

Molecular Generator of Andrus - MGA

BSA Ilc

Initial Pitch Presentation



23.08.2021

2 Executive summary. Value Proposition and Unique Selling Points.

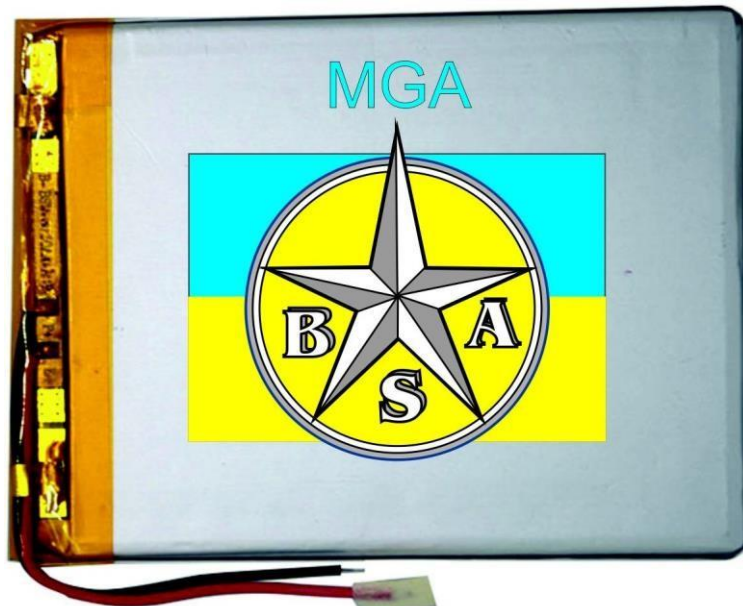
Value Proposition

The MGA is the world's first generator operating in the mode of nano-oscillations of the Earth's magnetic field, creating Foucault currents in the crystalline lattice of thermal graphite. These currents with the aid of an excited filler and diode surfaces, are brought out to the "+" plate, creating an electric circuit of a generator operating continuously in one mode for years (minimum 10 years)

Unique Selling Point

MGA is a new "battery" for mobile phones, tablets, flashlights, etc., without having to be recharged.







The MGA's technology allows to go to the production of a model range of generators from 3W (mobile phones) to 150 000 W (electric motor cars).



Project goal – to develop the commercial samples of MGA with a capacity of 3-50 W for the world market. These are "bricks", with which you can amount to any power up to 150 000 W.

Aggregate volume of the target market – all owners of mobile gadgets, flashlights, electric motor cars, private houses and apartments.

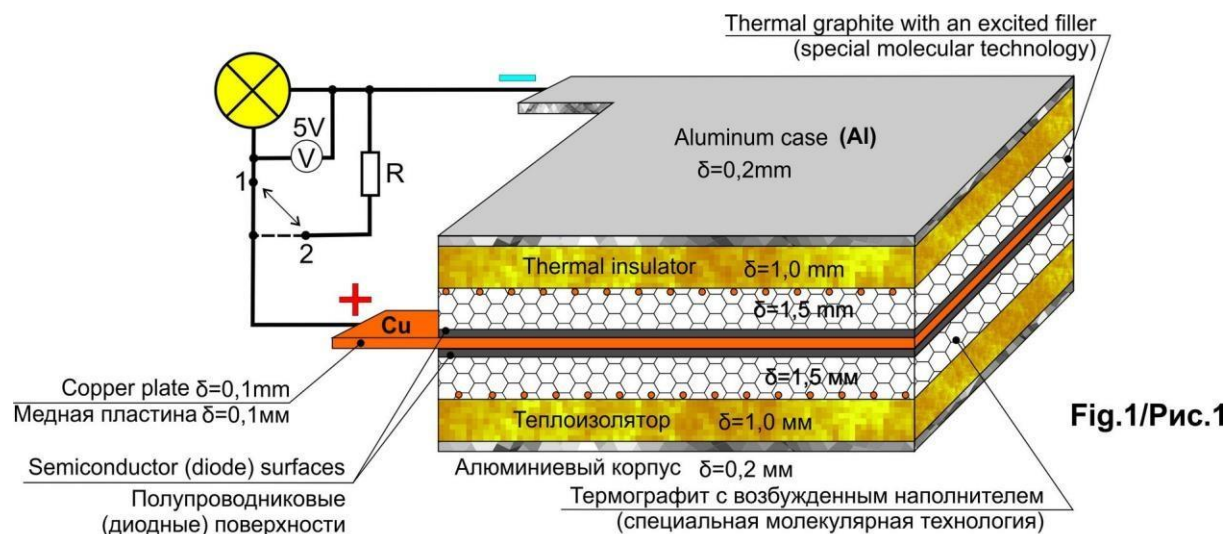
3 Basic eligibility criteria.

Criterion	Criterion met	Comment
1 The Technology is in the priorities in one of the 8 Thematic Fields of Sustainable Energy		 Energy efficiency.
2 Compliance with key BSA Ilc		Decreasing energy cost Reduce GHG
3 World-class innovation		MGA - it is high technologies
4 Defined product or service		Fully operational prototype is developed.
5 Time to market is less than 3 years		We are few steps before mass production.

4 The Underlying Technology

The electric generator itself consists of two plates of thermal graphite with excited filler. The excited filler – this is a scientific innovation. It is this filler that interacts with magnetic field of the Earth, it is absolutely inert, meaning it is not connected to the chemical reactions, thus it is able to work for years.

Nano-oscillations of magnetic field of the Earth, as in any generator, create locally multidirectional streams of electrons (Foucault currents) in thermal graphite with excited filler. These currents are getting deleted from it by diode surfaces. In the copper plate directed constant electric current of specified voltage is being formed.

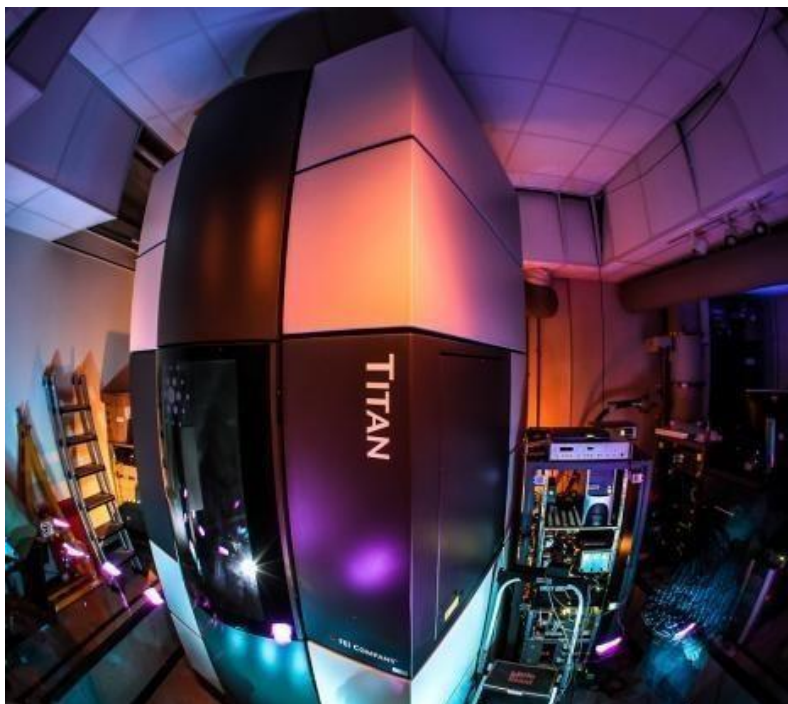


The thickness of the "sandwich"
 $S=2(0.2\text{mm}+1.0\text{mm}+1.5\text{mm})+0.1\text{mm}=5.5\text{mm}$

5 The Problems

1. At each stage of manufacturing of MGA it is required a quality control technology at the pico-level. The problem is that all the known methods and tools, except for the electron microscope TITAN THEMIS Z, can not perform this work. Attempts to do without the microscope TITAN THEMIS Z turned out to be unsuccessful, because other instruments (less powerful microscopes, spectrographs, etc.) give almost 100% coincidence of raw materials in the form of thermal graphite in chemical composition, mechanical and electrical characteristics, whereas electrical measurements of the output parameters give a 35% spread of voltage. Only TITAN THEMIS Z will allow us to select samples with a crystal structure that will provide the planned output voltage (working sample MGA produces a strictly planned voltage of 5V).
 2. The price of electron microscope TITAN THEMIS Z according a commercial offer in Ukraine is \$ 12,000,000 + \$ 2,000,000 for delivery, installation, adjustment and maintenance.
 3. To install the microscope TITAN THEMIS Z, special earths with low vibration are required in Kiev, such places have been defined and on them special rooms need to be built (the price is more than \$ 5,000,000) + construction of an engineering laboratory building (about \$ 7,000,000) - a total of \$ 12 million.
- TOTAL: \$ 14 000 000 + \$ 12 000 000 = \$ 26 000 000**

6 Information on the electron microscope TITAN THEMIS Z



Commercial proposal on microscope TITAN THEMIS Z

"Мелітек-Україна" Ltd

03067, Kiev, blvd. Ivan Lepse, 4, building 1, office 308

Tel (044) 454-05-90, fax: (044) 454-05-95

e-mail: olena.vertsanova@melytec.ru

Web: www.melytec.ru

Excerpt from a email message of 11.01.2017

"The cost of the microscope you are requesting in full packaging arrangement is about 10,000,000.00 Euro (\$ 12,000,000) "

Technical characteristics of electron microscope TITAN THEMIS Z

https://sernia.ru/catalog/mikroskopy/titan_themis_fei/

(see. Themis_Z_Datasheet.pdf, p.2)

	ENERGY SPREAD	INFORMATION LIMIT	STEM RESOLUTION
Image corrector	0.8 eV	70 pm	136 pm
Probe corrector	0.8 eV	100 pm	60 pm
Probe + image corrector	0.8 eV	70 pm	60 pm
X-FEG/monochromator double corrected (probe + image corrector)	0.2-0.3 eV*	60 pm	60 pm

* Depending on energy filter option.

Note: All specifications are at 300 kV.

7 Venture status. Future development.



Full company name

BSA Ilc

Venture stage

Prototype

Creation date

2006

Number of employees

25 ÷ 50

Ownership structure

Limited (Ltd)

Acquired investors

Acquired investors - they are our relatives and friends
(\$ 7 500 000)

Acquired external funding

There are no acquired external funding

LFY turnover

There is no profit because all funds are directed on creation of the commercial sample of MGA

Future development

Our goal – to develop a full family of MGA

Power range:

3-50 W - telephones

10 000 - 20 000 W - private houses and apartments

150 000 W – electric motor cars and other vehicles

8 The designed product/service. What you want to sell.

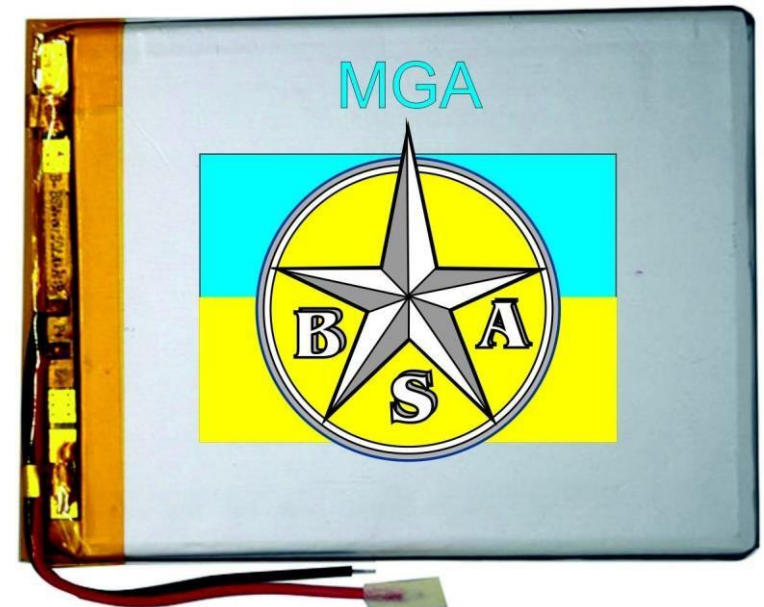
Developed product – this is the family of MGA in the power range 3 W ÷ 150 000 W.

Primary production is possible only under the leadership of BSA Ilc in Ukraine or abroad.

After mastering the production of products in factories, it is possible to sell MGA technology + KNOW-HOW.

Estimated price range:

1. MGA for mobile phones - \$25
2. MGA for tablets - \$50
3. MGA for private houses and apartments - \$6000
4. MGA for electric motor cars - \$12000



9 The Prototype. What you have.



The prototype

Currently, there is a testing of working sample MGA for a tablets in various climatic conditions



Intellectual Property

Technology MGA – it is a product of the 7th technological paradigm, that in the coming decades does not require any protection: high scientific level + it is very expensive. Even with the availability of money and the existing science, this technology can not be mastered without its developer.



10 Business model. How do you plan to get the revenue?



Value Proposition

MGA is a new type of business. There was not such a product on the world market yet.

In principle, this is the future of small electric power industry.

The world market is completely open for this product.

The product is absolutely safe.



Unique Selling Point

The MGA technology – it is a product of the 7th technological paradigm. It is believed that 5 technological paradigms were passed off in the world. At the moment, the sixth technological paradigm is coming, connected with nanotechnology (10^{-9} m).

The MGA technology – it is a pico-world (10^{-12} m).

At the level of the pico-world, only BSA Ilc works today.

<http://neutronscience.com.ua/wp-content/uploads/2016/09/Expl-anatory-Notes-to-tables-2.pdf>



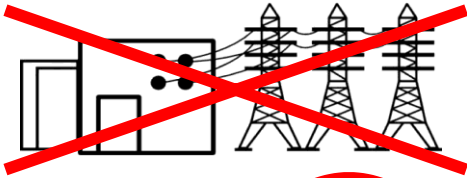
Customer Segments

The total volume of the target market – all owners of mobile gadgets, flashlights, private houses and apartments, electric motor cars and other vehicles.

11 The Customer. Total Addressable Market.

Customer	Number, billion (bn)	Price of MGA, \$	Sum, \$ bn
1. Owners of mobile phones	5	25	125
2. Owners of tablets	4	50	200
3. Owners of laptops	3,5	50	175
4. Owners of flashlight	2	5	10
5. Owners of private houses and apartments	2,5	6000	15000
6. Owners of car	1	12000	12000
7. Owners of other vehicles (boats, launches, yachts)	0,5	12000	6000
8. Small agricultural and industrial productions	1	12000	12000
TOTAL:			45510

12 Product/service benefits and Competitive Advantage



General competitive advantages, functionality

1. MGA can produce electricity continuously in one mode for years (up to 10 years)
2. With the MGA you do not need to pay for electricity
3. Advantages of MGA is that it is a power source that:
 - autonomous (does not require urban electric networks)
 - safe (not afraid of short circuits, doesn't burn, does not explode)
 - environmentally friendly (all materials decompose naturally in nature in a fairly short time)
4. Competitors have no alternative solution

13 The Team of BSA Ilc



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Technology of MGA – it is the environmental improvement in the world:

One line description of your company or motto.

1. NPP accidents.
2. Combustion of hydrocarbon fuels.
3. Atmospheric emissions – smog.
4. Lack of drinking water.
5. Depletion of natural resources.
6. Radioactive waste storage.