



**Eastern European
Association of the Greens**

**The inevitability of global warming. Single option
is fixation on clean energy sources**

Brussels, 2018

12 years is before the world disaster. That's how much time is left to stop global warming. This is the conclusion reached by the authors of the Special Report on Global Warming at 1.5 ° C of the United Nations International Panel on Climate Change (IPCC). At this time, forecasts of climate scientists cannot be called simply “disappointing,” the conclusions literally take on the character of the phrase “between life and death.” In other words, the stories of Hollywood disaster films may soon become a terrifying reality. This was exactly the rhetoric of the speakers, who presented a report on October 8 at a meeting of the organization in South Korea.

According to the UN scientists, it is necessary to act immediately, since by 2030 the level of carbon dioxide emissions into the atmosphere can reach a critical point. In fact, an increase in temperature will have irreversible consequences. The world is no longer surprised by droughts, heat, floods and hurricanes. In just over 10 years, these natural phenomena will become even more deadly. In the literal sense of the word.

UN Report: today, tomorrow, after 100 years. Disastrous consequences.

Scientists have long recognized that the lion's share of the blame for climate warming lies with developed and rich countries. After a three-year recession due to weak economic growth, a reduction in the intensity of energy use and changes in the fuel balance, global CO₂ emissions in 2017 increased by 2.1%. Developed countries, launching and renewing industrial facilities, are in no hurry to refuse to use coal, gas and oil for their work.

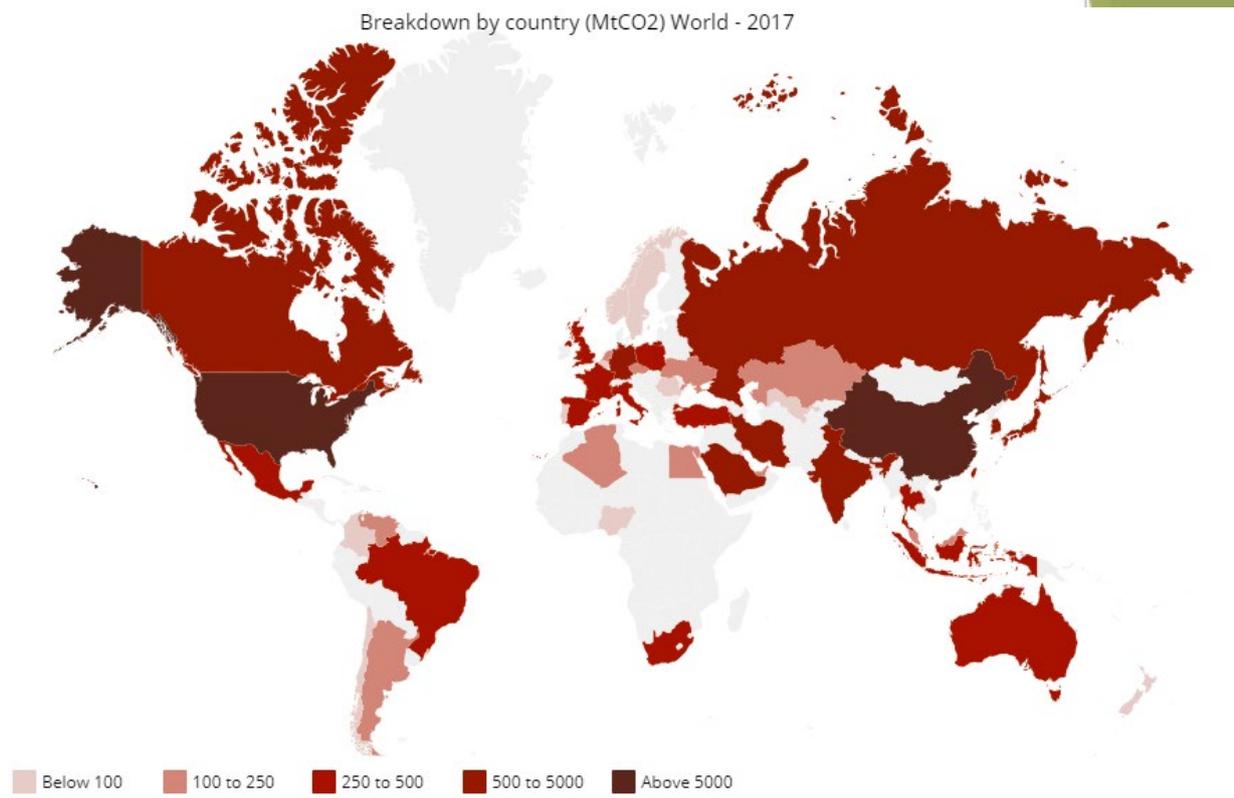
However, those who live in poor regions are the first to suffer. So, for example, Britain is not ready to completely abandon the development of the gas industry, Norway is not ready to abandon oil in the Arctic, and Germany, despite the protests of the "green", plans to cut down the Khambakh forest because this lands are rich in coal. At the same time, most of the negative consequences of these actions will be on the countries with a low level of development, people who often live far beyond the poverty line. In this context, it is primarily about the countries of Africa and Southeast Asia. Floods and droughts threaten the poorest countries not only with reduced yields, or even destructions, but also with the destruction of the infrastructure. Among other things, the already high threshold of epidemics of infectious diseases will also increase significantly. At the same time, many densely populated modern islands in the Asia-Pacific region, in the event of a rise in sea level (and it will rise), can generally go deep into the water. It is not only these land areas that will be affected. Industrialized countries will also suffer, it is they who will receive the "wave" of the millions of migrants fleeing natural disasters.

So by the end of 2017, CO₂ emissions in the United States remained stable, which corresponds to their energy consumption. The other world leader, China has a strong economic growth, on the contrary, it prompted an increase in coal consumption. This naturally led to an increase in CO₂ emissions. Increasing global economic growth has also increased energy demand and CO₂ emissions in most countries, such as Canada, South Korea, Japan, Iran, Russia and India.

Unfavorable conditions for the hydropower complex, including, contributed to the increase in emissions in Brazil and some European countries such as Germany, Spain, Poland and France. At the same time, the UK, on the contrary, reduced carbon dioxide emissions, this result was made possible by the introduction of stations that generate heat from renewable energy sources (RES). Also, emissions could be reduced in Mexico and Ukraine, actively using nuclear energy.

However, the largest contribution to global carbon emissions still boasts electricity production in China is more than 80% of its total demand is met by coal and oil. At the same time, a year earlier, more than 50 gigawatts of additional coal-fired power were added. However banal it may sound, air pollution threatens the health of people in China which is why many Chinese are forced to wear face masks on the streets because of smog, due to the work of such enterprises, makes it difficult for the respiratory system. However,

official Beijing sees the problem and by 2050 it is going to reduce the share of coal in the Chinese energy sector to 11%.



The situation with global warming began to become catastrophic by no means yesterday. Even today, the planet is 1 ° C warmer than in the pre-industrial period, a further increase even by half a degree can have irreversible consequences. So, for example, to the complete disappearance of some species of flora and fauna, almost a third of all species will be on the verge of extinction. In particular, the corals that are so protected from poachers in different countries. Forecasts are indeed destructive, with a rise in temperature of 1.5 ° C, the number of coral reefs will decrease by 70-90%, with warming by 2 ° C no more than 1% of reefs will remain.

Saying that if the world does not stop global warming and the temperature on earth rises to an awesome 2 ° C, the planet will literally burn out because of forest fires, the death rate from the suffocating heat will increase, about 10 million people on the planet will suffer due to rising levels seas. So, if the climate change problem is not actively started to be solved now, all these consequences are expected by the planet by the year 2100.

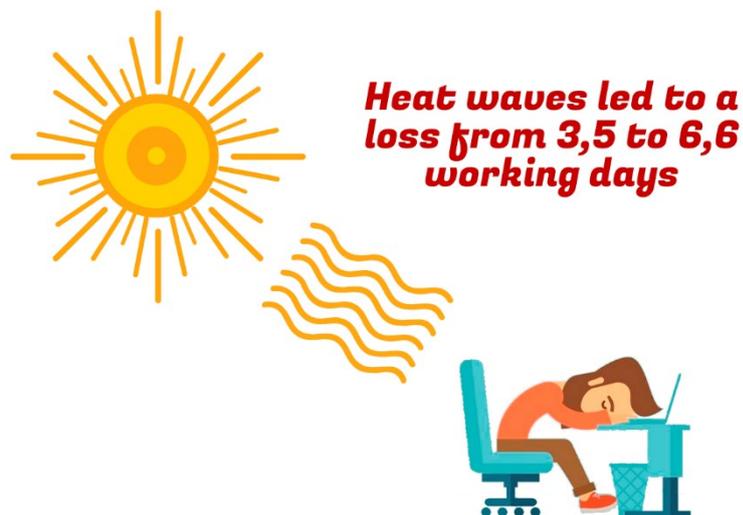
Having conducted more than one study, scientists found that by this period global sea level rise could be 26–77 cm above the baseline of 1986–2005 with a temperature increase of 1.5 ° C, or about 10 cm lower than with global warming at 2 ° C. This all entails flooding, saltwater intrusion and damage to infrastructure. The losses incurred by the state can only be guessed. Climatologists in their report concluded that reducing the risk of global warming would limit increases in ocean temperature and acidity, as well as oxygen levels in the ocean. In addition, maintaining a normal temperature would reduce risks to

marine biodiversity, fisheries and ecosystems. Scientists also suggest that approximately half of the world's population, which is now prone to water shortages caused by climate change, can be saved from a shortage of drinking water if we limit global warming to a maximum of 1.5 ° C. Leaving the problem at the current level and continuing to exacerbate it, the shortage of food and drinking water will cause new regional conflicts, which will also entail deplorable consequences for humanity and for the environment.

Meanwhile, Chinese scientists conducted a social study, the results of which showed that the increase in temperature on the planet will also affect the performance of people in the world.

The study showed that heat waves, which will increasingly be observed more often due to global warming, will have a negative impact on the working capacity of the planet's population.

During the experiment in 2016, 4363 respondents were surveyed to understand how much heat affects the productivity of each person's work, in particular. The result, to put it mildly, shocked scientists and once again confirmed the negative impact of climate change processes on earth on another area of human existence. Thus, it was found that heat waves led to a loss of 6.6 working days in developing countries and 3.5 working days in developed ones. At the same time, Central Asia and Northern Europe turned out to be the most vulnerable regions.



In the course of the study, scientists also tried to calculate how the rise in the average temperature of the planet's atmosphere will affect the number of lost work days. The study showed that when the temperature rises to 1.5, 2, 3 and four ° C, developed countries will lose 9, 12, 22 and 33 days, respectively. Developing states are even more — 19, 31, 61, and 94 days, respectively. It is noteworthy that the countries of Southeast Asia with a warming of 1.5 ° C will experience the same decrease in labor productivity than developed countries with a warming of four degrees.

European side of disaster

It is noteworthy that, despite the ongoing lobbying by coal enterprises, the UK from 2012 to 2017 was able to reduce the share of coal in the total capacity of the British electricity grid from 40% to 7%. In the same period, carbon emissions in the country dropped to levels not seen since the 1890s. They should be reduced by another 40 percent from 1990 levels in order to meet the UK's legally-binding goal set for itself. What is needed for this is the subsequent abandonment of coal and the transition to clean sources of energy.

The problem of insufficient drinking water can affect not only poor countries. For example, residents of northern Europe may also suffer from this. Greenpeace experts claim that the shortage of drinking water may be encountered in Brandenburg and Mecklenburg-Vorpommern (Germany).

After analyzing a series of studies, it is possible to determine the most disastrous consequences for the European region. For example, very cold winters and abnormally hot summer months.

So, extremely high temperatures on the European continent in the summer season already account for 99% of all weather-related deaths - most of them, naturally in southern Europe. However, if you do not stop the rise in temperature, the number of deaths as a result of extreme weather can increase from 3 thousand in 1981-2010 to 152 thousand in the period 2071-2100. And by 2100, 2/3 of Europeans will suffer from natural disasters, whereas at the beginning of the XXI century, this proportion was only 5% of the European population. At the same time, a large number of people will die as a result of coastal flooding: 233 people per year by the end of the century, compared with six at the beginning of the century.

And the flip side of the coin is cold winters. For example, now, the average January temperature in London is 5 ° C. Meanwhile, in the Canadian town of Goose Bay, which is located at the same latitude as London, the temperature drops to -13 ° C. Scientists have concluded that as the North Atlantic Current weakens, winters will become more severe in most parts of the European continent.

If we talk about the natural consequences, then we will focus on large-scale droughts. The increase in air temperature by an average of 3 ° C will lead to the fact that the area of dry regions in Europe will increase from 13 to 26%. In addition, the result of climate change here will be the threat to the life of the flora and fauna of the region. Global warming is now forcing mammals to abandon their habitat. After a few decades, animals will not be able to find a new home at all. Thus, on the 62 species of mammals that live in Europe, global warming will significantly affect (and is already affecting) the habitat of 30 of them.

It is noteworthy that global warming will also affect the issue of human relocation. During one of the studies, the specialists studied the appeals of refugees seeking asylum in European countries. Applications from 103 states for the period from 2010 to 2014 have been analyzed and this is about 350 thousand people. So, among the logical reasons, such as wars, “family” relocations, requests for political asylum and others, refugees began to more often mention the environmental factor. If on the European continent the temperature continues to rise, the countries of Europe expect an even more powerful influx of migrants. In numbers, this means that if the level of greenhouse gas emissions does not decrease, then 660 thousand migrants will come to European countries annually more than now, after 80 years.



+3

13% ↗ **26%**
Dry regions in Europe



350 thousand ↗ **1,01 million**
Migrants



How to stop global warming?

Naturally, having studied such critical consequences for the planet, the authors of the report demanded that urgent and unprecedented measures be taken to avoid a catastrophe. Namely reduce carbon dioxide emissions to 2030 by 45% and to 0% by 2050. How to achieve this? Here, scientists agree in their opinion - an urgent, albeit expensive, transition to alternative sources of heat. An unprecedented response would be required to limit warming to 1.5 ° C. Thus, a rapid reduction in emissions to maintain a fairly cool state of the planet could cost the world GDP of 2.5 trillion USD. According to the alternative version, a full transition to electric cars, for example, will enable new industries to absorb the amount of approximately 7 trillion dollars per year in US. Regardless of which path humanity, led by scientists, chooses, a revolution is necessary, but it must be gentle and only to the benefit of the planet.

According to a member of the IPCC, James Skay, it will be necessary to radically change all spheres of public life. It will be necessary to improve the areas of energy, transport, more efficient use of land and natural resources. At the same time, a quick refusal to use fossil fuels such as coal, oil and gas can be a very costly, but certainly an effective solution to combat global warming. According to experts, this measure will save the lives of more than 100 million people over the next two decades.

Obviously, the world and science do not stand still. Scientists are actively developing the introduction of technology for capturing greenhouse gases in electricity production, as well as directly from the atmosphere by dumping plant organisms, pumping carbon dioxide into the ocean, where it will dissolve in the water column and using artificial trees. However, most of these methods for eliminating CO₂ are very expensive. Considering the fact that about three tons of CO₂ are formed during the combustion of one ton, many methods of binding carbon dioxide are considered untimely and not fully studied. Previously, alternative methods of carbon sequestration by planting trees were also voiced, but they are also recognized to be untenable. This is due to the fact that, in its majority, carbon as a result of forest fires and decomposition of organic matter enters back into the atmosphere. However, this method cannot be called inefficient in connection with the closure of enterprises working for the extraction of minerals and planting trees, this is a positive addition to the fight against global warming. In any case, at this stage, nothing is more effective than the abandonment of the use of coal, oil and natural gas.

Despite the fact that in recent years, especially after the accident at the Japanese nuclear power plant Fukushima in 2011, many states began to abandon the use of nuclear energy, the situation with emissions and global warming did not improve, as the “green” organizations wanted. Thus, the share of fossil fuels is almost 87%, thanks to a reduction in the production of nuclear energy over the past 15 years, it has not changed. At the same time, other technologies that are essential for curbing temperature growth also remain at the same low level. At the same time, over the past 45 years, thanks to the work of all

nuclear power plants on the planet, more than 56 billion tons of carbon dioxide was prevented from being released into the atmosphere.

Naturally, it is impossible not to mention the role of solar panels and wind stations. However, according to many climatologists and scientists of the same energy of wind and sun, it is not enough to achieve the goals set to stop global warming. Since in this catastrophic situation, the amount of carbon emitted into the atmosphere, rather than the amount of new technologies, comes out on top. That is why, against this background, renewable energy is hardly an alternative. Despite the growth of investment, its share is less than 3%.

Despite the number of skeptics and opponents, it is developing countries that give significant importance to the development of nuclear energy. The point is not only in the minimum emissions of carbon dioxide, but also in the issue of cost. And with the latest UN report, stopping global warming is becoming more expensive every year. Currently, the topic of atomic energy is extremely relevant for its cheap base load and stability, in addition, the ability to plan costs will be a plus. In other words, we have a predictable price. At the same time, for several decades now the price of raw materials for coal, oil and gas stations has been unstable, which affects the final price for the consumer. In the nuclear industry, financial expenses are more planned, the cost of a kilowatt-hour of nuclear power plants is up to 5% of the cost of uranium. And although its price also does not always demonstrate stability in recent years, this did not affect the cost of nuclear energy.

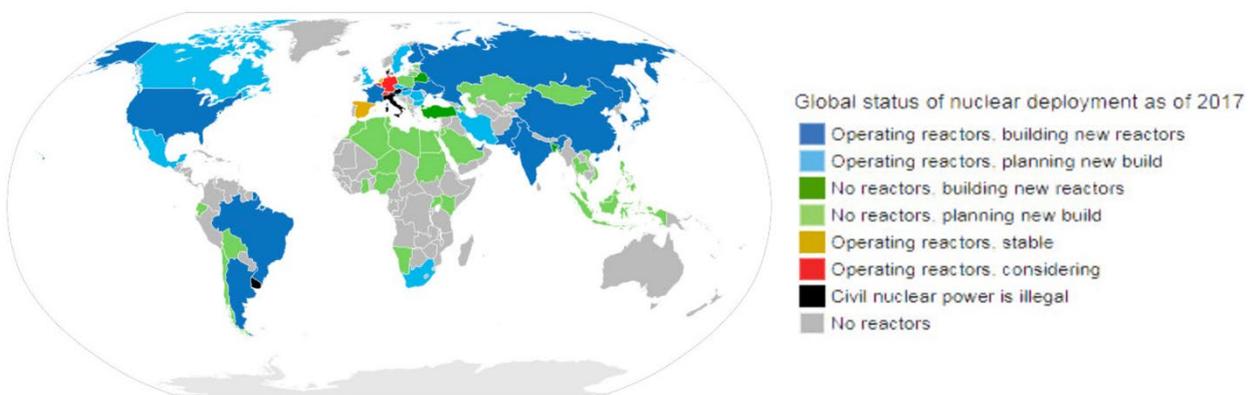
In addition, liberal states that continue to develop nuclear technology are trying to use contracts on long-term conditions with a fixed sale price. As an example of such arrangements can bring the UK. The state covers part of the initial investment costs for new planned nuclear facilities, working with public safeguards. At the same time, for example, in South Korea, investment risks are reduced due to the monopoly position of the country's electrical system, and accordingly, the transparent relationship between contractors and the state.

The role of atomic energy in curbing global warming

In scenarios to curb temperature increases within 1.5 ° C, according to a UN report, the contribution of nuclear generation to the global energy mix increases.

Thus, scientists noted the categorical need to use the atomic potential of states as one of the main factors for an effective global response. In other words, at the first critical and subsequent stages of combating climate change, the introduction and strengthening of proven technologies will be required. This includes both existing nuclear facilities and new developments. Such as new uranium and thorium fuel cycles, generation III / IV reactors, small reactors and nuclear cogeneration, as well as breeder reactors.

In modern reality, the pace of construction and development of nuclear power plants have become more restrained. This situation was influenced by the social factor, society after a couple of loud accidents fears the repetition of scenarios and does not possess sufficient information about the storage and handling of radioactive waste. And this is quite understandable. Many states at the political and economic levels still cannot decide on the preference for the production and use of this type of energy - this causes an imbalance. In addition, the above-mentioned accident at the Fukushima nuclear power plant in 2011 “added fuel to the fire”, after it, nuclear energy was gradually abandoned in 5 countries. However, about 30 more states continue to use atomic energy, and more than 10 of them are building new nuclear facilities.



By the way, earlier the construction speed of nuclear power plants in some countries was very high. For example, in the second half of the twentieth century, a program was introduced in France, thanks to which the country received over 80% of the energy from nuclear power plants for 25 years.

Now, after the UN report, nuclear power must again be viewed in a more positive way. Indeed, in addition to environmental, price and industrial issues, nuclear energy, as before, remains one of the safest in the world. At the same time, the subsequent progress in the field of nuclear technology will provide an opportunity to get rid of the prejudices

regarding nuclear energy and the fears that still accompany the issue of the disposal of nuclear waste.

In this matter you should pay attention to Japan and Ukraine. First, a country where anti-nuclear sentiment reached its limit (of course, after Fukushima), nuclear energy has still not completely failed. At the same time, in the near future, the Japanese are seriously planning to resume operation of at least half of their units.

At the same time, Ukraine operates 15 power units at four nuclear power plants, which provide more than half of all electricity produced in the country. At the same time, a nuclear power plant operating in normal mode does not release anything into the environment, except heated water vapor. This is an indisputable fact, against which even the most negatively-minded opponents of nuclear energy will not go. True, they will definitely remember the consequences of accidents at nuclear power plants in these two countries. Since so far, for many - this is almost the only argument against.

The positive aspects of the use of atomic energy are more than enough to continue to develop the industry, especially when it became obviously necessary to solve the problem of global warming. So, for example, the development of nuclear energy will also help to resolve issues related to the shortage of energy resources or the need to build power plants near fuel sources. In addition, the ability to reprocess nuclear fuel creates inexhaustible resources for nuclear energy.

At the same time, the introduction and development of technology for the construction of small and medium-sized reactors can positively affect the industry in the industrially undeveloped regions, where the lack of energy sources is an obstacle to economic growth. Among other things, according to many international studies, the current level of new technologies makes it possible to create fourth-generation nuclear reactors - they are distinguished by a high degree of safety, as well as accuracy and cleanliness of operation. At the same time, environmentalists, climatologists and politicians of many countries are confident that the future of world energy is in a reasonable balance between nuclear generation and renewable energy sources.

European potential of using nuclear energy

Over the past few years, a situation has developed in European countries where most companies, equipment and panels for, for example, wind stations are supplied by Chinese companies. In turn, European enterprises are forced to gradually leave this market. This is due to the lower price of purchasing goods from the Middle Kingdom. For example, a year ago, one of the largest manufacturers of solar batteries in Germany, Solarworld AG, declared its insolvency, in effect declaring itself bankrupt. Regardless of the further development of renewable energy sources and their potential impact on curbing global warming, the current capacity of VEI is not enough for a complete transition to clean energy in Europe. Therefore, now companies like Solarworld AG occupy a niche of researchers and development specialists.

It is worth noting that today the European energy industry is in the process of rebirth. So, earlier in the media it was repeatedly reported that it is likely that the administration of French President Emmanuel Macron will seriously consider supporting the nuclear industry in order to speed up the construction of new power units to replace old facilities. It was reported that official Paris is even ready to go on state subsidies for the construction of these same units. The presidential administration has pushed this decision is not the best in recent years, the situation in the nuclear industry in France. And this is despite the fact that the state is still one of the leaders in Western Europe in the production of electricity at nuclear power plants and in the development of technologies in the nuclear field.

In addition, the UK has begun construction of the Hinkley Point nuclear power plant. The commissioning of the nuclear power plant is scheduled for 2025. In fact, the new station will have to replace the partially output power at an existing site. French and Chinese investors have decided to invest in construction. Despite the fact that the UK government could not decide for a long time whether to build or not to build, the decision was made in favor of the nuclear industry. Thus, it is categorically too early to say that atomic energy will soon cease to claim one of the energies of the future.

Take another example. Sweden is a country that is considered the flagship in the field of environmental protection. This is believed not only by local environmentalists, but also by international experts, and the Europeans themselves. But can there be any doubt? This country has made a big step in the use of "clean" energy. Thus, in Sweden about 40% of all electricity is produced using renewable energy sources. At the same time, more than 40% are produced by three nuclear power plants at 10 power units. In general, it is Sweden that is an example of the realization of the symbiosis of nuclear and "green" energetics. By the way, Germany is still the European state that relies more on the political component on the issue of the use of nuclear energy - this is especially evident during election campaigns. The fact is that German society is quite settled in its negative attitude towards nuclear energy and, in particular, towards the operation of nuclear power plants

directly in Germany. However, selective German business policy leaves a chance for the nuclear field, supporting export-oriented enterprises. Therefore, German business is negatively disposed towards the issue of decommissioning nuclear power plants - large industrial facilities have a lower electricity tariff than medium-sized enterprises and the public. However, with the active development of renewable energy sources, this support is likely to decline. Accordingly, over time, electricity prices will rise and will be equal for all consumers.

That is why, among experts, there is a perception that the resumption of positive attitudes towards nuclear power in Germany may take several decades. Only after a change in public opinion and a reduction in skepticism regarding the nuclear industry, can we expect that Berlin, in the first place, will refuse to decommission its nuclear power plants and, secondly, it will start, or at least plan to build new facilities.

The differences in opinions regarding the use of nuclear potential in Europe are viewed both between individual countries and in general. However, given the findings of the UN report on global warming, it is likely that it will “warm” just on the issue of the peaceful atom, since other ways of preventing the rise in temperature are still less effective.

Nuclear energy in conjunction with green energy

In the conditions of a critically small amount of time to solve the problem of global warming, the most optimal levers should be used, both economically and ecologically. It is important to understand that modern technologies of using nuclear energy make it possible to build powerful and large stations. At the same time, in order to receive the same amounts of energy from renewable energy sources, be it solar or wind power plants, it is necessary to attract much larger areas. Thus, the territorial issue of the construction and placement of solar and wind stations arises. And again, let us raise the issue of expediency at this critical stage. How to calculate the cost, energy consumption and what will be "at the result"? In addition, the issue of centralized operational control and remote control, for example, solar generation has not yet been studied at the appropriate level.

Obsolete nuclear power plants in Europe, which have been in operation for more than a dozen years, as of today, actually subsidize the green energy industry. And in the conditions of developed countries, the nuclear power industry would be even more efficient without the advantages that the renewable one gets. However, climatologists call the symbiosis of atomic and renewable (alternative) energy sources the best way out of the situation. Given the high cost of abrupt transition to "green" energy consumption, such a "partnership" will be not only beneficial, but also less painless.

The UN is convinced that alternative and nuclear energy are able to complement the energy balances of countries, and not oppose each other. The last remark, rather refers to the fierce opponents of atomic energy.

So, in 2015, renewable energy sources were built at 164 GW, and traditional ones at 110 GW. At the same time, about \$ 330 billion were invested in alternative sources. In addition, by 2040, traditional and alternative sources will be 40% in India's energy balance by 60%, in Germany this figure will be 50% by 50%, and in Japan and China alternative sources will be at 20% in the overall balance of energy resources. At the same time, nuclear energy should become the main link promoting the development of modern technologies.

2015
were built



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renewable
energy sources
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 **\$ 330 billion**

The only thing that states need to decide on is what will be the optimal balance between nuclear and renewable energy sources in the world? So, today, the main burden in providing the economy with electricity lies precisely on the nuclear industry. Here, as mentioned above, it is necessary to especially emphasize the level of price predictability, since commodity price fluctuations have virtually no effect on the cost of nuclear kilowatts and pricing in the energy market.

However, despite the appeals of the rapporteurs from the UN, opponents of the nuclear power industry continue to foster negative attitudes regarding the use of nuclear facilities. Therefore, in fact, the joining of atomic energy to the list of "key technologies for mitigating" climate change caused an expected skeptical reaction from the "green" ones. The opinion of the fighters against atomic energy is also worth considering when it comes to the equal coexistence of the nuclear industry and renewable energy sources. Environmental organizations insist that these UN statements are incorrect and call the report's conclusions "solving one problem at the expense of aggravating others." Some "greens" continue, as before, to insist that nuclear power was and is the source of such problems: the high cost of building and maintaining power plants, the storage of nuclear waste, the tool in the hands of terrorists and the risk of nuclear proliferation.

According to one of the leaders of the "green", President of the international environmental organization Friends of the Earth Brent Blackwelder, "the report looks more like an attempt to compromise than a serious plan." He believes that many recommendations have a great sense, but the "pushing" of nuclear energy moves the world in the wrong direction.

"Atomic energy is unsafe for humans and the environment. And it is not a solution to the climate problem. Improving energy efficiency and using clean sources of energy are measures that can be taken to mitigate the problem of global warming right now and without any risk of any other environmental problems," - he said.

Meanwhile, such a categorical position of some "green" still will not be taken categorically because of limited time and financial resources. And the experience of Sweden itself shows how it is possible to remain one of the most environmentally friendly countries "mixing" renewable energy sources and nuclear power. And at this stage, such a "junction" technology is the most acceptable solution for all parameters.

The political aspect of problem solving

The Paris Agreement of the United Nations Framework Convention on Climate Change, which essentially replaced the Kyoto Protocol, was signed at the end of 2015. To date, the Paris Agreement has been ratified by more than 170 countries and only two states, the United States and Turkey, are opposed, ostensibly for financial reasons. At its core, the document is a set of principles for long-term international cooperation. The agreement implies that participating countries will have to establish and periodically review relevant national decisions on climate change.

At the same time, the untimely and shocking withdrawal of the United States from the Paris Agreement threatened the implementation of its principles. The countries of Europe and the world community were indignant and grieved by this statement of the current President of the United States, Donald Trump. Despite the scientists' research that it is the States that is one of the leaders in CO₂ emissions and they are among the first to suffer from the effects of climate change, the US leader continues to defend his position. So, for example, analysts have already considered that the economy of the country each year will be deprived of \$ 250 billion due to the elimination of the effects of rising sea levels and extreme weather events. However, the scale of hurricanes and floods in the United States is already noticeable today.

Meanwhile, it is the Paris Agreement that now remains the main document regulating climate change issues at the International level. In May of this year, a negotiating session of the UN Convention on Climate Change was held in Bonn, Germany, where the rules for implementing the Paris Agreement were developed, and also discussed the possibility of revising national targets for greenhouse gas emissions.

The lion's share of the rules is accounted for by accountability, transparency and objectivity of all parties to the Agreement, as well as monitoring on climate change issues. Among the main problems with the implementation of these rules, experts voiced a few. In particular, this is the withdrawal from the US Paris Agreement - it is now difficult for developed countries to preliminarily reduce their emission reduction and adaptation measures in the weakest and most vulnerable countries - in the first four years only \$ 10 billion will be needed to replenish the Green Climate Fund. Also, it will be necessary to resolve the issue of unification of these rules for all countries - it is likely that more developed countries will have to submit reports in the same way and follow the rules regardless of the national policy on carbon dioxide emissions. At the same time, poor or less developed countries will be able to fulfill the requirements in a simplified mode in the early stages.

No less important is the reaction to the UN report on global warming in October. Thus, a number of European politicians at the end of October addressed the states "to act without delay in the conditions of an emergency situation connected with global warming". The

document was signed by the mayor of Paris, Anna Hidalgo, the mayor of Bordeaux, Alain Huppe, and the President of the Union of Buddhists of France, Min Tri Vaugh.

The next large-scale discussion on global warming, where the Paris Agreement Code of Practice will be adopted, will be the 24th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), which will be held in Katowice, Poland, in December 2018. It is worth noting that this is one of the most polluted cities in Europe, precisely because of the coal stations.

Conclusion

The UN report reports that global carbon dioxide (CO₂) emissions should be reduced by almost 45% by 2030 compared to 2010 levels (FP15C1). By 2050, net zero carbon dioxide emissions should be achieved. This means that all remaining emissions must be balanced by removing CO₂ from the atmosphere and switching to “clean” energy sources. The document also notes that the effectiveness of such methods has not been proven on a large scale, and some of them may carry significant risks for sustainable development. Therefore, the best ways to prevent further warming will be: the abandonment of coal, the transition to renewable energy and the development of the nuclear industry.

According to the Finnish meteorologist, head of the World Meteorological Organization, Professor Petteri Taalas, adaptation to climate change is “this is no longer an option, this is a necessity.” From the last UN report, it becomes absolutely obvious that the longer humanity, scientists, ecologists, climatologists and politicians will put off this adaptation, the more difficult and expensive it will be.

In short, it is not necessary to be a specialist in climate change. Already now the weather anomalies are visible to the naked eye, becoming more frequent in many parts of the planet. Heavy precipitations that led to floods in eastern Germany and France this summer, forest fires in Russia, triggered by record high temperatures, Venice goes under water, right now the water level in the Venice Lagoon reached a record high of more than 1.5 meters. And these are just a few obvious examples of how global warming affects different countries and different territories. At this pace, without taking appropriate measures, the same Venice, we will soon be able to call nothing less than “underwater city”.

At the same time, a full and absolute transition to non-alternative energy sources at this critical stage of global warming is impossible neither from an economic point of view, nor from a potential one for each type. Thus, the scientists who submitted the report are convinced that now is the time to accumulate nuclear power and “clean” energy sources into a single “organism”. Such a symbiosis will limit air warming to 1.5 ° C at the current 1 ° C and prevent catastrophic 2 ° C. Such a transition involves gradually, but urgently, and then completely abandon the use of coal, gas and oil, which are the main sources of CO₂ emissions into the atmosphere.

Obviously, the decisions that the world is taking today at different levels are crucial for the further provision of a safe and sustainable ecosystem of the planet, both in the near and in the distant future.

At the same time, the authors of the report call on all bodies that influence decision making to consolidate at the International level. It is the cohesion between countries and the personal contribution of every scientist, ecologist, ordinary person that will help to

stop the destructive force of global warming. And it is so obvious that now it is necessary to come to a consensus on this issue, following the example of scientists, who always take the prevailing side, even if it resonates with their opinion. It is also important to change the imposed negative opinion about the vigorous energy in society.

It is necessary to be prepared for the fact that, due to the circumstances, the next couple of decades will be key to saving the planet from the effects of global warming. And it is important that this information be fully conveyed to each person, regardless of his sphere of influence on the environment. Right now is the very time when disputes between “greens” and nuclear scientists, politicians and businessmen, atheists and believers on the subject of the influence of global warming should stop. Facts - a stubborn thing.

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