

Common Document (East Region)

Our East region represents 6 countries: Poland, Ukraine, Russia, Estonia, Latvia and Belarus. Each of these countries is a rapidly developing one and to cover all industries' demands they need a lot of energy. That's why in almost every country energy problem has the highest political priority. So the issue of energy supply and energy security is very important in each of our countries. The main point is that every country is trying to become independent in the sphere of energy and to use its own commodities for energy production. In this overview we will try to show it in more detailed way.

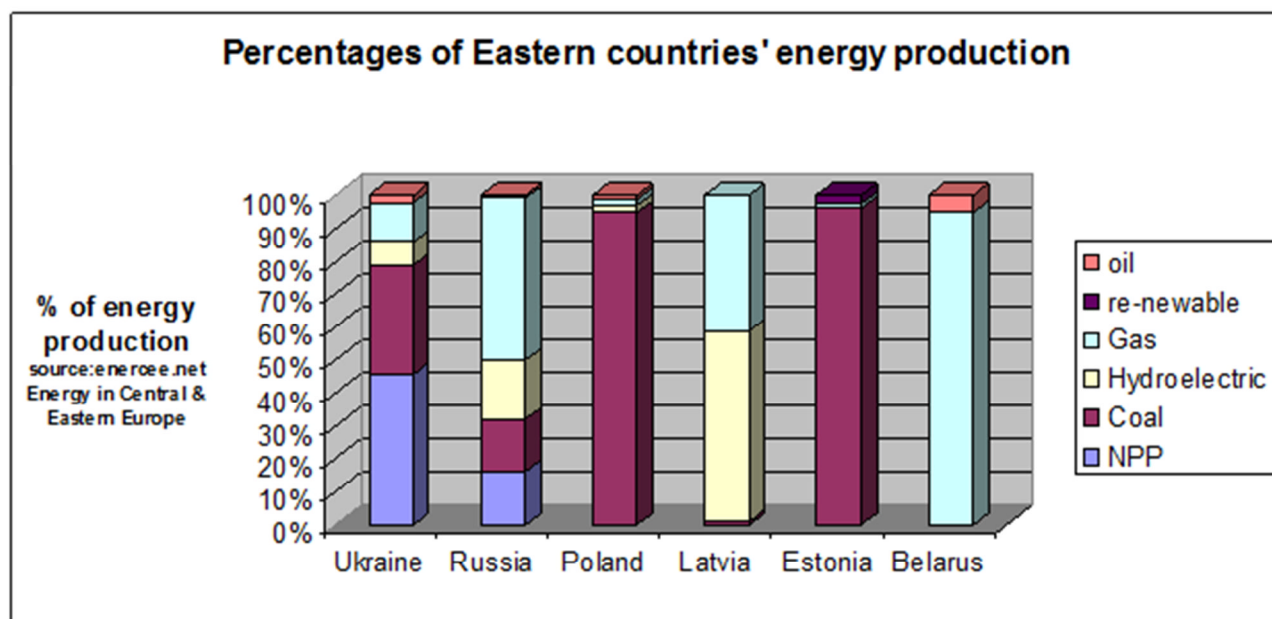
There are two main energy resources in our region: gas and coal. They cover both industry and household consumption. In Belarus and Ukraine the total consumption of gas is very high. That is why both governments try to implement a policy of reducing the level of its consumption. 60% of the Ukrainian industry uses gas, in Belarus this rate is even higher and reaches 80%. These countries are extremely dependent on foreign, mainly Russian, gas. The coal is highly spread in Poland, where around 93% of all the energy is produced from coal (as for 2009).

Nowadays one can spot a world tendency towards the growing usage of alternative energy sources and our region is not an exception. Almost every country uses wind energy which is widespread in Latvia and Poland. Belarus plans to build high-capacity Park of windmills. As for solar energy, it is used in Ukraine and Poland. There are hydroelectric power stations in each country.

What is more, there is a tidal electricity power station in Russia and a pumped-storage power station on Żar mountain in Poland which generates energy by making use of water falling down from the mountain through the underground tunnel.

As for nuclear energy, it plays a big role in energy supply in Eastern Europe. Our region includes countries which have nuclear power plants (NPPs) – Ukraine and Russia, and countries without NPPs – Latvia, Belarus, Estonia and Poland. Statistics shows that nuclear energy is very important for Russia and Ukraine. 46% of all electricity in Ukraine is produced by 4 NPPs. In Russia 15% of energy production are provided by 10 NPPs. It is quite a high rate, taking into account the size of Russian Federation. The main point is that this type of energy allows country to be relatively independent in the sphere of energy. It is an issue of extreme importance nowadays, so countries possessing nuclear power plants don't have any plans to cut the usage of nuclear energy. Latvia, Estonia and Belarus are going to build their own NPPs in the next 10 years. Because of their small size Latvia and Estonia together with Lithuania are going to construct a common nuclear power plant which will wholly satisfy energy needs of the Baltic countries.

Belarus also has a project of NPP building and this document was already signed by the President. Experts predict that it will give Belarus from 10 to 20% of energy independence. On the diagram below you can see the percentages of Eastern countries' energy production.



Each country of the region has special emergency plans for the case of an accident in any NPP. Even those countries which don't have NPPs on their territory are aware of possible accidents. The Chernobyl tragedy has shown that some measures can be taken to avoid a high number of victims in the future. Every country prepared its own plan of protecting its citizens in case of nuclear contamination.

Moreover there are special emergency services which are responsible for implementing these plans.

There are several measures that should be taken in case of radioactive contamination:

- Restriction of staying people at open district by their time shelter in refuges and houses with hermetic sealing inhabited and office accommodations;
- Carrying out the iodane preventive medication;
- Population evacuation in case of the high levels of radiation and impossibility to execute a corresponding mode of radiating protection;
- An exception or restriction to consume of that or other food;
- Carrying out of sanitary processing with the subsequent radiation control;
- Protection of respiratory organs and a skin by individual protection frames;
- Transfer of domestic animals into not infected pastures or fodder forages;
- Deactivation of the polluted district;
- Observance by the population rules of the personal hygiene.

People living in areas, polluted by radioactive substances should observe the special mode of behavior providing their safety. The basic actions of this mode consist of the following:

- To accept food it is possible only in the closed premises;
- To limit stay on open cart-spirit;
- Not to use in a diet fish and crayfish from local water reservoirs;
- To prepare and use local agricultural products, wild-growing berries, mushrooms and grasses only after the permission of experts;
- Cleaning of premises to spend in the damp way, garbage and the used rags to put in special capacity for the subsequent burial place.

You can find all the necessary information in a summary below.

1. In which agency of our governments is the topic of nuclear safety/use of nuclear power located? Who is responsible for that (e.g. which ministry,...)?

Poland - Department of Nuclear Energy of the Ministry of Economics and National Atomic Energy Agency

Latvia - Ministry of Environment

Estonia - Ministry of the Environment; Estonian Environmental Board Environmental Inspectorate.

Belarus - Department of Nuclear Energy under the Ministry of Energetics in Republic of Belarus

Ukraine - National Nuclear Energy company “Energoatom”

Russian - state corporation of atomic energy “Rosatom”

2. A) Are there any emergency plans for the case of a severe accident in a nuclear power plant? What would happen in our countries (evacuation, medication,...)?

B) And are there any plans about bi-lateral or European co-operation?

A – EMERGENCY PLANS

Latvia: Civil defence council would create a plan of accident consequences liquidation and possible evacuation. They would:

- Gather information about accident
- Create an evacuation plan if needed
- Create a list of unsafe areas and lakes and rivers
- Create recommendations for hygiene
- Create plan of the nuclear material collection if possible
- Create plan for animal rescue and restrictions
- Create plan for protective equipment usage
- Inform people
- Rescue service would start to inform people about the accident using mass media, warning system, if necessary local information or even evacuation, if the risk is very high, the army forces would help evacuation and rescue. Services will spread information: What happened, when, where, what is the possible damage and what should people do.
- Since there are no NPP in Latvia, the civil safety council would gather information from the International Atomic Energy Agency and the European Commission about the accident. It would inform these agencies about local safety events.

- Gather weather data for possible pollution contamination
- Plans Iodine prophylaxis, evacuation, inactivation, medical help etc.

Belarus: Department of Nuclear and Radiation Safety of the Ministry of Emergency Situations of the Republic of Belarus deals with emergency planning in Belarus. The Ministry of Emergency Situations and its structural departments have the emergency plans for different emergency situations, including the accident in a nuclear power plant (in neighboring countries). Which emergency plan will be used it's depend on the heaviness of the accident; evacuation (up to Ministry of Emergency Situations) and medication (Ministry of Public health) are both possible. These plans are top-secret and not available for everybody. Population has special instructions in case of the accident in the nuclear plant:

1. To protect respiratory organs
2. To take cover in nearest building, a protective premise
3. To close windows, doors, ventilating apertures
4. To take a place far from windows
5. To spend premise hermetic sealing
6. To spend protection of food
7. To make a considerable water-supply
8. To spend iodine prevention
9. To leave a premise only at emergency and for short time
10. To be prepared for possible evacuation

Ukraine: Events of public infrastructure to meet the minimum needs of citizens affected by the consequences of the Emergency Situation, providing public services and implementation of social security at the time of rescue and other urgent works are:

- temporary resettlement of people in safe places;
- nutrition of the population in areas of the National Assembly;
- organization of clothing, footwear and essential goods for affected populations;
- medical services and sanitary-epidemiological supervision in temporary accommodation;
- finding damage cells and delimitation of these cells;
- carrying out works related to search and rescue people;
- assisting victims;
- evacuation centres of mass lesions;
- ensuring public order in areas of accidents, disasters;

- implementation of public life;
- implementation of hygiene and preventive measures, etc.

Russia: secret information.

Poland: Responsible for that are some departments of National Atomic Energy Agency: the Department of The Nuclear and Radiation Safety, the Department of Supervision of Uses Radiation Ionizing and Centre to the matters of Radiational Events (CAESAR). There is also the Regulation of The Ministry on the plans of emergency conduct in the case of radiation accidents.

B - BILATERAL OR EUROPEAN COOPERATION

Poland:

- Member of IAEA
- signed Convention on Nuclear Safety

Latvia:

- Full Scope Safeguards Agreement with the IAEA (International Atomic Energy Agency)
- a member of the Nuclear Suppliers Group in 1997. In June 2001, the European Council adopted a report on nuclear safety in the context of enlargement.

Estonia:

- has several bi-lateral agreements in a case of a radiation accident with Latvia and Finland
- An agreement with a Council of the Baltic Sea States
- Official contact person for International Atomic Energy Agency

Belarus:

The Ministry of Emergency Situations of Belarus has the cooperation with:

- The European Commission H (EEC UN)
- The International Organization of Civil Defense;
- The United Nations Organization;
- The International Agency of Nuclear Energy;

- Interstate Council about Emergency Situations of Natural and Technogenic Character;
- Took part in the IVth meeting of the Council on Cooperation in the field of atomic energy for peaceful purposes (Almaty, 22-23 April 2009);

Ukraine:

- was signed a Memorandum of Understanding on cooperation in energy sphere (1 December 2005)
- project “Shelter” (a cover under the 4th block of Chernobyl NPP)
- the program "Partnership for Peace"
- "Fourth UN Committee on International Cooperation on Chernobyl”

Russia: secret information.

FOR PARTICIPANTS FROM COUNTRIES WHICH OPERATE NUCLEAR POWER PLANTS

3. Since when is nuclear power used?

Ukraine: since 1971

Russia: since 1949

4. When was the first nuclear power plant built?

Ukraine: 1971 Chernobyl

Russian: was built in 1954 “Obninsk” (110 km southwest from Moscow)

5. How many and which kinds of power plants exist?

Ukraine: Ukraine has 15 nuclear power units at four nuclear power plants

Russian: 10 operating power point plants in Russia with 31 power units

6. Were there ever any accidents?

Ukraine:

- Chernobyl accident (26th April, 1986)

Russian:

- Kashtymsky tragedy (29th of September 1957)
- Radiating failure at factory «Red Sormovo» (18th January, 1970)
- The USSR, the Pine forest, the Leningrad (30th November, 1975)
- The USSR, Sverdlovsk area, settlement Zarechnyj (31st December, 1978)
- The USSR, Medzamor, the Armenian atomic power plant (15th October, , 1982)
- The USSR, Power gift, the Zaporozhye (27 January 1984)
- The USSR, the Balakovsky atomic power station (27th June, 1985)
- The USSR, the Pine forest, the Leningrad (21st January, 1987)
- Russia, Sverdlovsk area, settlement Zarechnyj (22nd December, 1992)
- Russia, Murmansk area, settlement Polar Dawns (2nd February, 1993)
- Russia, the Tomsk region, Tomsk-7 (6th April, 1993)
- Russia, Leningrad region, the Pine forest (20th May, 2004)

7. Does your country plan to build new nuclear power plants? (Have there ever been plans to build a nuclear power plant)?

Ukraine: – In the future 20 years it is planning to build 13 new reactors and to replace 9 more old reactors at the Nuclear Power Plants.

Russia: Currently in Russia active works on building of 6 atomic power stations are conducted.

FOR PARTICIPANTS FROM COUNTRIES WITHOUT NUCLEAR POWER PLANTS

8. Does your country plan to build new nuclear power plants? (Have there ever been plans to build a nuclear power plant)?

Poland:

- The first decisions were taken in 1972; construction lasted between 1982 and 1990 (Żarnowiec), when it was cancelled;
- Government is planning to build a first nuclear power plant till c. 2020

Latvia: took part in building Visagina NPP in Lithuania

Estonia: there were plans to take part in building Visagina NPP in Lithuania

Belarus: The resolution of the Security Council № 1 «About the development of nuclear power in the Republic of Belarus » is signed and due to it the first block of the NPP would be ready till 2016, second one till 2018.

9. How did the decision making about whether to build a nuclear power plant or not happen?

Poland:

- Decisions were taken by Politburo of CP
- Because of the rapidly developing economy of Poland in the 1970s and symbolical prestige that was ascribed to the nuclear energy; the (Yes)
- A lot of citizens were against, especially after a Chernobyl accident (No)
- Economy needs it now
- Energy independence has to be secured

Latvia:

- No because of the people protests
- Government plans to build the NPP together with Estonia and Lithuania but not in the Latvia territory.

Estonia:

- To gain energy independence from Russian Federation
- Realising that coal supplies will come to an end
- To secure the energy independence

Belarus:

YES

The Belarussian government decides to build a NPP in order to:

- To improve energy security by diversifying energy sources;
- To replace up to 5 million tons of fossil fuel (natural gas) from the balance of power;
- To reduce the cost of fuel for energetics by the year 2020, 250 - 300 million dollars a year while the growth rate value of fossil fuels within 3 - 5%;
- To reduce the costs of electricity production;

- To reduce greenhouse gas emissions by 7-10 million tons per year.

10. Does your country use nuclear power from another country?

Poland - No

Latvia - 60% of energy gets imported from Russia and Scandinavian countries

Estonia –

- Was built an EST-LINK cable in order to secure the energy independence
- Energy is also imported from Russian

Belarus - Yes, Belarus uses the nuclear power of neighboring countries (Lithuania, Ukraine, and Russia).

Belarus was receiving electricity from Ignalina's nuclear power plant (Lithuania), until the nuclear reactor was stopped at 31/12/2009. In 2010 it was planned to import in Belarus 5 billion of kilowatt/hours of electricity from Ukraine and Russia NPP's. The most important from them are Smolenskaya (Russia), Rovenskya (Ukraine) NPP.

11. Do you know how much of your country's energy is generated by nuclear power?

Which other kinds of electricity generating forms are used in your country? (coal, renewables, ...)?

Poland:

- a statute states that 10,4% of all the energy comes from renewable resources;
- in 2009 around 93% of energy came from coal (in 2005 it was around 97%)
- 3,2% of the energy came from gas (2009)
- 1,9% from water plants (2009)

Latvia:

- Hydroelectric power (3 on the river Daugava) 96,8%
- Hydroelectric power (149 on smaller rivers) 1,2%
- Wind Generators) 1,0%
- Biogas 0,9%
- Wood 0,1%

Estonia:

- 96% of our electricity is produced, using coal resources
- 1,5% of the energy is produced, using gas

- 2,5% of the electricity is produced, using renewable resources

Belarus:

The main source of electricity generating is:

- Natural gas ($\approx 91.6\%$)
- Charcoal ($\approx 6.3\%$)
- Local energy sources (oil, turf, pyroschist, mazut) ($\approx 2.1\%$)
- Renewables
- Fuel wood – 43,8%
- Thermal resources and surplus pressure resources – 32,5%
- Wind energy – 15,1%
- Wood pulp waste – 8,4%
- Water energy – 0,24%
- Another kinds of renewables including solar energy – 0.01%
- The share of local fuels and alternative energy sources by 2012 should be increased from 2,1% to 25%

Ukraine:

- 46% of the all electricity - NPP
- 7% of the total energy is provided by hydro electricity stations.
- one wind electric station
- Government is planning to build one solar station (the biggest in Europe)

Russia:

- 16 % of the electric power – NPP
- 18 % of the electric power - Hydro-power stations
- 1 tidal power station
- Wind and thermal energy.