

Nukes for Belarus?

Energy security of Belarus and a nuclear power plant

What is considered to be a turning point in the planning of the construction of a nuclear power plant in Belarus is Decree No. 399 of 2005 on “the concept of energy security and improvement in energy independence of the Belarusian People’s Republic for the years 2006-2010”. At the meeting of the Security Council chaired by the head of the state, which was held on the 15th of January 2008, “a final political decision” was passed which, despite certain legal controversies, will lead to construction of a new nuclear power plant.

A direct motive behind the taking of steps towards implementation of the national “energy security concept” was the gas and oil conflict between Belarus and Russia at the turn of 2006 and 2007. The new document was drawn up to support diversification of energy resources, exploitation of local fuels and an increase in the state’s energy efficiency. Measures to this end include nuclear power station, which, unfortunately, still does not eliminate the state’s dependence on energy supplied by Russia. Quite the opposite - indebtedness due to nuclear power station and the necessary purchase of technology may aggravate this dependence.

The very concept of “energy security” has developed in the countries of the Commonwealth of Independent States since 2005, when these states began experiencing difficulties with the supply and prices of hydrocarbons. The Russia-chaired G8 meeting held in 2006 in St. Petersburg adopted an action plan for “global energy security”, while the following year saw G.W. Bush announce in the US the idea of “energy independence”, having in mind primarily independence from imported materials. In the meantime, further development of the idea of hydrocarbon independence has led to global popularisation of the idea of “sustainable power engineering”, proclaiming such principles as renewability, easy access to and ecological safety of energy sources, and efficiency in exploitation of the sources. These ideas, however, do not mention nuclear energy. The reasons for this include problems with disposal of nuclear and radioactive waste, decommissioning old power plants, and environmental pollution. This is why several European states, including Germany and Italy, refused to acknowledge nuclear energy as a mean to extend energy sustainability.

As a result of the global economic crisis, prices of hydrocarbons dropped significantly, particularly in the case of oil (in 2008). For this reason, Belarus has already taken steps to protect itself against dramatic fluctuations of supply that may occur in future. These

measures involve, for instance, establishment of natural gas storage and transition of combined heat and power plants and industrial enterprises into other technological solutions, with a view to enhancing their efficiency. Thanks to these steps, the volume of natural gas imports stabilised (from 2005 to 2007 the volume nearly doubled from 10 to 20 billion m³ per annum, in contrast to the period from 2007 until now, in which the level of global import rose only by 1 billion m³ – according to reports by Gazprom in 2009, 2008).

Hence, Belarus and other states whose economies are dependent on hydrocarbons are trying to make their energy systems more immune to oil and gas crises. Unfortunately, the new types of dependence – on uranium and technologies – does not help solve the problem of energy security. Belarus has made the mistake of incorporating the idea of construction of nuclear power station into its national concept of energy security, as it is not feasible for economic, social and ecological reasons.

Among various motives behind the idea of construction of a nuclear power plant in Belarus, experts underline a hope for financial aid from the state budget in the form of credits and grants, a change in the status of the state and groundless hopes that energy generated by the future nuclear power plant will be sold at a profit to EU states.

Plans to construct a nuclear power plant – feasible?

In accordance with the political decision made at the meeting of the Belarusian Security Council, the government intends to construct two 1200 MW reactors. Delivery of the reactors is scheduled, successively, for 2016 and 2018.

Numerous experts, including Georgy Lepin, Yegor Fediushyn, Vladimir Siviak, and Leonid Zlotnikov, stress that this agenda is unrealistic for a number of reasons, most significantly:

- Problems experienced by the Russian nuclear industry which do not allow for completion of the project within such a tight timeline;
- Financial difficulties ascribed to the crisis which preclude access to the finances adequate to fund the project within the envisaged timeline;
- Disputable points between the contracting party and the contractor, among others, related to the location where spent fuel would be stored before processing (a plant for processing of spent nuclear fuel from AES-2006 reactors still does not exist, and it is unknown if the Russian party will collect spent fuel), as well as regulatory issues;

- Problems with development of costly infrastructure, which, besides social facilities, should embrace other elements such as a system for transmission and supply of power from the designed plant (contemporary energy networks being unfit for that), the recipients of specific amounts of energy (the region lacks large power facilities, Hrodna industry is located too far from the venue in Astraviec) and others. At present, no plans for establishment of those infrastructural elements nor a relevant budget exist;
- The necessary research for design works has not been yet conducted in a full scope.

The above-mentioned issues are accompanied by problems specific to the nuclear industry – constantly rising costs of materials and power plant construction. All these factors render delivery of the Belarusian nuclear power plant within the intended deadlines in 2016 and 2018 absolutely unfeasible.

The shadow of Chernobyl – pros and cons of the nuclear power plant

The Belarusian constitution proclaims the non-nuclear status of the state. Indeed, Belarus has never had any nuclear industry, which translates into its lack of experience in this field. In the Soviet times, the possibilities for building a nuclear power plant were actively researched, although in light of a lack of favourable conditions for a given project, and then the Chernobyl disaster, all attempts were suspended. The National Academy of Sciences of Belarus used to run an experimental base, a part of which was lost after the requisitioning of the mobile reactor for military purposes in Chernobyl. The organisation has very narrow experimental capacities which cannot be recognised as resources enabling exploitation of nuclear energy for industrial or other applied purposes. Belarus also needs experienced specialists. A small number of nuclear physicists who previously worked at the university and the National Academy of Sciences make up a group opposed to the idea of establishing nuclear industry in Belarus (Georgy Lepin, Yegor Fediushyn, Yury Woroneztzev). What's more, the country does not actively train any specialists who could replace those scientists. The Sosna Institute does not employ local employees with adequate practical experience in nuclear industry, while the Belarusian Energy Ministry and its entities have no experience in designing nuclear facilities.

The impact of Chernobyl on Belarusian society remains sensible, despite the aura of 'taboo' which surrounds it. According to Ivan Nikitchenko and Yuri Bandazewsky, the impossibility of producing relatively harmless types of food under conditions of common contamination from radioactive substances in areas not excluded from farm production, poses a great problem.

Another essential issue is that Belarusians suffered enormously due to radiation, food and water contamination caused by the Chernobyl disaster. Nevertheless, the opinions on this issue in government and the scientific environment are divided.

Supporters of the plan to erect a nuclear power plant can be found mainly in the state sector of Belarusian enterprises whose officials – former or current – hope for generation of new jobs.

NGOs against the nukes

Ever since the plans to build a nuclear power plant were announced by the media, a body of Belarusian non-governmental organisations began their activities to stop the works on the project. The first organisations to announce their stance against the nuclear venture were ecological organisations and the Ekodom initiative, along with the international Ecodefense group. In 2006, these organisations announced a joint Anti-Nuclear Campaign, later joined by members of the ‘Scientists for a Non-Nuclear Belarus’ movement. Then, in the period between 2007 and 2009, virtually all non-governmental organisations, parties and social initiatives called for abrogation of the decision to build the power plant, inviting Belarusian society to extensively discuss the issue. And in April 2009, the Assembly of Non-Governmental Organisations came up with a relevant resolution.

The period from 2007 to 2009 has seen a number of local initiatives being set up in the region of Astraviec and the cities of Gorky, Vileyka and Maladzyechna. In the course of these activities, signatures were collected on a petition against construction of the plant in those places. On the eve of the public debate in Astraviec, after a debate over the “Statement” on the impact of the Belarusian nuclear power plant on natural environment, the joint initiative of Ekodefense, Ekodom and Belarusian Green Party was joined by other social groups and organisations. Representatives of the third sector undertook an attempt to participate in public debates held in Astraviec on the 9th of October. But the envisaged activities failed to be held due to the intervention of the authorities (a Russian expert of the Ekodefense group, Andrzej Ożarowski, was detained). The Assembly of Non-Governmental Organisations, Belarusian Popular Front (BNF) and Belarusian Green Party (BPZ) subsequently extended an appeal to the Belarusian authorities.

Preparations for the debates and their results found enormous resonance in the press, including the Russian press. In the Belarusian media, discussion on the nuclear power plant

and the public debate continues, proving that the forces protesting against the nuclear plant in Belarus enjoy broad support.

Does the power plant mean independence?

Construction of the nuclear power plant in Belarus could greatly increase Belarusian energy dependence on Russia. It would be above all a consequence of the appearance of a new grid of dependence on supply materials (fuel assemblies which can be produced only in Russia, etc), and dependence on technology (sold and maintained only by a Russian supplier). Moreover, even if, in the foreseeable future, Belarus could purchase the whole plant and materials needed for the decades to come, the nuclear plant would not eliminate the problem of Belarusian energy dependence, as it would cover only 20% of the electrical energy consumed.

The issue of energy independence in Belarus, a country without adequate energy resources – oil, gas, coal or uranium – is quite a complex one. Thus, Belarus cannot and should not be entirely isolated from external markets and withdraw from economic relations with other countries. Within the framework of these relations, Belarus would be able to tap renewable energy sources such as biomass, wind and solar energy, and energy generated from small water power plants. An analysis performed in 2008 by an international group of specialists, Vision 2050, showed that Belarus has a large, untapped potential of renewable energy resources. Additionally, Belarus could diversify supply of hydrocarbons (impossible in the case of nuclear industry) and substantially cut down consumption of those resources (even by 40-50%). The process of such reduction can be carried out by continuing market modernisation, increasing the efficiency of energy generation capacities (including transition to steam and gas installations in heat generating plants), by equipping houses with modern, energy-saving materials and by creation of new generation capacities for renewable energy. Such activities will obviously require investments, yet the amounts needed will be much lower than in the case of nuclear power plant construction and can be procured from external sources and small domestic investors.

Chances for a public debate

There is slender chance of Belarusian society having an honest public debate on the issue in question. Previous attempts to open up free discussion have failed. The starkest manifestation of the governmental reluctance to enter into talks were the debates in

Astraviec involving the detention of Andrzej Ożarowski, a Russian expert in nuclear physics. The right to attend such meetings and speak has been denied to almost all independent experts and representatives of society for all but 5 people, 3 of whom had to publicly demand permission to speak.

Non-governmental organisations have demonstrated their active civic stance, especially in respect to the ecological hazards entailed by construction of a nuclear power plant. Most non-governmental organisations involved in the campaign against construction of the plant do not specialise in ecology. Nonetheless, they have become involved in the discussion, proving considerable potential for public debate in the country. The authorities do not recognise non-governmental organisations as rightful participants in the discussion. Their place could be then replaced by other forces, e.g. international organisations.

Tatiana Novikava