



Kinetic energy storages for power engineering, industry and electric transport

Russian superconductor Corp., Lls

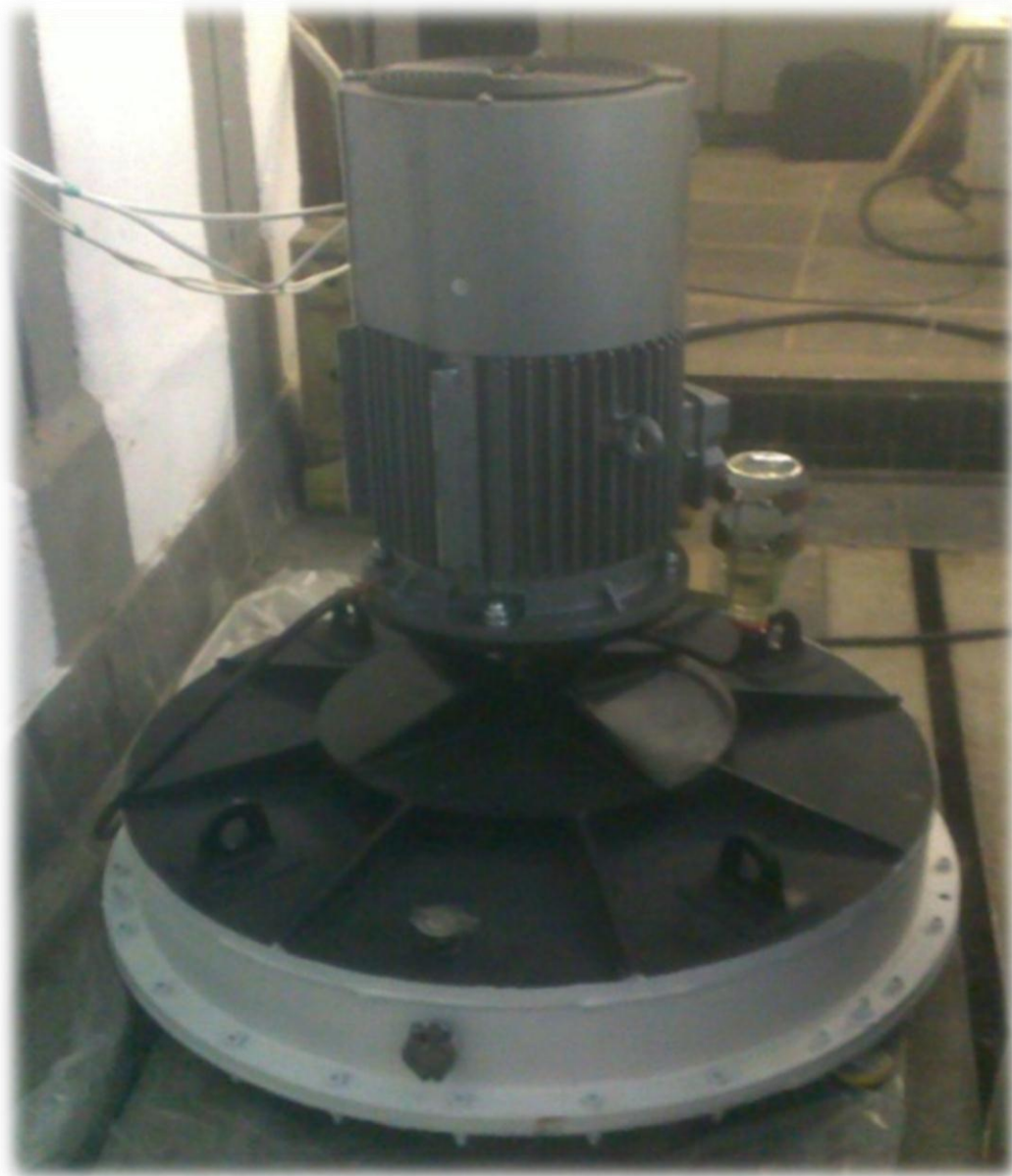
Alexander Katsay

General director

Problems of energy consumers

1. Power supply outages
2. There is no possibility of energy redistribution by the time of the day
3. Problems with the frequency regulation
4. Absence of energy recovery on electric transport

Solution: Kinetic energy storage



KES-1 (4 MJ)

Mass – 800 kg

Energy capacity – 1,2
kWh

**KES allows quickly give out high power in the object
network or accumulate it**

Market: main consumers of KES

Key KES consumers are the objects in energy systems relating to 1 and 2 categories of reliability. Effective demand is **5+ billion RUR per year** (~ 25-30% of UPS market).

Only in Russia **there are at least 5000 power facilities** need in electric energy supply with considerable fluctuations of power level.

Growing KES market segment is the **Alternative Energy**. The Storage device allows to redistribute Renewable Energy Source energy during the day and provides the electricity complying the standard to be used in power network.

Competitive advantages

General Kinetics will make a revolution on the US flywheel market

General Kinetics

Permanent magnet based flywheel.



- ✓ **2x** cheaper
- ✓ **30x** more capacity
- ✓ **12x** more power
- ✓ participate in frequency regulation
- ✓ No self-consumption



The leading US player with
\$60M+ in revenue
IPO 2002 **NASDAQ**



Team



Nurbey Gulia

The Scientific KES project leader. Russian scientist and inventor in the field of energy flywheel storage, stepless mechanical drive, popularizer of science and technology. Dr. of Sci. , Professor, Academician of the International Academy of Environmental Safety and environmental management.

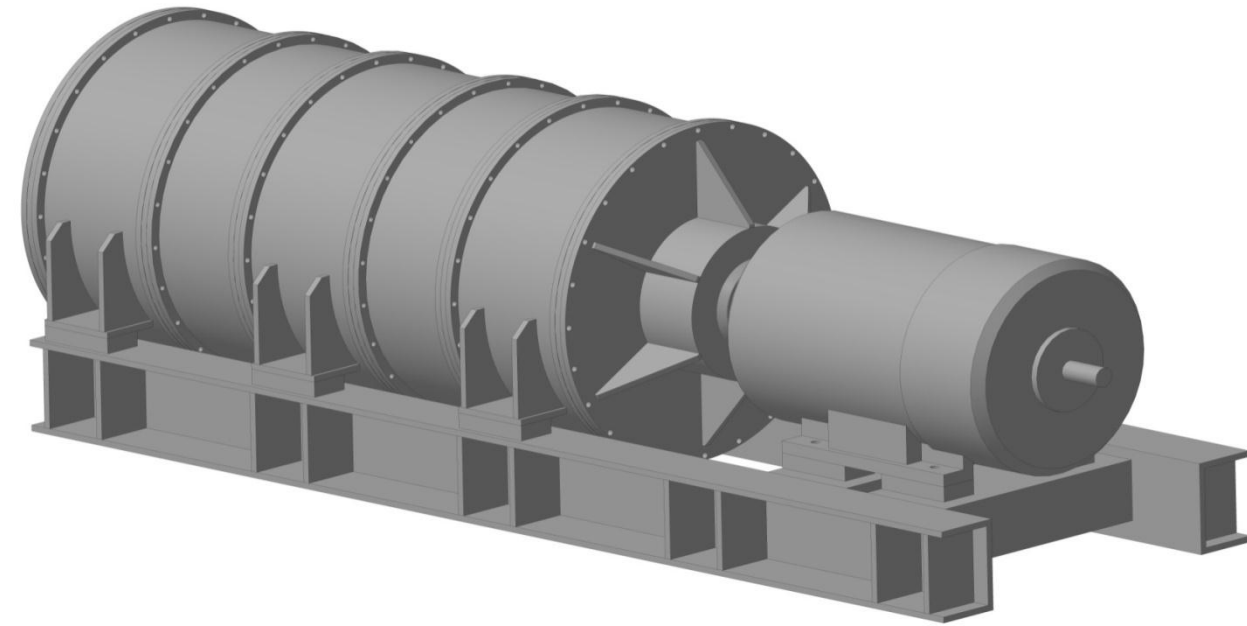
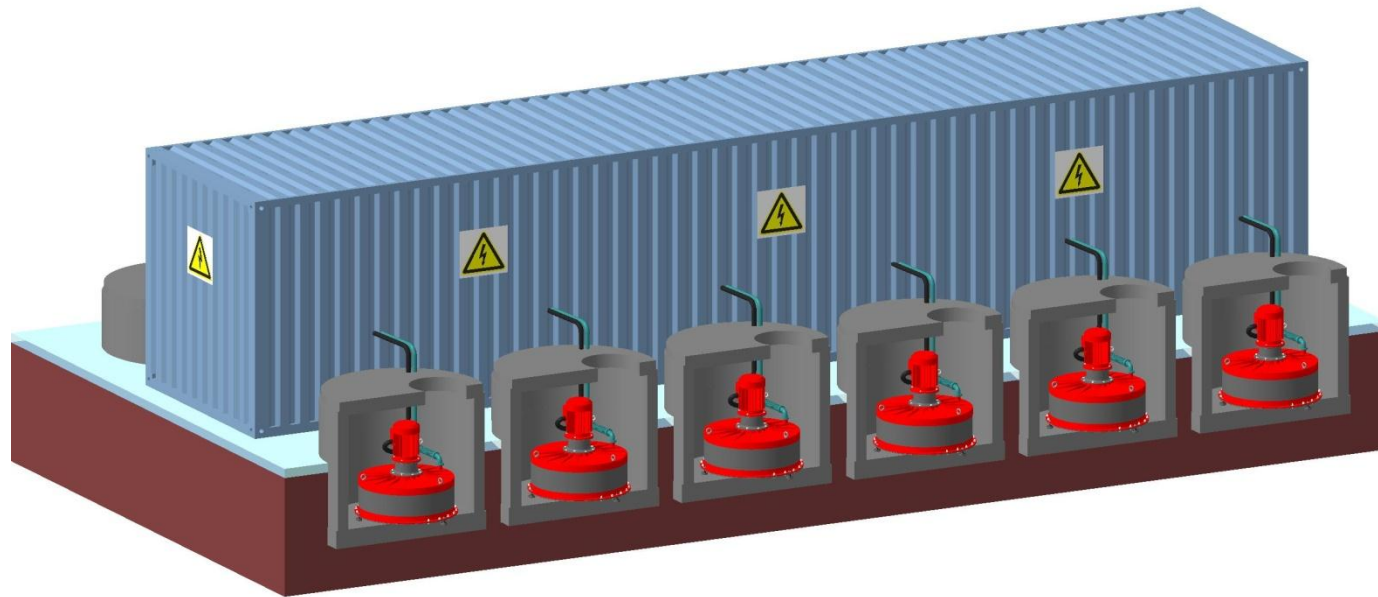


Alexander Katsay

General director. Development and commercialization of a number of high-tech devices and technologies in the field of environment, energy and nanomaterials.

The team includes experienced designers, technologists, engineers, power engineers.

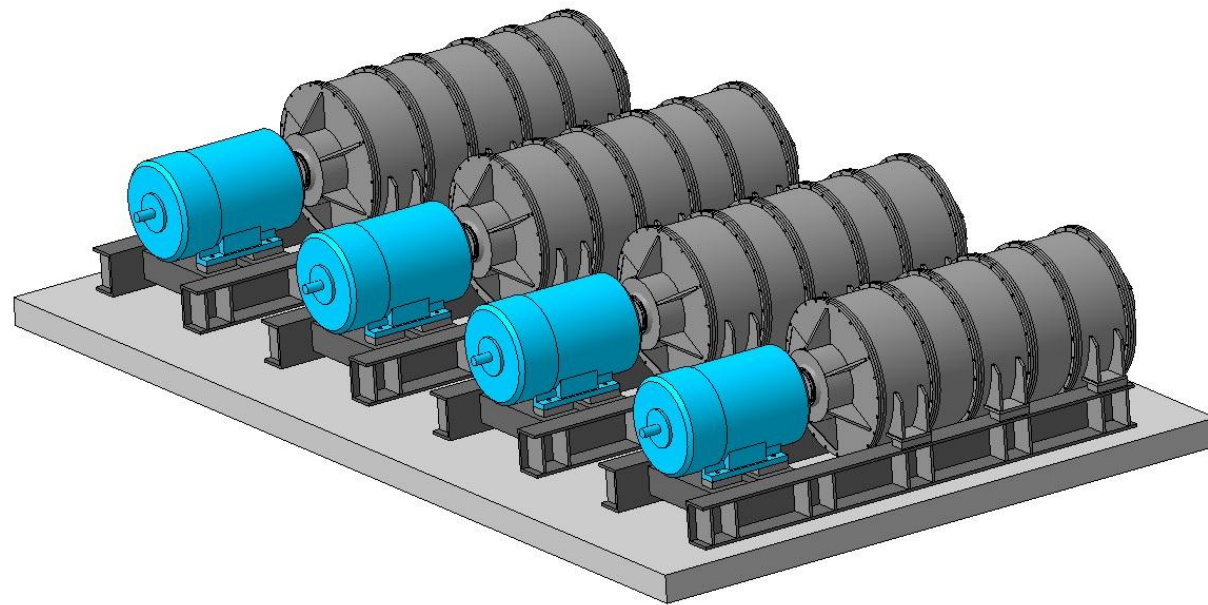
Business model



- The basic selling product is the system of standard KES units with the total capacity up to 150 MJ and the power of motor-generators from 10 to 3000 kW
- Service during all operation time.
- There are comfort letters from customers.

Next steps

We are going to start small-scale production within 12 months



Now:

- the prototype developed and tested
- LOIs from customers received
- 9 patents obtained

Investment offer

We are seeking \$2M

2013 revenue to be \$4M



Thank you for attention!

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