

ARMENIA'S ENERGY SECURITY: MAIN ACHIEVEMENTS AND CHALLENGES

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Introduction

After the accident at the Fukushima Nuclear Power Plant in Japan, Armenia's energy industry found itself in the center of attention not only of its own country, but also, to some extent, of the world community. This interest was largely aroused by the need to re-examine the attitude toward nuclear power safety. In their comments about Armenia's Metsamor Nuclear Power Plant, local and international experts reminded us of two important facts:

1. About the energy crisis at the beginning of the 1990s caused by the blockade of Armenia and the closing down of the Metsamor Nuclear Power Plant in 1989.

2. About the plans to close down the restarted Metsamor Nuclear Power Plant in 2016.

The accident in Japan gave reason to think about the most important questions of Armenia's energy security: "What is the level of the country's energy security? How does closing the existing nuclear power plant affect the country's energy security? Will a new nuclear power plant be built?"

In this article, we will discuss precisely these questions, focusing particular attention on the political and economic aspects of the problem.

The State of the Armenian Energy Industry

Since the country acquired its independence, energy security has become one of the main goals of Armenia's sustainable development. What is more, this sphere occupies a key place in the country's national security system. The conflict that began around Nagorno-Karabakh led to a halt in energy resource deliveries (heating oil and natural gas) through the territory of Azerbaijan. Since the beginning of the 1990s, these resources could only be delivered through Georgia, which was experiencing a political crisis.¹

¹ Two of Armenia's thermal power plants, Razdan and Erevan, operated on heating oil, while natural gas was mainly used exclusively by the population and industry. Not until 1993, thanks to partial modernization of the thermal power plants, did the latter begin operating on natural gas. From this viewpoint, the main reason for the onset of the energy crisis in Armenia in 1992 was the halt in heating oil deliveries.

But in 1989, the Council of Ministers of the Armenian S.S.R. made a decision (mainly under pressure from the public)² to close down the two active energy units of the Metsamor Nuclear Power Plant, which led to a structural change in the energy industry. The thermal power plants became largely responsible for producing electricity. In conditions of stable heating oil deliveries from different parts of the Soviet Union, Armenia's two large thermal power plants, Razdan and Erevan, ensured the stability of the country's energy system.

However, when deliveries of heating oil and natural gas through Azerbaijan were halted and rail communication linking Russia to Georgia and Armenia and passing through Abkhazia stopped, Armenia's energy system collapsed. This resulted in the 1992-1994 energy crisis; the country was able to produce only 10-15% of the electric power needed by the economy and population.

In the context of the energy crisis, rationalism and pragmatism, which had been lost during the struggle for independence, again came into play during the adoption of the most important economic decisions. It should be noted that it was the crisis during the first two years of independence that largely caused the dramatic changes in the structure of the energy industry. Their important components were:

1. The decision of the government of the Republic of Armenia of 7 April, 1993 On the Beginning of Restorative Work and Renewal of Operation of the Second Energy Unit of the Metsamor Nuclear Power Plant.³
2. The decision of the government of the Republic of Armenia of 9 September, 1997 On the Creation of the Russian-Armenian ArmRosgazprom Closed Joint-Stock Company.

This company was created for the purpose of increasing gas supply volumes, building local gas pipelines, producing electricity, and transiting Russian gas. But the company's main tasks were to restore Armenia's gas-transportation infrastructure and import natural gas via the only functioning gas pipeline passing through Georgian territory.

The decision of the Armenian government on creating the joint Armenian-Russian ArmRosgazprom Closed Joint-Stock Company, in which the share of Russia's Gazprom was eventually increased from 45% to 80%, became an extremely important event for Armenia's energy industry. ArmRosgazprom invested around \$1 billion in restoring the Armenian gas-transportation system destroyed and plundered during the first years of independence, as well as in building new local gas pipelines.

But the most important achievement was Gazprom's price policy. For the past 14 years and to this day, the cost of Russian gas for Armenia has been non-market (ArmRosgazprom buys 1,000 cubic meters of natural gas for \$180, which is much lower than world and regional prices).

Moreover, several projects have been implemented in the country called upon to ensure the stability of the energy system (see Table 1),⁴ particularly taking into account that after 2016 Armenia's Metsamor Nuclear Power Plant will be closed.

Of all the above-mentioned projects, two have the greatest strategic importance—the Iran-Armenia gas pipeline and the new energy unit of the Metsamor Nuclear Power Plant. However, although perceptible results have been achieved, there is still a number of unresolved problems.

² After the Spitak earthquake in 1988, many representatives of the intelligentsia and leaders of the independence movement that emerged began actively convincing the public that the Metsamor Nuclear Power Plant was a huge environmental threat to the country and its further operation threatened Armenia with extinction. In so doing, no expert or professional evaluations were carried out before the nuclear power plant was closed down, and the decision to halt operation of the two energy units was political.

³ The first energy unit could not be restored largely because during the four years after the nuclear power plant was closed most of the equipment of this energy unit was dismantled for a variety of different reasons.

⁴ See: K. Karapetian, "Armenia's Role in Ensuring the Energy Security of the South Caucasian Region," *21st Century*, No. 4 (22), 2008, p. 23 (in Armenian).

Table 1

Armenia's Energy Projects

No.	Project	Capacity	Year of Completion
1	New energy unit of the Metsamor Nuclear Power Plant	1 000 MW	2016
2	5th unit of the Razdan Thermal Power Plant	Up to 440 MW	2011 (fall)
3	Modernization of the Erevan Thermal Power Plant	More than 300 MW	2010
4	New hydropower plants ⁵	1 100 MW	In process
5	Building wind stations	200 MW	Work has not begun
6	Iran-Armenia gas pipeline	2.3 billion cubic meters	2008

The Iran-Armenia Gas Pipeline

Building the Iran-Armenia gas pipeline, which will be able to supply Armenia with 2.3 bcm of natural gas a year (which is approximately equal to the annual gas consumption in the country), is still the largest infrastructure project to be implemented in the country after it acquired its independence (the project costs \$130 million).⁶

In order to fully assess the significance of this project for Armenia, the most important question must be answered: what was this gas pipeline built for? According to the contract signed between the Erevan Thermal Power Plant and the Iranian National Gas Export Company, there are plans to build a gas pipeline for establishing mutually advantageous energy exchange between the two countries. The cost of 1 cubic meter of Iranian gas, from which the Erevan Thermal Power Plant produces electricity, will constitute the cost of 3 kWh of electricity. The Erevan Thermal Power Plant will independently sell the rest of the electricity it produces in other markets.

It should also be noted that holding talks with the Iranian side on building a gas pipeline began in 1994, when Armenia was suffering from Russia's unstable natural gas deliveries through Georgian territory (it is very likely that the Iranian gas pipeline was conceived as an alternative to the Russian).

However, since the end of the 1990s, the situation in Georgia has qualitatively changed; gas deliveries throughout the territory of this country during the past ten years have stopped for exclusively technical reasons. Gazprom, which became a monopolist in the Armenian energy market, is

⁵ It must be noted that despite the development of small hydropower plants, the main hydropower capacities that were to ensure the industry's growth have not even begun to be built. This applies to two hydropower projects, Loriberd and Shnokh (for more detail about hydropower projects in Armenia, see, *Hydropower Potential of Armenia*, available at [<http://www.renewableenergymarmeria.am/>], 22 May, 2011).

⁶ See: A. Gazazian, "Gazoprovod Iran-Armenia mozhet stat shansom dlia Evropy," 2 December, 2008, *Deutsche Welle*, available at [<http://www.dw-world.de/dw/article/0,,3843202,00.html>], May 2011.

unlikely to make use of the opportunity to import natural gas from Iran in detriment to its own interests. Moreover, Iranian gas can in no way become an alternative to Russian, which remains relatively cheap.

In 2004, Armenia and Iran nevertheless signed an agreement on building a gas pipeline; construction work was completed in 2008.

Despite the fact that the commentaries of both sides about the designation of the gas pipeline apply only to the provisions set forth in the contract, in recent years several viewpoints have formed among Armenian experts and opposition politicians on this issue, from which the following can be singled out:

1. The Iran-Armenia gas pipeline could become a transit route.
2. Iranian gas will make it possible to forego Russian gas.

It should be noted that neither the first, nor the second position reflects the actual state of affairs.

- First, the gas pipeline cannot become a transit route, not only because of its technical shortcomings (a throughput capacity of 2.3 bcm), but also largely for a whole number of geographic, political, and economic reasons.

Georgia is unlikely to buy Iranian gas since it is more expensive than Azerbaijani; in any case, it could obtain it through the territory of Azerbaijan (which links the Iranian and Georgian gas-transportation systems).

- Second, it is not clear how Iranian gas, even if it is transported through Armenian territory to Georgia (there can be no talk of Turkey and Azerbaijan because Armenia does not cooperate with them), could be delivered to other states. As we know, Russia does not need Iranian gas, while Turkey buys it directly from Iran (which Azerbaijan could also do if it wanted).

Moreover, popular opinion in Armenia has it that Iranian gas could be transported to Europe through the republic's territory. But in reality, such arguments do not hold water.

- First, the EU has not held and is not holding any direct talks with Iran on the purchase of natural gas.
- Second, it is entirely unclear why the EU should buy Iranian blue fuel in Armenia and not in Turkey, which is actively trying to be a mediator in establishing Iranian-European cooperation in the gas sphere.
- Third, not one gas pipeline has been laid from Armenia to the EU.

As for Russian gas, we mentioned the practical inadvisability of rejecting it above.

One important detail is missing for a complete analysis of the benefits of Iranian gas for Armenia—information about its price. Armenia has never held talks with Iran on the purchase of Iranian gas for internal consumption; we only know the price at which the Erevan Thermal Power Plant purchases it, which exports electricity to Iran (in exchange for the gas it receives from there).

In light of the above, it can be said that against the background of stable deliveries of Russian gas, the use of the Iran-Armenia gas pipeline merely boils down to an energy exchange between the two states (as is officially stated by the Armenian and Iranian sides).

The Iran-Armenia gas pipeline is also pertinent and important for Armenia because it gives it the opportunity to export electricity to Iran, this country's consumption of which has increased four-fold in the past 20 years.⁷

⁷ See: Iran — Country Analyses Brief (2010) — Energy Information Administration, available at [<http://www.eia.doe.gov/cabs/Iran/pdf.pdf>], p. 11], 21 May, 2011.

The gas pipeline is also of important strategic importance from the viewpoint of energy security; if it becomes impossible to deliver Russian gas to Armenia through Georgia (for technical, political, and economic reasons), the pipeline's role will significantly rise. In the event of force majeure circumstances relating to deliveries of Russian gas to Armenia, the Iranian pipeline will be able to ensure stable functioning of the Armenian economy.

It should be noted that until stable deliveries of Russian gas to Armenia become a reality, the Iran-Armenian gas pipeline cannot be a market or economic alternative to it.

Nuclear Energy: Closing an Old Energy Unit and Building a New One

Restart of the second energy unit of the Armenian nuclear power plant in 1995 solved the problem of providing the population and economy with electricity. Despite the stable operation of the thermal power plant and largest Vorotan hydropower plant,⁸ the Metsamor Nuclear Power Plant remains the foundation of the country's energy industry (it produces from 30 to 40% of all the electric power in the country).

Since the end of the 1990s, the question of closing the Metsamor Nuclear Power Plant again occupied an important place in Armenia's relations with European countries which expressed concern about its security, since the plant's nuclear reactor is essentially the only one that has been restarted after its decommission.

In 2003, the Armenian government, striving to ensure stability of nuclear fuel deliveries for the nuclear power plant, as well as continuous professional care of the plant's equipment, passed it into the trusty hands of Inter RAO UES. Despite the fact that for more than 7 years now the largest Russian company has been responsible for the security of the Metsamor Nuclear Power Plant, the EU wants the plant closed down for more than security considerations.

In 2007, Evroatom began official talks with the Armenian Energy Ministry about finding ways to close the plant, but the technological approach to resolving the problem did not provide an answer to the question of what Armenia would receive in exchange for the nuclear power plant. No realistic offers regarding financing the building of alternative capacities (thermal, hydro, or nuclear) have been forthcoming from either Evroatom or the EU.

The European side promised Armenia that it would render maximum assistance; this statement was made by Head of the Main Administration of the European Commission for Foreign Affairs with Eastern Europe, the Southern Caucasus, and Central Asia Hugues Mingarelli during the 6th meeting of the Armenia-EU cooperation commission held in Erevan. He said in particular that if the Armenian government took steps to close the Metsamor Nuclear Power Plant as soon as possible, the EU would hold an international conference of sponsor countries to gather the necessary funds to facilitate this.⁹ The matter essentially exclusively concerned financing the work involved in safely closing down the plant, and not about finding funds to create new generating capacities.

However, as early as 2005, Armenian officials announced that the only alternative to closing the current reactor would be to build a new one, which aroused criticism from the EU. The unwillingness of the European structures to offer other projects and finance their implementation led to a change in

⁸ It supplies about 8% of electricity production in the country.

⁹ See: "ES nameren organizovat forum donorov dlia sbora sredstv na zakrytie Armianskoi AES," RIA Novosti Information Agency, 8 July, 2004, available at [<http://rian.ru/economy/20040708/629389.html>], 22 May, 2011.

the EU's position. At the end of 2006, Ambassador of the European Commission to Georgia and Armenia Torben Holze deemed justified the desire to build a new reactor to replace the current one.¹⁰

It is possible that the initially critical position of the EU regarding building a new energy unit was due to the fact that Armenia has the possibility of launching other thermal power capacities similar to nuclear plants. In 2011, the fifth energy unit of the Razdan Thermal Power Plant with a capacity of 440 MW (which has essentially the same parameters as the energy unit with Water-Water Energetic Reactor-400 to be closed) will go into operation.

Moreover, several other projects are being implemented in the republic which could compensate for the closing of the nuclear power plant; they include the building of small and large hydropower plants, the largest of which will be built by Armenia and Iran on the Araks River (its planned capacity will amount to 400 MW).

But for Armenia itself, the problem of nuclear power plants is not being examined from the no-alternative viewpoint. We will discuss the prospects of Armenia's nuclear power industry after the accident at Fukushima below.

On 29 November, 2007, the government of Armenia approved the strategy for decommissioning the current energy unit of the Metsamor Nuclear Power Plant. According to the preliminary schedule, between 2012 and 2016, there are plans to prepare this process for licensing, while in 2016-2048, the work to decommission the energy unit, safe storage, dismantling of buildings and structures, and rehabilitation of the areas will be carried out.¹¹

On 27 October, 2009, the draft Law on Building a New Nuclear Energy Unit in Armenia, envisaging the building of a new energy unit with a capacity of up to 1,200 MW, was adopted in the third final reading.

The biggest problem was finding investors for building the new energy unit. Various countries and organizations were named as soon as possible sources of funding were discussed: the U.S., Russia, France, the Asian Bank for Reconstruction and Development, and so on. Armenian Prime Minister Tigran Sarkisian had the following to say about this: "There is very serious interest in this project. On the whole, building nuclear plants is restricted in the world, reactors are reserved for 10 years in advance, including in Russia. We know where and who is building, and there are many who wish to participate in investments, particularly today when investors have money, but they do not know what projects to invest it in."¹²

But in reality, not one country, apart from Russia, has shown any noticeable interest in Armenia's nuclear project. This is probably because today there is no obvious business interest in the new energy unit; the question of opening the Armenian-Turkish border has not been resolved, nor is the real share of Armenia's financing of the project known. Moreover, the sources of financing this share have not been determined, nor have other possible risk factors been entirely clarified.

In these conditions, investors can be attracted as follows:

- By attempts to prove that their investments will be recouped relatively quickly and revenue can be obtained in the not-too-distant future.
- By emphasizing the political, rather than the economic, significance of the project.

It can be maintained in all confidence that the Armenian side hit the jackpot regarding the second point, while it does not have any significant arguments regarding the first.

¹⁰ See: G. Movsesian, "Budushchee Armenii—v razvitii iadernoi energetiki," *Respublika Armenia*, 22 December, No. 093 (479), 2006.

¹¹ See: "Pravitelstvo Armenii odobrilo strategiiu vyvoda Armianskoi AES iz ekspluatatsii," Regnum Information Agency, 27 November, 2007, available at [<http://www.armtown.com/news/ru/pan/20071129/24225/>], 26 March, 2010.

¹² Arka Information Agency, 19 October, 2009.

Russia's strategic interest in strengthening its own position in the regional energy market was extremely helpful in resolving the question of financing construction of the new energy unit.

The electric power generated by the new energy unit of the Metsamor Nuclear Power Plant can be exported to Turkey and Iran in the future. Today, Armenia is the only regional country that has the potential for such export: the established capacity of Armenia's energy system after building the nuclear power plant could reach almost 5,000 MW (whereby the amount of energy ready for consumption will be 1,500 MW).

During almost all of the Armenian-Russian talks the question of building a new energy block for the Metsamor Nuclear Power Plant was discussed. In the end, on 3 December, 2009, the Armenian government approved the draft of the decision to create a closed joint-stock company for building a new unit at the Metsamor Nuclear Power Plant. Russia's Atomstroieksport and the Armenian side in the form of the Ministry of Power Engineering and Natural Resources held equal shares in the closed joint-stock company. At a meeting of the Armenian government, it was announced that the reactor of the new unit of the Metsamor Nuclear Power Plant (with a capacity of 1,060 MW and operation time of 60 years) will be of Russian manufacture. As Prime Minister of Armenia Tigran Sarkisian said, "a political decision is being made—we are giving our consent to establishing a joint enterprise with our Russian partners in which both sides will have equal shares."¹³

According to preliminary data, the project for building the new energy unit could cost up to \$5 billion. It was presumed that at least half of the work would be financed by the Atomstroieksport Company and the rest by the Armenian side.

On the eve of Russian President Dmitry Medvedev's official visit to Armenia on 20 August, 2010, an Agreement on Technical and Financial Cooperation for Building a New Nuclear Power Plant Energy Unit was signed between the Ministry of Energy and Natural Resources of Armenia and Rosatom.¹⁴ However, during the Russian president's stay in Armenia, Head of Rosatom Sergey Kirienko said that the Russian side was willing to finance only 20% of the work and, in order to find the rest of the funds, the Armenian and Russian sides would have to exert joint efforts to convene a conference of possible sponsors.¹⁵

The conference was to be held at the end of April 2011, but it did not take place. It was probably cancelled because other sides were not found that were interested in building the new energy unit of the Metsamor Nuclear Power Plant. The lack of investors could freeze the project for an indefinite amount of time. It is entirely obvious that by 2016 (when the current reactor of the Metsamor Nuclear Power Plant closes), construction of the new energy unit of the nuclear power plant will not have been completed.

Since the sponsor conference never took place and work on building the new energy unit has not started, Armenian Energy Minister Armen Movsisian's statement to the effect that until the new energy unit is built, the old one will not be closed, deserves particular attention.¹⁶

It should be noted that extending operation of the energy unit for another 5 or 10 years will arouse serious criticism from the world community (which is worried by the disaster at Fukushima as it is), and the EU might be able to use the nuclear power plant as a lever of pressure on Armenia in the talks about signing an Associative Partnership Agreement. It can already be confidently said that if the nuclear power plant is not closed by 2016, Armenia will have big problems with Europe.

¹³ [<http://www.regnum.ru/news/1231523.html>].

¹⁴ During the signing, it was announced that the new project might cost \$5 billion (see: "Novyy blok armianskoi AES stanet rekordnym," *Kommersant*, 21 August, 2010, No. 153 (4453)). Here it should be noted that this will be the most expensive of any nuclear power plant construction projects with a 1,000-water-water energetic reactor ever carried out.

¹⁵ See: "Russia Can Finance 20% of the Construction of the New Nuclear Power Plant of Armenia," *Radio Liberty — Armenia*, available at [<http://www.azatutyun.org/articleprintview/2133108.html>], 17 May, 2011.

¹⁶ See: "Armianskaia AES budet ekspluatirovatsia do postroiki novogo energobloka—Minenergo," available at [<http://www.atominform.ru/news4/d0761.htm>], 1 May, 2011.

Echo of Fukusima or Its Absence

After the accident at Japan's Fukushima Nuclear Power Plant, a new wave of protests against the nuclear power industry arose in Europe and the world. Armenia, which in 1988 experienced a destructive earthquake in Spitak, which led to the temporary closing (at the request of the population) of the Metsamor Nuclear Power Plant, did not support these protest moods.

The only loud statements about the inexpediency of building a new nuclear power plant in Armenia were heard from the country's former prime minister, Armen Darbinian, who in his interview (reprinted by many Armenian information agencies) said the following: "Even such a technologically developed country as Japan was unable to prevent this terrible disaster or withstand the blows of the elements. And here we are saying that we can withstand everything, that everything is alright in our country. Nor is it entirely clear how we intend to guarantee the world security without technology or energy units of our own."¹⁷

On the whole, Armenian society's calm attitude toward nuclear power safety can be explained by two main factors: psychological and political.

Psychological. As of today, energy delivery routes to Armenia have been diversified (a new gas pipeline has been built from Iran), while Georgia has been a reliable transit country of Russian gas for the past ten years (in contrast to the beginning of the 1990s). However, many members of the country's leadership and Armenian society as a whole are inclined to believe that because of the closed border with Turkey and Azerbaijan, the vulnerability of the routes by which Armenia receives gas from Russia and Iran, and closing down of the nuclear power plant, the energy crisis may return. This is precisely why the publications of certain Western media claiming that the Metsamor Nuclear Power Plant is a serious environmental threat are not having a noticeable influence on Armenian society and the country's leadership.¹⁸

Political. There is a long-standing opinion that having a nuclear power plant in the country is important not only from the energy, but also from the military-political viewpoint. Now that Turkey and Azerbaijan are calling for the closing of the Metsamor Nuclear Power Plant in the aftermath of the Fukushima catastrophe,¹⁹ this opinion is gaining stronger hold. In so doing, the fact that it is Ankara and Baku that are taking advantage of the Japanese disaster as the main argument for agitating against Armenia's nuclear power industry is indirectly depriving Armenian society of the possibility of objectively evaluating the entire dramatics of the situation at the Fukushima Nuclear Power Plant and drawing lessons from this tragedy. In this way, Azerbaijan's and Turkey's criticism is raising support of nuclear power in Armenia.

This position by Armenia has become the main obstacle to carrying out a critical analysis of the threats and risks of developing the nuclear power industry in Armenia. After the accident at Fukushima, the official position of the Armenian government remained unchanged. Chairman of the Nuclear Security Regulation State Committee Ashot Martirosian voiced it at his press conference on 20 April, 2011: "Until yesterday, the Armenian authorities repeatedly stated that the situation at Japan's Fukushima

¹⁷ "Kak postupit s AES posle Iaponii?"—Armen Darbinian predlozhit novyi podkhod dlia armianskoi energetiki," available at [<http://news.am/rus/news/54459.html>], 1 May, 2011.

¹⁸ See: P. Brown, "EU Halts Aid to Armenia over Quake-zone Nuclear Plant," *The Guardian*, Wednesday, 2 June, 2004; M. Lavelle, J. Garthwaite, "Is Armenia's Nuclear Plant the World's Most Dangerous?" 1 April, 2011, available at [<http://news.nationalgeographic.com/news/energy/2011/04/110412-most-dangerous-nuclear-plant-armenia/>], 1 May, 2011.

¹⁹ See: "Azerbaidzhan bespokoitsia po povodu AES v Armenii," available at [<http://www.georgiatimes.info/news/55176.html>], 1 May, 2011; "Turtsia prodolzhit kampaniiu protiv Armianskoi AES," available at [<http://www.rosbalt.ru/kavkaz/2011/03/21/830475.html>], 1 May, 2011.

would not affect implementation of the republic's energy policy. The program envisaged building a new energy block at the Metsamor Nuclear Power Plant, and it should be built."²⁰

As for Armenia's seismic rating, it should be noted that it was also taking into consideration earlier when building the current unit of the nuclear power plant. In particular, Head of the Center for Seismic Stability of Buildings of the Armenian Emergencies Ministry Zaven Khlgatian said that "in the U.S.S.R. it was well understood that Armenia is in a seismically active zone, so even then all the special features of the area were taken into account during construction."²¹

In so doing, however, it should be noted that after the collapse of the U.S.S.R., a national service was essentially not formed in Armenia capable of resolving security issues relating to the nuclear power plant. These questions are still mainly resolved by Russian specialists, whose efforts helped to restart the second unit of the Metsamor Nuclear Power Plant in 1995. They are also responsible for efficient management of the plant.

In Lieu of a Conclusion

For the past 15 years, the level of Armenia's energy security has remained rather low, even despite the fact that new capacities have been created in the country. Thermal energy capacities will be under additional burden after the current nuclear power plant is closed. Moreover, their stable operation requires uninterrupted functioning of the gas pipelines passing through Georgia and laid from Iran. Both Georgia and Iran have great potential for internal destabilization, which in practice could lead to a breakdown in natural gas deliveries, while if there is no nuclear power plant in the country, the national energy system could collapse.

For Armenia, it is critically important to develop those spheres of the energy industry, the stable operation of which is not directly related to the situation in the regional countries. These spheres are renewable and nuclear energy. Hydropower plants are the only facilities of renewable energy in Armenia; but despite certain achievements in this sphere, their development rates leave something to be desired.

As for nuclear energy, things are not clear due to the absence of investors for building a new nuclear power plant. Keeping the current nuclear power plant running until a new one is built could lead Armenia into an impasse: the lack of investments for building a new nuclear plant could lead to the current energy unit remaining in operation for an indefinite amount of time.

²⁰ "Vlasti Armenii ne namereny otkazyvatsia ot stroitelstva novogo energobloka AES," available at [<http://www.panarmenian.net/rus/economy/news/67727/>], 1 May, 2011.

²¹ "Armianskaia AES mozhet vyderzhat zemletriasenie do 9 ballov—seismolog," available at [<http://www.newsarmenia.ru/society/20110315/42413102.html>], 1 May, 2011.