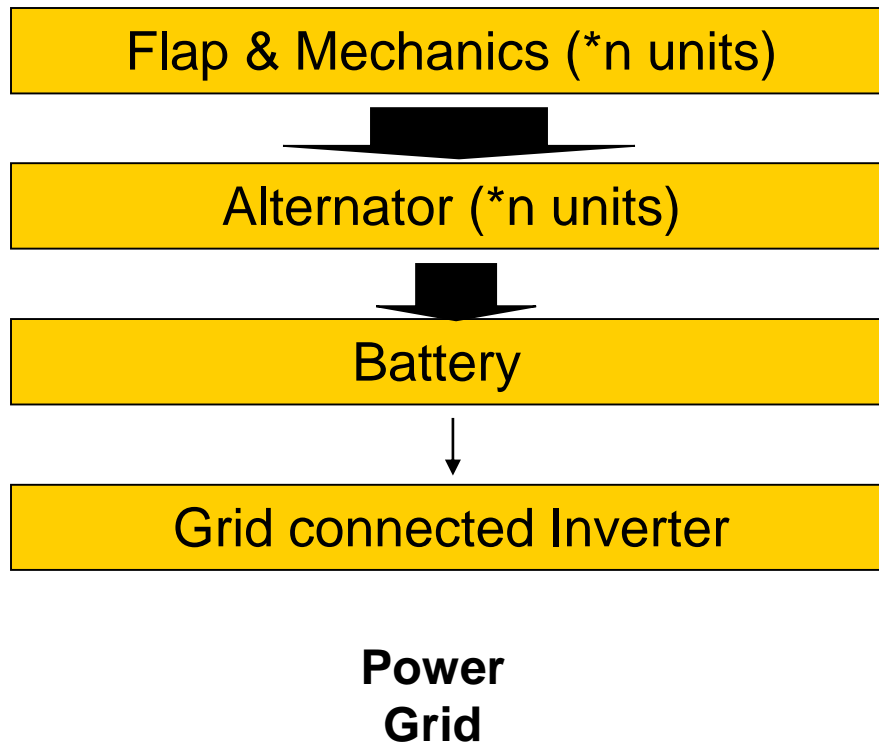


- BumperOn[©]: Several consecutive rotating flaps, each one is a self power-generating unit
- Installed as a regular bumper, flashed to road surface.
- Covered by a flexible cover, to withstand snow, rain, dust etc.
- Patented Technology.



System depth – 70cm

Electrical Block Diagram



Versatile Solution

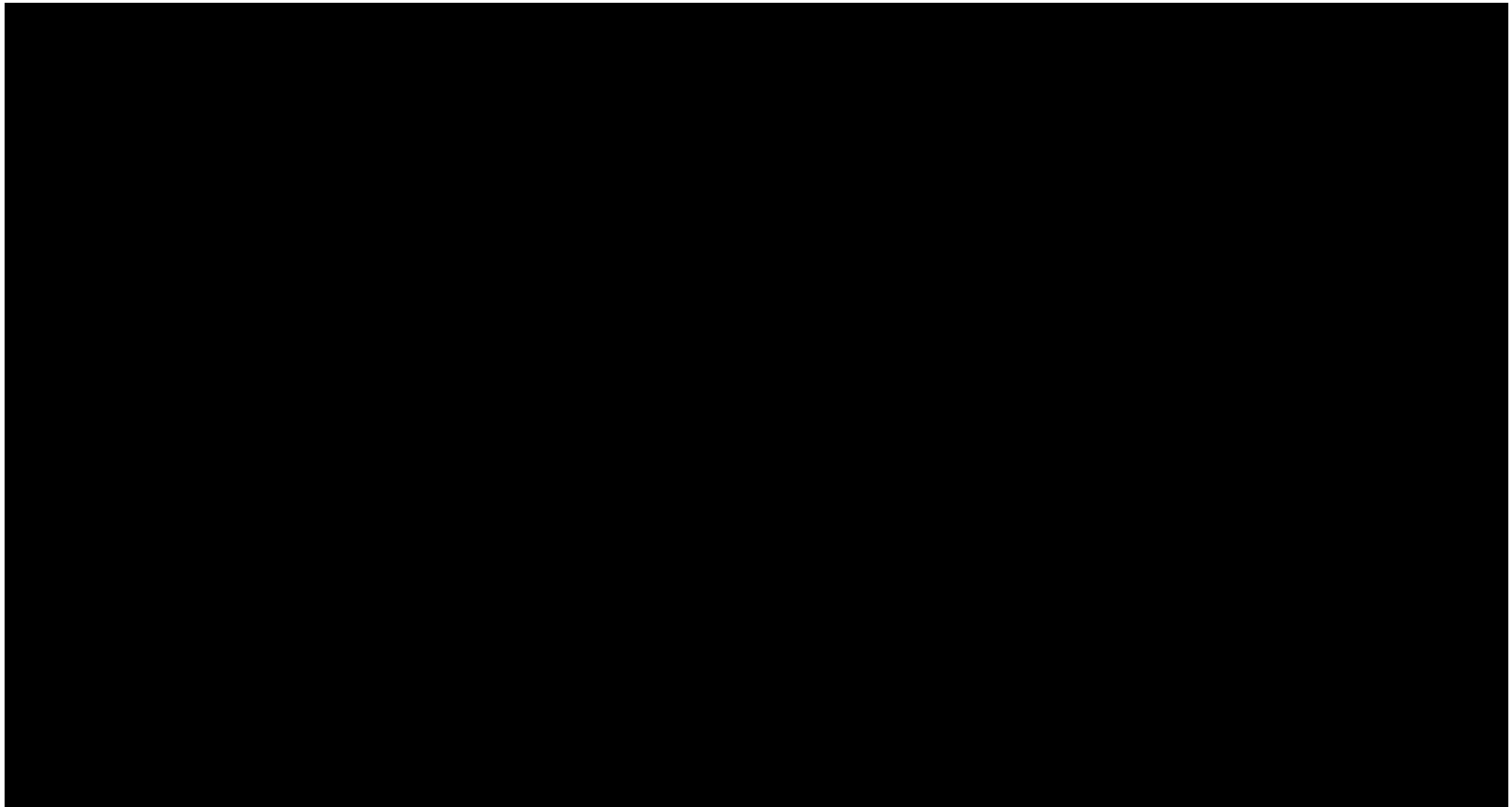


- Bumper can be installed in highways, that are crowded during rush-hours:
 - Protrude surface when traffic is slow
 - Flushed with surface when traffic is fast

Prototype in Action



The piston simulates a passing car
Accelerating alternator is heard



Patents



- BumperOn granted patents at:
 - United States
 - Canada
 - South Africa
 - Israel
 - Mexico
- Patents pending at:
 - European Union

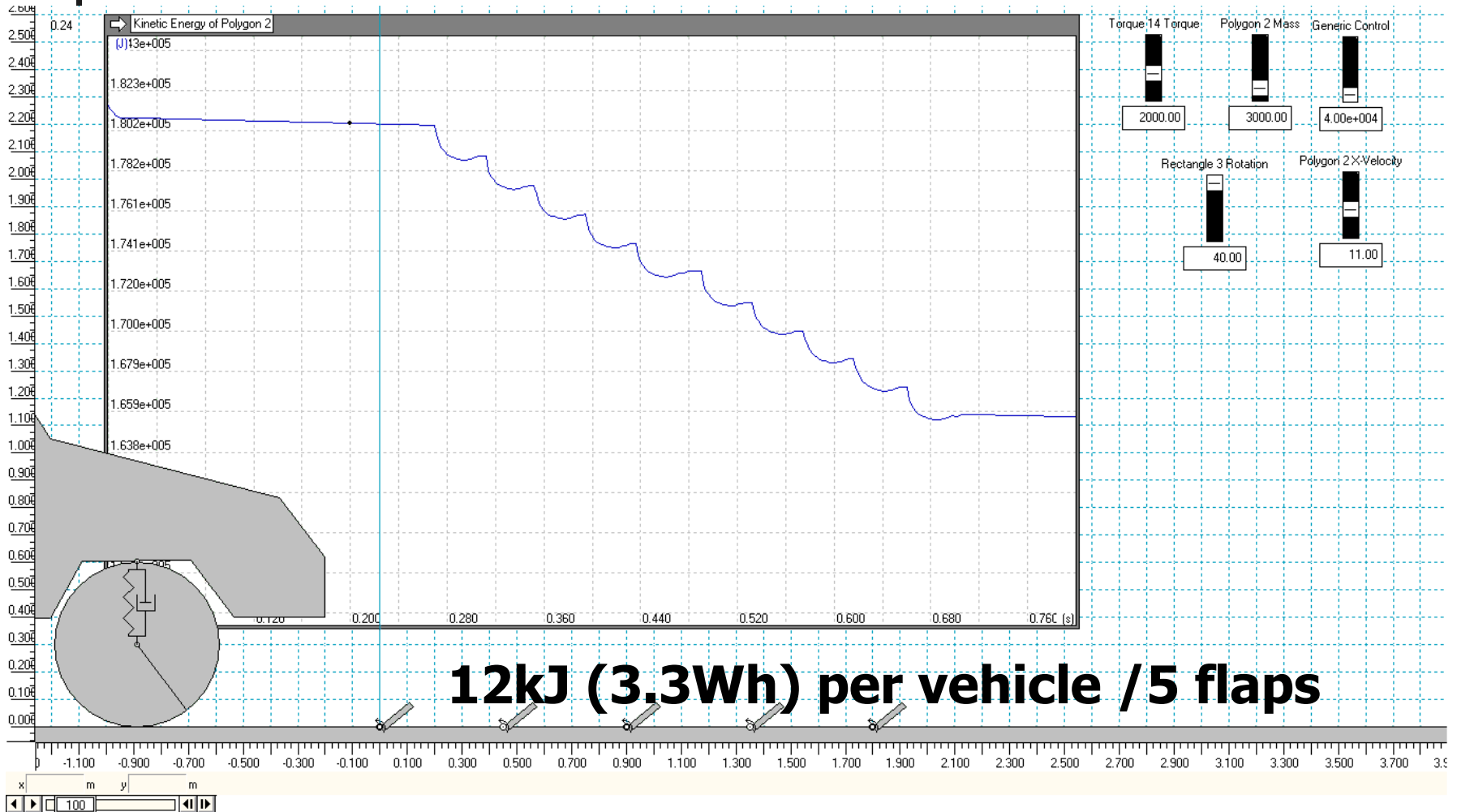
Energy Production Analysis



- Parameters and assumptions:
 - Car/Lorry ratio: 90% / 10%
 - Average weight – 3000Kg
 - Initial vehicle velocity – 40km/h
 - 5 consecutive flaps

Analysis Demonstration

System Energy Production: 12kJ per car

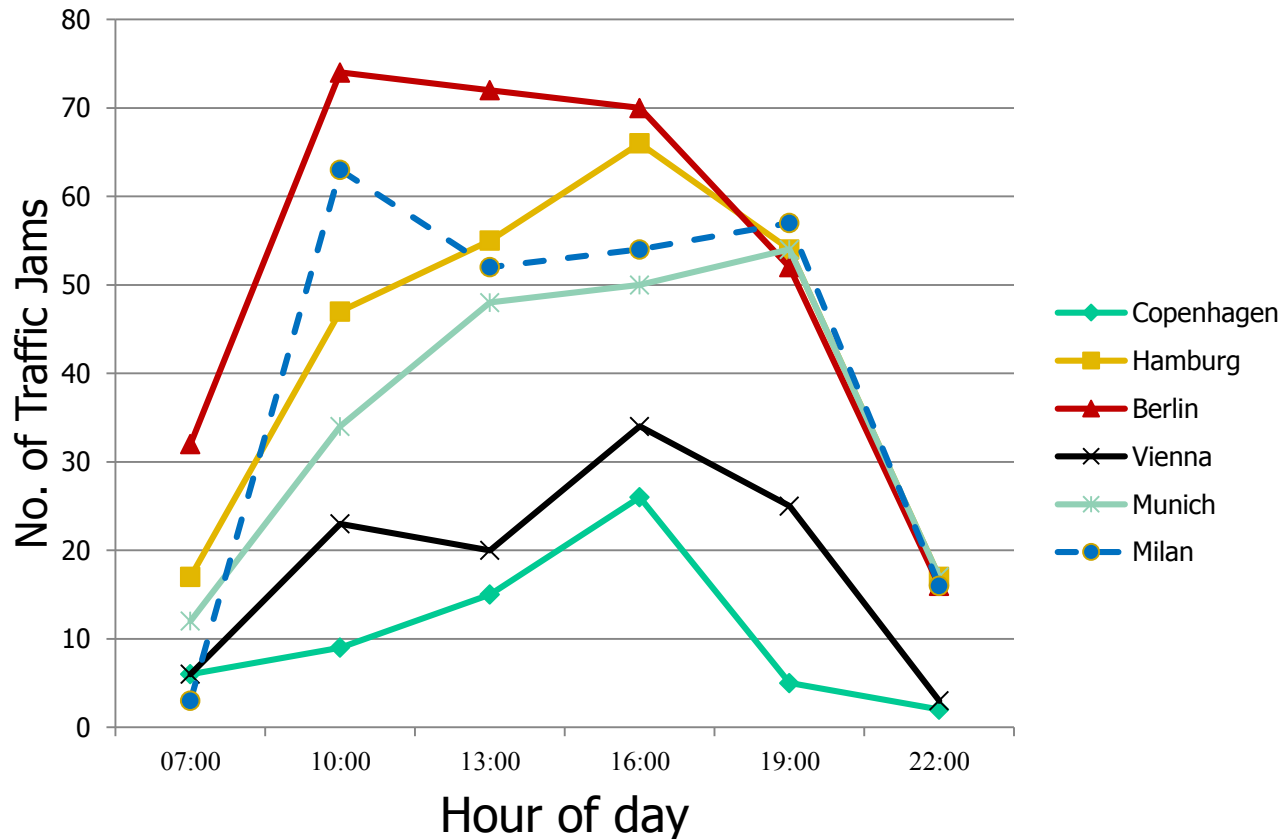


Attractive Installation Sites

- Roads with high traffic volume
- Rings exits
- Left turns, crossroads/lights
- Shopping centers, parking lots



Transportation in Europe



Conclusions: 12 hours of high traffic – good assumption
Vienna, Copenhagen not attractive...
Berlin, Hamburg, Milan, Munich – are!

Milan Attractive Sites - Example

<40

40-60

>60

Km/h

Viale Marche
7:30-20:00

Viale Murillo
8:00-19:30

Via Lorenteggio
8:00-22:00



Loreto
8:00-20:00

Viale Abruzzi
8:00-21:00

A7
7:00-19:00

Conclusion: 12 hours of high traffic

How much money can it make?

High traffic volume: cars at 40 Km/h or less, result a delay of 3.5sec between cars, that is 1100 cars per hour.

Mid traffic volume: Same velocity, with 600 cars per hour

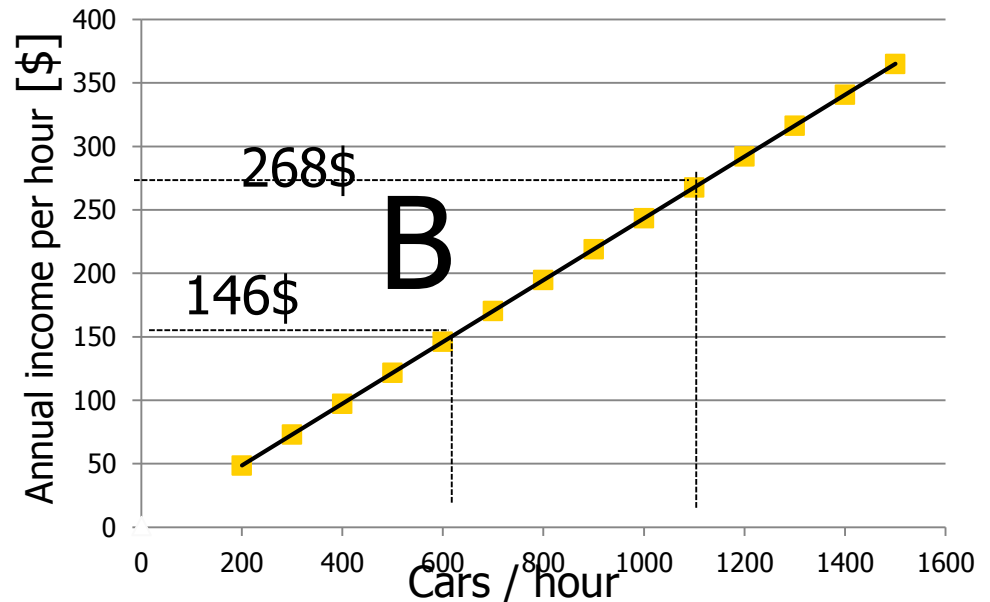
Monday – Friday has higher volume of traffic

1100 cars of 24kJ results 0.73\$ per hour, yields 268\$ per year

Income is calculated by multiplying number of hours of each volume a day [A], by yearly income per hour[B].

	High traffic 1100 Cars/h [hours]	Mid traffic 600 Cars/h [hours]
Monday	12	4
Tuesday	12	4
Wednesday	12	4
Thursday	12	4
Friday	12	4
Saturday	6	6
Sunday	6	6

A



How much money can it make?

Income = \sum <days of week>* <Annual income per hour>* <hours> =

$$5/7 \text{ days} * (12\text{h} * 268 + 4\text{h} * 146) + \\ 2/7 \text{ days} * (6\text{h} * 268 + 6\text{h} * 146) = 2714 + 710 = \\ \mathbf{3424\$/year}$$

System cost is ~5000\$, thus

ROI = **1.5 Years**

Power Production Cost

- No variable costs, but:
 - Maintenance, patent protection, fees
 - Marketing, administration, service
- Suggested business model yield costs that are less than **1¢/kWh** from the third year on.
- Government subsidy wasn't taken into account, yet!

Summary



- “Green” electricity production, at less than 1 cent per kWh.
- Very fast return on investment.
- Enormous growth potential.

Innovative would license technology and patents to relevant group in Europe that is a significant player in the municipal energy market.



Thank You !