

Energy-ecological education at the university and school

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XXI century was declared by UNESCO a century of education. The education system was named as strategically important sphere of human activity in the decision of global problems of mankind survival and development. Two interconnected global functions of education were formulated: humanistic and ecological.

The ecological function sets new value-semantic reference points to the whole upbringing, development and education, assumes the transition from consumption culture and nature conquest to culture of co-authorship with the nature and harmonization of attitudes of the person and the nature.

What environmental problems excite mankind of this century?

- The exhaustion of resources of a planet such as oil, gas, coal, some metals and minerals.
- Pollution of biosphere of the Earth by products of person's vital functions.
- Non-uniformity of distribution on the Earth traditional energy sources.

Resources of alternative солнечно-hydrogen power are practically inexhaustible.

Output is the transition to the most ecologically pure and inexhaustible solar hydrogen energy.

One of the principal causes of the international conflicts will disappear at the active transition to alternative energy sources.

Therefore Hydrogen club MIREA and its branches in the initiative order spend energy-ecological education (EEE) first of all among students and schoolboys.

(EEE) means knowledge of the population that the world community should move in a direction of the noospherical hydrogen civilization. This way provides people not only a survival, but also long steady development in harmony with the nature.

EEE in the simple intelligible form explains that:

- Hydrogen is not only the most widespread element in the nature, the purest (in the ecological plan) fuel, but also it is the store, and the carrier of ecological energy.
- Reception and use of hydrogen as an energy source is closely connected with all kinds of alternative power: solar, wind, geothermal, nuclear, thermonuclear, etc.

Three directions are united by EEE in a uniform complex:

- Overall hydrogen education (OHE),
- Bases of the energy-saving technology

- Ecological education.

The last is the only thing from them, having the state status of educational discipline.

Work with schoolboys and students of colleges on EEE is spent on the program Overall hydrogen education is developed by MIREA. This program is the component of the National scientifically-innovative program " Hydrogen energy for the period till 2050 ".

Three years ago students of MIREA have organized the Hydrogen club, and also its branches in Moscow: in boarding school № 58, Polytechnic college № 39, Car's construction college and social structure " the Alive Earth". At the present time at 15 schools and 9 high schools of Moscow, St.-Petersburg, Urals Mountains, Jamal-Nenets autonomous region, Donetsk, Minsk are created branches of Hydrogen club MIREA, which actively work.

Hydrogen club MIREA and its branches in the activity use all accessible forms of training and information:

- It participates in the organization and carrying out of the international symposiums on hydrogen energy;
- It supports the site on the Internet <http://www.h2club.mirea.ru>;
- It lets out a color illustrated newspaper "Vodorodovorot";
- It lets out a journal " Hydrogen Education ".

Carrying out of Hydrogen festivals became a new form of EEE where scientific sessions are combined with amateur performances, games, etc. Four festivals took place in Moscow (in MIREA) and two ones were in St.-Petersburg (in lyceum № 179).

Active participation of schoolboys in work of Hydrogen club allows them to realize the idea of a continuity of education and to be defined with a choice of the future professions at school.

The boarding school № 58 is a base platform on working off of experimental educational program on hydrogen energy at schools. Developed in MIREA training and developing programs passed approbation at lessons of ecology and within the limits of system of additional education.

The effective form of the organization of extra activity of pupils of various schools and cities became the joint projects which are carried out by means of the Internet-resources such as the Internet-conference, bridges between sponsored schools and colleges.

Ideas HE gradually get into all layers of the Russian society according to the slogan of Hydrogen club and OHE: "Give a course to hydrogen".