

CONTEMPORARY CONCEPT OF THE ENERGY PARADIGM

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Abstract: *The article analyzed the history of research and discoveries in the physics of energy, since the 19th century. Showing pattern of new principles of using electromagnetic technology (Tesla electromagnetic principle). Suggested category «nature way energy» and submitted its classification attributes groups.*

Keywords: *energy, nature way energy, Tesla electromagnetic principle, hydrogen energy, cold nuclear fusion*

1. INTRODUCTION

The social development has been immense change, which were based on the development of the physics of energy-electrical processes. This ensured the development of computer and information technologies, which provide a system of automated control of energy production.

In the energy technology of the 20th century breakout occurred, which provided an opportunity to generate electricity, by a controlled nuclear reaction atom. It creates a new direction of energy - nuclear energy.

But relatively quickly the energy industry has become very dangerous and in environmental terms is a potential threat to all living creatures. In addition, in terms of technology the principle of generating electricity has not changed. Nuclear reactions provide a large amount of heat, which brings the water to steam. And the steam through turbine rotational movement on the induction generator provides electricity removal. In fact, the technology has remained the same - the rotational mechanical work is converted into electric current.

At the same time press and news fed a lot of information about the latest developments generate electricity without the use of traditional technologies already, and on the basis of only the title of the so-free energy [1].

Therefore, the aim of the research is the analysis of contemporary developments in the electricity generation through natural conditions and, accordingly, carrying out scientific

classification of these developments, as well as the evaluation of the possibility of a breakthrough in the energy production of cheap electricity.

2. TECHNICAL REQUIREMENT

The theoretical basis and at the same time the practice of generating electricity was developed by Tesla. In 1885 he constructed with the help of a generator provided electricity transmission lines without wires from one turbine Niagara HPP and lit the surrounding area radius of 25 miles to 200 carbon filament lamps. Tesla worked for a long time and has created a number of ingenious designs and inventions, but he died in poverty.

Then, a similar successful experiment was repeated in 1914 by Russian scientist Philipov, who created them from the installation from St. Petersburg lit bulbs in Tsarskoye Selo. Philipov were not so lucky, he was killed four days after the completion of the experiment.

Focus on the first electric vehicle. So in 1931, the Tesla demonstrated a car that set the AC electric motor (a capacity was 80 hp), which was the source for a box, from which protruded two rod-that the scientist hooked up to the engine. This car has a top speed up to 150km / h, when the average speed at the time was 200-250 km / h. At the same time, the car did not require recharging during the week (as much lasted the test). Explaining the source of energy, he clearly and unambiguously stated: «From the air around us all». Specify that box was a fellow by Nikola Tesla with explicit tools radio store (12 vacuum tubes and a handful of assorted resistors). All of this together in a box of 60 cm in length, 30 cm in width and 15 cm in height of long with a pair of rods 7, 5 cm, protruding outside.

Another direction of development of energy was granted an immigrant from Portugal Andres in 1917. He conducted an experiment that made the car run York - Washington and back in presence of State Commission. The specific of the experiment was that the car was filled with ordinary water to which adds a drop of cheap and simple chemicals. The Commission approved the results of the experiment, and the documentation and the rights to the aqueous composition were sold to the United States the largest naphtha company for \$ 2 million and the author after receiving the money was gone forever.

In 1927 Briton T. Brown receives a patent for a driving force due to the electric field. After 28 years in France, he has provided a working model, which allowed reaching speeds up to 600 miles per hour, and at the same time using the field voltage of 2 thousand electron volts (which corresponds to $3.20435466 \times 10^{-17}$ joule). After the demonstration in this direction was closed completely.

About the development of nuclear energy could be a very different path, safe and cheap. In 1962 Filimonenko in the USSR was granted a patent for a thermal synthesis by nuclear fusion reaction of helium from deuterium. In this direction the work of 80 companies and organizations, which under his leadership was established setting THPP (thermionic hydrolysis of the power plant), which ensured the production of hydrogen, oxygen, and high pairs pressure, with nuclear radiation absorbed. The raw material was only heavy water. The economic effect of its implementation in the industry in the USSR could provide annual savings was of \$ 300 million only by burning coal, gas and oil. After the death of Kurchatov, to develop the scientific discoveries of the program have been curtailed, and the inventor was jailed. Only in 1990, the project came back, and was recreated [2].

In 1994, this facility was dismantled and taken to the United States, together with part of the staff. But the American «experts and specialists» have been unable to properly to understand it. In 1996, representatives of George Soros offered by Filimonenko to sign a check for \$100 million for conducting «consultations» on the installation. But Russian patriots refused tempting offers current and lived their life in poverty at home.

In the modern direction of development of the energy areas continue, but less effective.

Thus, in 2011 Italian scientists Andrea Rossi and Sergio Focardi of Bologna University held a public demonstration reactor (heat generator E-CAT), that enables to get energy when operating of cold nuclear transmutation. Reactor gave 10 kW of thermal power in the form of dry steam, consuming electricity from the grid 0,60kVt, spending 0,01 grams of hydrogen and 0,10 grams of nickel for 1 kW / h of energy. Moreover, the commercial value of the installations reached \$ 500, and the cost of 1 kW of heat would have been 1 cent. Subsequently, A. Rossi designed the installation of 1 MW, and subsequently designed a mini heat station [3].

In July 2012 A. Rossi project received support from President Barak Obama. Therefore, the continuation of work on cold fusion NASA was allocated \$ 5 billion. In August 2013 the United States successfully launched reactor LENR, which is created on the basis of technology A. Rossi.

Thus, Rossi suggested source is not limited, practically free, clean energy. Academicians and professors all over the world ignored it and some opponents have accused scientists of fraud, because he could not explain scientifically what happens in its reactor.

In recent years the generator Rossi repeatedly tested by independent experts. The last such examination was held in March 2014, when six professors of physics from Italy and Sweden in the independent country of Rossi and laboratories, the clock surveillance 32 days in various modes tested E-CAT. The final report on this issue was published October 8, 2014, which indicated that the Reactor E-CAT can release energy equivalent thermal power plants or nuclear power plants. So, this reactor can provide every home and business, to equip his car and aircraft [4].

Some experts even attributed the sharp decline in oil prices in late 2014 early 2015 with mass production facilities E-CAT. After all such a generator can quickly displace hydro and nuclear power stations, gas and coal power plants, buckets and solar panels. According drop the need for pipelines and oil tankers. This may lead to displacement of huge financial flows [5].

This brief historical overview of the development of power indicates that energy is available in huge quantities and at relatively low cost and without the use of classical fuels (gas, oil, coal). Existing plants for the production of this promising energy and a lot of promise. But most importantly, they point to an entirely new direction of development of energy sector.

Let's try to deal with this energy, which does not fit into the usual framework of perception. At the-first, this energy is not formed due to the ignition technology, and is inherent in the nature of the primary form. It harmoniously blended into the space, but it is possible and it forms a space that is much more accurately. From this position, there is no energy problem at all. Secondly, it is the problem of selection. And the «Achilles heel» is just the development of these technologies. The first attempts to develop these technologies optimistic enough.

Thirdly, the biggest problem is the development of a new energy paradigm ignoring its conclusion at all levels, starting with the fundamental theoretical research to conduct experiments and finished models.

Therefore we offer to operate with the concept of natural way energy. Natural way energy is the energy in the next generation, which involves the use of new knowledge, but in a fundamentally new direction, that is a departure from the fundamentals and the transition to a deep and universal understanding of the universe.

If conditionally to compare, this transition from plane to volume perception of reality and existence. This transition has already occurred and will continue to develop more and more ... So natural way energy source is actually based on the study of fundamental approaches to the structure of the universe and revisions to the very essence of nature.

From the logistics approach, natural way energy is an energy that aims for primary energy in any place and in unlimited quantities. It confirms completely principle to provide logistics needs. Besides modern energy in its fundamental approach taken to destructive processes.

From an economic point of view, the traditional energy - it is a costly part of the energy for which it is necessary first of all capital costs for the construction of production infrastructure, commissioning and maintenance. This requires a fairly complex application and automated logistics processes. Natural way energy is much simpler in this respect. It does not require such capital expenditure in servicing and maintenance. Although its receipt, that is, the formation energy environment in technical terms - it is a serious investment, but due primarily to the level of traditional economics. Logistics concept should be fundamentally different. After all electricity at any point in space in any amount is not tied to traditional infrastructure and traditional logistics schemes.

Although in principle, the large-scale approach can be fully used. For microeconomic approach appears only instantaneous application. For example, if it's just the lighting, domestic use of electricity, natural way energy sources should be placed at a distance from vital areas or directly in the area, but with certain parameters. At this time we can only guessed. But this is the condition of human life, with safe.

For the structure of natural way energy is an energy that associated with a basic understanding of elementary processes that occur in nature every little period of time, and allow nature to exist successfully. The task of the natural way energy, above all, it is not obtaining energy, and of the role of man in the process of being, and harmonious joining human being, first of all economic activity in its natural process. Because energy is possible in an infinite volume.

The initial implementation process of natural way energy was the use of relatively large technical devices in the future will be concentrated in a compact, single-level diplomat or books. It will be linked with the development of the most fundamental understanding of natural way processes.

In general, the development of natural way energy can be considered from the late 19th century. Throughout the 20th century the idea of getting started and using energy is being actively marketed, got the appropriate patents, took a number of practical devices tested were conducted with encouraging results. On further development of these ideas after the demonstration did not take place, and if there was, the results and the projects closed. At present, the most active type of natural way energy is the development and implementation

Table 1 Classification of nature way energy

Class	Subclass	Practice result	Efficiency	Commercial implementation
Aether Energy	Electromagnetic induction	The Nikola Tesla electric car 1931	AC electric power of 80 hp, was moving at a speed of up to 150 Km / h	«Tesla Motors» commercial production from 2012 (but still far from a source of Tesla electric car)
		A. Hubbard boat 1921	Moved without the supply of external energy to it	Is not implemented
		T. Brown installing 1927 - 1955	Speeds up to 600 miles per hour, using a field of up to 2 thousand eV	Works were closed
		L. Stovbunenko motor 1960	Rode a whole day around the city on a conventional battery power	Is not implemented
		V. Shkondin 1992	Motor-wheel of a transport vehicle	The sales price is 26 thousand rubbles
		Japan motorcycle «Sumo» 2013	The speed of 150 km / h, in 7 times more effective for the petrol version, selling price in \$2100 dollars, used mobile battery	Is not performed
		Lester Hendershot 1927, 1962, 1981	AC generator, voltage of 220 volts	Is not performed
		John Bedini 2003	Motor-generator VEGA (Bedini), the launch of the 12-volt battery, 6 kW power	Implementation in Ukraine liquidated in 2012-2013
		Tariel Kapanadze 2007	Ether energy generator, 5 kW of electricity production	Is not performed
Fluid energy	Vortex motion	V. Schauburger, 1930	Vortex generator	Is not performed
		Richard Klemm 1970	Vortex engine on vegetable oil. Power to 350. p.v. over 9 days works, 1800-2300 turns per minute. Vegetable oil is heated to a temperature of 160 degrees	Is not performed
	Cavitations	V. Bolotov, 1970	Rotor generator, the heating of water	
		Eugene Perkins and Ralph Pope, 1980	Kinetic oven, energy conversion factor of 1.5-2 times	
		U. Potapov, 1993	Heat generator	Production and sale of the company «YUSMAR», «TEKMASH» since 2014
Hydrogen Energy	Technology PEM (proton-exchange) and the SOFC (solid-oxide)	1. Japan National Program, 1993-2002 2. US Department of Energy, 2002 3. «European Hydrogen and Fuel Cells Technology Platform, HFP», 2004	Small fixed installations and electric substation capacity of 0.75 kW. up to 10 kW; transport	Implemented since 2006
Nuclear fusion	Cold (Nature)	I. Philimonenko 1957, 1989, 1991	Installation of cold nuclear fusion	Installing closed and exported to the USA
		Andrea Rossi and Sergio Fokardi, 2011	Gave 10 kW thermal powers in the form of dry steam, consuming power from the network 0,60kVt spending 0.01 g and 0.10 g of hydrogen on nickel of 1 kW / h energy. Moreover, the commercial value of this setting is reached US \$500; the cost of 1 kW of heat would be 1 cent.	2012 support for President Barack Obama, NASA has funded \$5 billion. The USA released the reactor LENR in 2013

of hydrogen energy. Accordingly certain advanced countries have adopted national programs to implement it. Another focus of this energy becomes energy of water technology-based cavitations. Quite progressively implementing a program on cold fusion. It should be stated that energy on the principle of electromagnetism Tesla practically not implemented (table 1).

Modern research has specific concern such sources of energy. And their structure is very diverse. According to a source of energy, natural way energy is divided into areas:

cold nuclear fusion, which is extremely promising and environmentally safe;

aether dynamics that allows complete ensure self-sufficiency in the production and use of electricity. At present, the application is currently only in the individual sector. Developments on the possibility of industrial use are in the early stages of research;

the use of energy water, which is divided in two areas:

a) vortex energy without water cavitations phenomenon that started by Schaumberg applied in vortex pumps in various industries;

b) vortex energy water through the cavitations process. These so-called rotary generators that form the heat due to water movement.

3. CONCLUSION

The beginning of the active application and use of natural way energy was put by Tesla in the early twentieth century.

For a hundred years the development of this energy was applied to the enthusiasm of researchers. There was strong opposition and misunderstanding of these developments and inventions.

Since the twenty-first century natural energy actually has been recognized in commercial activities, and at present is being actively used in various fields, including medicine, transport, domestic heating and lighting.

There traced complete lack of state support for the development of this type of energy.

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