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Monitored this issue:

Nuclear waste in Slovenia

By Matjaž Valenčič, B.Sc., independent energy expert

Slovenia is the smallest of all nuclear states in terms of its surface area of 20.271 square km and population of 2 mio. Due to its size, geological characteristics, population and tectonics, it is also the most exposed to nuclear risk. The Krsko Nuclear Power Plant (NEK) is the only nuclear power plant in the world situated at an active seismic fault[1]. In addition, the NEK is only half owned by Slovenia, the other co-owner is Croatia, which makes it difficult to manage and ensure nuclear safety. This is not reported by the media, as unwritten nuclear censorship[2] applies.

At the moment, more nuclear investments are expected, all related to nuclear waste:

- The Upgrade of NPP NEK is still in progress,
- The closure of the former uranium mine RŽV[3] has not yet been completed,
- The construction of a LILW disposal is planned,
- The extension of the operating period of NEK is expected,
- Temporary storage HRW is under construction
- Planned construction of a new NPP

New insights

The situation today is different from half a century ago, when Yugoslavia joined the nuclear states. At the time, we naively believed that science would regulate the permanent disposal of nuclear waste in a timely manner. However, there is no safe disposal of nuclear waste. New insights in the field of nuclear waste should worry us.

Nowhere in the world is nuclear waste disposal solved! So, it is not appropriate to generate nuclear waste.

Too many cooks spoil the broth

Nuclear power management is a story of adapting to changing political circumstances and blackmail. It works on the principle, "offer a finger, and they'll grab the whole hand".

In 1970, the Slovenian and Croatian economies signed an agreement on the construction of two NPP, NEK and Prevlaka. Only the NEK in Slovenia was built.After the independence of both republics in 1991, the legal status of the NEK became unclear. Unfriendly relations were calmed by new agreements, which did not protect Slovenia's interests in regard of nuclear safety and equal share of waste and costs. The intergovernmental agreement ratified in 2003 regulated property relations, rights and duties, but to the detriment of Slovenia, it indirectly endangers nuclear safety.

By 2025, Croatia should have finished taking over and removing half of its radioactive waste and spent nuclear fuel from the NEK site. It probably will not. Thus, Slovenia is becoming permanently responsible for all nuclear waste on its territory, including the Croatian half.

Legislation

The classification of radioactive waste and the management of radioactive waste are regulated by the "Rules on the Management of Radioactive Waste and Spent Fuel", which have been repealed but are still in force. Is nuclear waste so insignificant that they can hide it in repealed regulations?

The trend of radioactive waste management coming from the US is legally reducing the risk of nuclear waste. In 2020, the U.S. Nuclear Regulatory Commission (NRC) proposed a reinterpretation of its own regulations so that all "low" radioactive waste would be considered VLLW or "very low level radioactive" and disposed of in sites that do not require a nuclear license[4]. A better name for this is Very Large Lies or Very Long-Lasting Waste: VLLW.

Slovenia, the land of waste

The state is drowning in waste. Waste of packaging, municipal waste, dust particles, greenhouse gases, emissions, industrial waste, toxic chemicals…

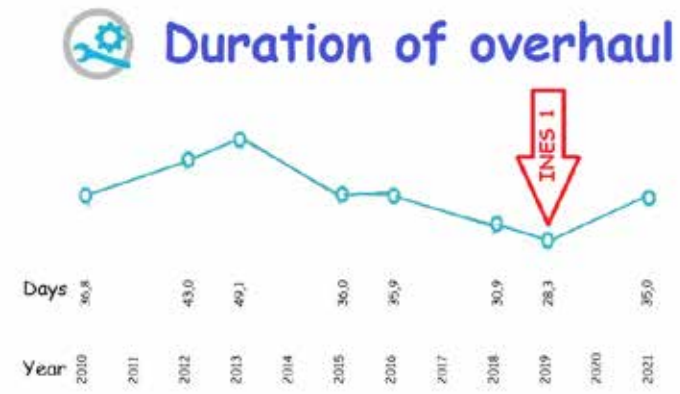
In the official conversation on nuclear waste, all problems can easily be solved. The phrase that *"nuclear waste eventually decomposes into stable, inactive materials" (CEO of GEN energija), "may find a reliable technical solution in two hundred years" (CEO of GEN-I), "nuclear waste is so safe that I would keep them under my bed "*(former Director of the Management for nuclear safety),*"in human life, so much nuclear waste is produced for every inhabitant of Slovenia that he can put it in a can of beer"* (head of the nuclear technology department).

As long as nuclear addicts trivialize nuclear waste, nuclear hazard will increase.

Nuclear Games without borders

According to the 2019 NEK Annual Report[5], the worst nuclear hazard, nuclear games without borders, is due to the NEK NPP Management Board, which shortens the time of regular overhauls. Due to nuclear games without borders, an INES 1 nuclear anomaly occurred.

1. Oona Scotti, Presentation of IRSN report on possible NPP Krsko II site. What are the implications of this report? Ljubljana, Slovenia 2.12.2013, 35 pages
2. https://zaensvet.si/nuclear-censorship/
3. 2019 Annual Report on Radiation and Nuclear Safety in the Republic of Slovenia
4. https://www.nirs.org/radioactive-waste/llw/
5. https://www.nek.si/upload/publications/



A nuclear anomaly occurred during the shortest overhaul.

The nuclear profession offers unique energy solutions, but at the same time it cannot take care of its waste. The scenario of nuclear advocates is transparent: waste from the NEK NPP should be taken care of and paid for by others, some other time. Something like this was said by Louis XIV, the Sun King: " After me, the flood!"

Social responsibility for nuclear waste

ARAO is a specialized professional organization in the field of radioactive waste management. They have a social responsibility to employ sustainable solutions and to avoid placing unnecessary radioactive waste management burdens on future generations [6].

With eloquence, with the word "unnecessary", ARAO shakes off the responsibility for burdening the later generations. The current benefits (nuclear energy) and the postponement of the elimination of the consequences of the use of nuclear energy to the next generations (landfill) is like a loan that will be repaid by our grandchildren.

As soon as a society realizes that it cannot provide a permanent solution for nuclear waste, it is obliged to stop burdening the environment with nuclear waste. Due to the greed of decision-makers on the use of nuclear energy, the current generation is exposed to nuclear gambling, and the next generations will be burdened with a nuclear legacy.

Radioactive waste

90% of radioactive waste is generated in the production of electricity at the NEK. Half of this waste belongs to Croatia and Croatians are obliged to take it away by 2025, in accordance with the international agreement.

LILW are a mixture of short-lived and long-lived nuclear wastes. It is precisely this duality that can lead to the mixing of long-lived HLW in the LILW repository. For this reason, the LILW should be treated as carefully as the HLW.

Among the countries with a nuclear program, the Republic of Slovenia remains one of the few that does not have a regulated final disposal for any type of radioactive waste. Nuclear waste dumps are expensive, which would blow away profits.

Fukushima and nuclear upgrade

The Fukushima nuclear disaster was a milestone. After that, all European NPP were inspected. The URSJV reports that, based on stress tests, the NEK is the best performing NPP in Europe. Even the best was not good enough, so in 2012 the URSJV prescribed measures to upgrade nuclear safety.

The upgrade measures should be completed by 2016, but are today still not completed. Moreover, under the cover of a safety upgrade program, investments were launched to extend the operation of the NEK NPP to full 60 years and to build an additional new NPP JEK2. At the same time, an oversized LILW nuclear waste disposal site is planned and an oversized temporary SFDS is already building.

Temporary SNF warehouse SFDS

Spent fuel is stored in the SFP. Under the cover of the nuclear upgrade, SFDS is supposed to be safer than SFP. In fact, they are preparing to store significantly larger amounts of nuclear waste, including the unremoved Croatian half of the waste.

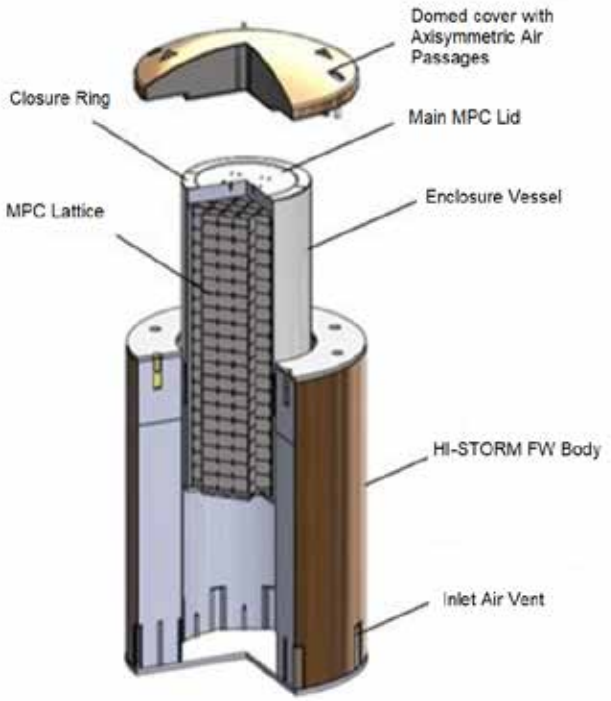
The capacity of SFDS will be sufficient for all spent fuel from the NEK until 2023 and additionally for SNF, which would arise from the possible extension of the NEK until 2043. It should be noted that the NEK does not have a permit to extend its operation beyond 2023, as it has not obtained an environmental impact assessment, cross-border project assessment, environmental consent or a PSR. Given the seismic exposure, the safety of the extension of the NEK's operation is questionable.

Without explanation, they are building an oversized SFDS, in which all highly radioactive waste from the NEK will be "temporarily" stored for at least 100 years and also HLW from the extended operation, although a permit for extension has not yet been obtained. The policy of faits accomplits?

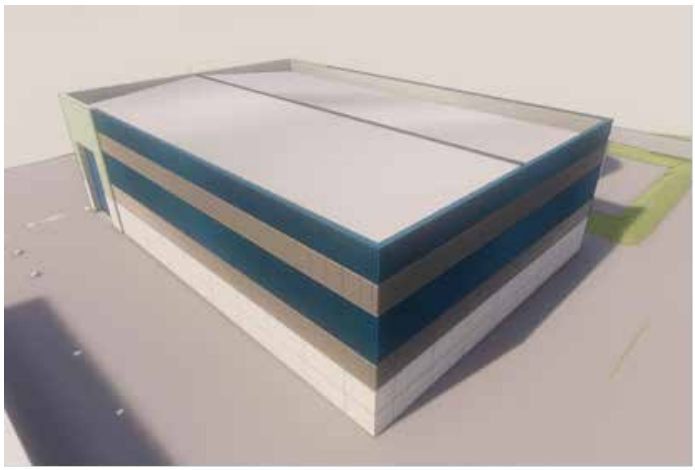
The SFDS building will house SNF in 70 HISTORM FW containers, for a total of 2,600 fuel elements. This is significantly too much, as the Slovenian half will have about 850 fuel elements after regular operation. The total capacity in SFDS and SFP will be 4,300 fuel elements!

Obviously, the SFDS is oversized for the needs of the NEK.

6. https://www.arao.si/index.php/en/arao/



HISTORM FW container, each will contain about 56 fuel elements.



View of the SFDS building 70 x 50 m. It will have 80 cm thick perimeter reinforced concrete walls 6 m high and a tin roof. Heat dissipation will be buoyant, with no auxiliary energy. Passive safety of heat dissipation will be ensured.

The Association of Ecological Movements ZEG[7] had several concerns about nuclear safety, in connection with the safety upgrade and a significant increase in SNF at the NEK site. Concerns were overheard.

The SFDS concept is simple: under the guise of a safety upgrade, the storage capacity needed to extend the operation of the NEK after 2023 will be increased. Spent and already cooled fuel, which is now temporarily stored in the spent fuel pool, will be moved to SFDS space for newly spent nuclear fuel from the extension of operation. Instead of taking the Croatian half of the SNF to Croatia by 2025, it will remain in Slovenia and will be moved to SFDS, and the amount of SNF at the NEK site will increase.

In this context, SFDS does not represent a significant safety upgrade and does not increase the level of nuclear safety. SFDS is designed for a lifespan of 100 years or more.

Significantly higher amounts of highly radioactive nuclear waste and significantly longer storage times in temporary storage mean an increase in nuclear risk due to natural, human and technical circumstances.

Permanent disposal of HLW

The operation of the temporary warehouse is planned for at least 60 years. The next generations will have to build a permanent HLW disposal, which is supposed to be in stable rock, more than 400 m underground. Only in this way will the descendants be able to provide safely stored nuclear waste for 100,000 years and more at their own expense. Those wastes that are generated by the current generations and from which only the current generation benefits.

There is serious doubt that it is possible to find a location in Slovenia for the permanent disposal of HLW, especially in terms of size, geological characteristics and tectonics. Therefore, it would be most appropriate for the NEK to seek permanent disposal of HLW in another European country, and at the same time stop creating new HLWs.

Permanent LILW disposal

The lifespan of low and intermediate level radioactive waste is 300 - 500 years.

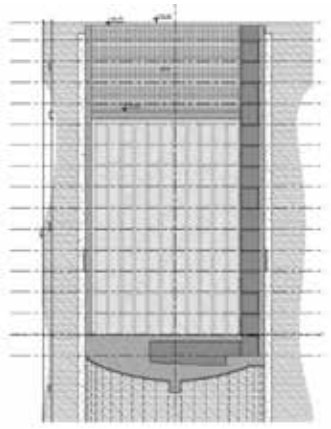
The principle of the near-surface LILW disposal, the first of its kind in the world, has been selected. Concrete containers with radioactive waste will be placed in a concrete silo 55 m deep and 27.3 m in diameter. The silo will be in the area under the level of groundwater.

After the closure, groundwater will begin to flow into the silo, and a flow of groundwater will be established through the silo. Water will also flush out radioactive waste.

ZEG has been assured that long-lived LILW will not be dumped. Are these just letters on paper or ARAO commitments?

7. www.zeg.si

Schematic of the silo before filling.



The concept of closing the silo after the end of operation.[8]

LILW will be placed in metal barrels or in bulk in 3.3 m high concrete containers. 99 containers will be placed in each level of the silo, a total of 990 containers in ten levels. The empty spaces between the containers will be concreted. Disposal waste will form a monolithic whole, earthquake resistant.

Engineering barriers are designed to protect LILW for 300 years, which is sufficient for short-lived waste. However, long-lived waste will also include long-lived radionuclides. Therefore, LILW in the Vrbina landfill will be potentially dangerous for thousands of years. The landfill is designed in such a way that a remediation will be possible, but technologically demanding and expensive.

The long-lived nuclear waste (approximately 250 m3 of long-lived LILW, including: Ra-226, Am-241, Pu-239 and U-238) will also be filed in LILW. This is unacceptable for the near-surface groundwater landfill concept, which has a planned leak of 300 years.

ZEG estimates that the concept of the landfill is inappropriate, the near-surface landfill in the groundwater zone is risky, long-term control is not defined, there is a high risk of unintentional intrusion ...

The longer action of tritium, which causes numerous DNA damage and cytogenetic effects, causes cancer during chronic exposure to tritium even at lower levels of exposure and longer exposure times, is ignored.

The precautionary principle

The precautionary principle is a fundamental principle of European environmental policy and means that, in case of doubt, the benefit of environmental protection overrides other interests. Nuclear technology allows the release of large amounts of thermal energy, but at the same time permanently burdens the environment.

Given that nuclear energy is not sustainable, it is not cheap, but it burdens the environment much more than fossil energy[9], both by heating the environment and by emitting greenhouse gases, and generating persistent nuclear waste, there is no reasonable reason to operate a NPP.

At the beginning of the nuclear age, there was a doctrine that nuclear weapons were the guarantor of world peace. The peaceful use of nuclear energy was a disguise for participating in the nuclear arms race. Predictions that nuclear energy will supply humanity safely and cheaply have not been fulfilled. The nuclear illusion dries up. In 2050, the share of electricity power from nuclear energy will fall from the current 5, 3% to 2.3%.

But Putin newly threatened with eventual use of nuclear weapons during his attack against Ukraine.

Nuclear energy is not a solution for climate change.

Large investments in nuclear facilities have become attractive to criminal groups active in many nuclear states. The sooner we shut down the NPP and dispose all nuclear waste safely, the sooner we will relieve the environment and protect the population.

By Matjaž Valenčič, B.Sc., independent energy expert

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List of abbreviations:

ARAO: Nuclear Waste Agency of Slovenia

HLW: High-Level Waste

IAEA: International Atomic Energy Agency

ILW: Intermediate Level Waste

JEK2: Krško Nuclear Power Plant 2

LILW: low and intermediate level radioactive waste

LLE: Low-Level Waste

NEK: Krško Nuclear Power Plant, NPP

NPP: Nuclear Power Plant

PSR: Periodic Safety Review

SFDS: Spent Fuel Dry Storage

SNF: Spent Nuclear Fuel

SFP: Spent fuel pool

URSJV: Slovenian Nuclear Safety Administration

ZEG: Association of Ecological Movements

8. Projektne osnove za odlagališče NSRAO Vrbina, Krško – faza presoje vplivov na okolje, ARAO 2018

9. http://coordination-antinucleaire-sudest.net/2012/index.php?post/2021/05/29/L-%C3%A9nergie-nucl%C3%A9aire-r%C3%A9chauffe-la-plan%C3%A8te%2C-le-climat-et-la-France

Energy transition without Gazprom and without new nuclear capacity

By Todor Todorov, staff member of Za Zemiata, Friends of the Earth, Bulgary

The energy transition in Bulgaria must lead to rapid and adequate structural reforms in the energy sector, leading to energy independence. That means no new NPP.

The Putin regime's war against Ukraine has debunked another myth in the nuclear lobby to ignore decentralization in the energy sector: that there are no wars in countries with nuclear power plants and gas pipelines. Russian troops occupied Chernobyl, there is a large repository for radioactive waste, and increased radiation was immediately reported, only from the movement of heavy military vehicles in the area. What if hostilities lead to fighting in this area? Zaporozhye NPP was also occupied, the largest in Europe with 6 reactors of 1000 MW each. For now, the occupation of the nuclear power plant is used only as a threat, but no one knows what could happen in the event of an unfavorable war for the Putin regime.

Surprisingly for the former rulers, a country with a nuclear power plant is subjected to military aggression

The energy transition in Bulgaria should lead to swift and adequate structural reforms in the energy sector which in turn will lead to energy independence. Supported by the budget and funds from the National Recovery and Resilience Plan and the Just Transition Fund, climate change mitigation and clean environment policies should be accepted as important for the whole society.

Putin's brutal aggression against Ukraine and the unprecedented sanctions imposed by the EU on Russia make it necessary to rethink the main directions of the country's energy plans.

The EU is trying to minimize energy dependence on Russia and this is an irreversible process.

Our government has neither the time nor the excuse to delay energy reforms. Adopting more ambitious green transition targets is a guarantee to increase the country's energy independence and to mitigate the consequences of new political and energy crises in the region.

The abandonment of the corrupt project for the construction of the The Belene Nuclear Power Plant , Kozloduy 7, as well as the contracts with Gazprom is mandatory.

We have been observing for decades the serving of private, oligarchic interests in the energy sector, to the detriment of the state, by various politicians and officials, as well as the prioritization of Russian energy interests at the expense of Bulgarian ones.

It is time to put an end to this corrupt pattern and finally turn our attention to sustainable solutions for increasing the country's energy independence, preserving nature and improving people's quality of life.

It is absurd that in 2022, the energy sector is still blocked by the same politicians who have been serving Russian energy interests for 30 years, condemning Bulgaria to energy mega-projects that limit the development of our economy.

Ministers from governments known for their huge corruption from the distant and more recent past - Rumen Ovcharov, Rumen Petkov, Rumen Gechev, the President Georgi Parvanov - continue to block the European path of the country's development in the direction of increasing energy efficiency, decentralization of electricity production and easier access to renewable energy for households. It is worrying that these have been given publicity in the media, as part of the ruling coalition, to campaign on an almost daily basis for the renewal of the discredited Belene Nuclear Power Plant project, which has caused losses of more than BGN 3 billion to the budget, as well as for gas projects relying on Russian gas.

Temenuzhka Petkova and Boyko Borissov still do not find the roadmap for the construction of Turkish/ Balkan Stream, a Gazprom project paid for with nearly 3 billion leva from the national budget and completely meaningless for the Bulgarian energy transition.

For decades, we have not heard from these politicians any proposals for protection of the environment, Bulgarian nature, or for improvement of air quality in the country. They never made the connection between improving people's health and quality of life and a clean environment.

The Putin regime's war against Ukraine has debunked another myth the above politicians have repeated without much thinking in order to ignore decentralization in the energy sector - *that wars are not fought in countries with nuclear power plants and gas pipelines.*

Russian troops occupied Chernobyl, there is a large radioactive waste storage facility there, and increased radiation was immediately reported, just from the movement of heavy military vehicles in the area. And what if military action leads to fighting in that area?

The Zaporizhzhia Nuclear Power Plant, the largest in Europe with 6 reactors of 1000 MW each, was also occupied. So far, the occupation of the NPP is only being used as a threat, but no one knows what might happen in case of unfavourable development of the war for Putin's regime.

The fires that have broken out in the area of the plant are a very serious warning that a nuclear catastrophe with worse consequences than Chernobyl and Fukushima could be triggered there.

Several gas pipelines were also blown up, which was not even noted as a major event - so much for the issue of "protecting" countries with nuclear power plants and gas pipelines from military action.

By the way, these examples should also be kept in mind by the EU in connection with the plan for categorising nuclear power and natural gas as 'green' energy sources.

The construction of a new nuclear power plant in Belene is impossible for many reasons, which we have previously written about (Nuclear power in Bulgaria - chaos, corruption and incompetence; Critical analysis of the rule of law in the licensing process of Belene NPP).

To these we may now add the EU sanctions on Russia and the impossibility of expecting Russian equipment for the already existing reactor, covered with plastic sheeting at the Belene site for years.

There is no need to mention the huge unresolved problem of the management and storage of high-level radioactive waste and spent nuclear fuel at the Kozloduy NPP, let alone adding another nuclear power plant.

For the same reasons as the sanctions, Kozloduy 7 is also impossible with a Russian reactor, and the US small modular reactors recently promoted by our politicians have no license anywhere in the world and the most optimistic date for building nuclear capacity with them is around 2035.

More on this topic:
https://www.zazemiata.org/malkite-modulni-reaktori/

In connection with the Russian aggression over Ukraine, Finland is assessing the security risks of the

planned Hanhikivi 1 nuclear reactor which is to be built by the Russian state-owned company Rosatom. The likelihood of the Finnish Government cancelling this project is high.

As a consequence of the sanctions on Russian banks, the fate of Hungary's Paks 2 nuclear power plant, which is planned with a EUR 10 billion loan from Russia, is also unclear.

The time of gas as a transitional fuel passed ten years ago. Just like Borissov's promises our country to become a gas hub in the Balkans.

Europe's vulnerability to fossil fuels is not a problem of today. Back in early 2009 Putin demonstratively stopped gas supplies through Ukraine, which affected several EU countries, including Bulgaria. But unfortunately, no measures have been taken to reduce the EU's dependence on Russian fossil gas.

The high energy prices in Europe since last autumn are also a consequence of the excessive share of gas and coal in the energy mix of European countries.

This gas and coal price shock has once again shown us that, by relying on fossil fuels, we are putting the economy not only in a position of uncertainty and dependence on unpredictable markets, but also in political and economic interests over which we have no control.

Now the Bulgarian government has the opportunity, together with EU partners, to take concrete measures for increasing the country's energy independence.

At the moment, it is particularly important to put an end to the campaign of some politicians and media in Bulgaria against the Green Deal, presented as "pressure from Brussels" against Bulgarian national interests and economic development.

Because of the sanctions against Russia following the war in Ukraine, the Swiss-registered company Nord Stream 2 has filed for bankruptcy and dismissed all its employees.

The trend is for the EU to minimize its dependence on Russian gas.

The changed environment in Europe puts the Bulgarian government to the test of implementing real reforms towards a fair energy transition even faster. We want to identify the steps that are so necessary in this process:

- Adoption of energy policies towards a green transition and a green economy.
- Abandonment of energy mega projects - NPP Belene, Kozloduy 7, combined-cycle power plants, which are blocking the development of the energy sector.
- Development of an energy sector based on modern renewable energy technologies, energy efficiency and decentralization of electricity production.
- Investing in renewable energy and energy storage technologies will be a key focus in the coming years. Moreover, there will be additional funds from the Recovery Plan, the Modernisation Fund, the Just Transition Fund and territorial plans.
- Planned and gradual decommissioning (phase out) of coal plants, starting with those that have not met environmental standards for years. Using funds from the Just Transition Fund to make the energy transition fair for workers in the sector.
- Establishing a detailed professional reorientation plan for employees affected by the energy transition, including an analysis of the jobs currently held, education level and age group, based on which a clear strategy for employee opportunities after the phase out of the coal facilities to be developed. This would significantly mitigate the negative attitudes of much of society in the region on the subject of energy transition.

We have other specific proposals and recommendations that we think the government should undertake and we are ready to provide expert assistance to the Ministry of Energy. We hope it will come out of its shell and lobbying interests, and open up to the capacity of NGO experts, energy experts and scientists.

By Todor Todorov, Za Zemiata and CEE Bankwatch National Energy coordinator for Bulgaria about Energy Transition

No complete nuclear exit after all in Belgium?

Doel 4 and Tihange 3 should run ten years longer than planned

March 11 movement, Belgium

The Belgian government has decided to keep the two least old nuclear reactors open longer. The war in Ukraine and the dependence on Russian gas are used as an alibi. Two new gas-fired power stations are planned at the same time. 1.2 Billion euro is also provided for renewable energy. This cocktail of conflicting elements is not a safe guarantee of a future with sustainable energy.

The government's decision includes several elements on nuclear power. Not only are two existing nuclear reactors being extended. It is again decided to invest in so-called small modular reactors. This also opens the way for new nuclear power plants.

In dangerous times, it is incomprehensible to continue to bet on dangerous nuclear energy. The government justifies its decision with the war in Ukraine. At the same time, it wants to become more independent of fossil energy sources, including Russian gas. What the war in Ukraine shows above all, however, is that nuclear installations are extremely dangerous war targets. For example, there was a temporary increase in radioactivity measured around Chernobyl, the nuclear power plant where reactor 4 exploded in 1986. That increased radioactivity was most likely related to troop movements. As a result, radioactive dust was blown up again that ended up in the ground 36 years ago in the explosion of Chernobyl 4. Worse still is the situation at the Zaporijia nuclear power plant. There was even a fire in one of the buildings. And for both nuclear power plants, will the supply of electricity, cooling water and equipped personnel be guaranteed? If not, a scenario like Fukushima is not imaginary. So why extend such dangerous targets in Belgium? So why even invest in research into new "small modular reactors"?

Moreover, it is not only fossil energy that keeps us dependent on foreign countries. This also applies to uranium. The majority of uranium is mined and processed in non-Western countries, such as Kazakhstan or Uzbekistan, and yes... Russia! What is the point of reducing the existing dependence on fossil resources in Russia if this dependence on nuclear matters is retained with two reactors? With a complete nuclear phase-out, we would have completely lost our dependence on foreign uranium supplies. But no, in the name of so-called 'energy independence', it is decided to remain 100% dependent on foreign uranium again.

Finally, the declaration states that it intends to amend the Safety Regulations Act of 2011, namely the "Royal Decree of 30 November 2011 laying down safety requirements for nuclear installations". What is the right content? The fear is that there will

The exploded reactor 4 in Chernobyl, in this picture only with the old encapsulation (Petr Pavlicek/IAEA, CC)

be a pressure anyway, now or later, to facilitate the extension of the two least old reactors. This could be done by considering putting certain safety obstacles in the balance, as promoters of SMRs also try to do.

Security of electricity supply becomes uncertain

But another hobbyhorse of the nuclear lobby has also been threatened. By extending two old reactors, it becomes highly uncertain whether there will be enough power after 2025. Because the whole procedure to extend nuclear reactors takes a long time. There is a good chance that this period will not be met. There are not only technical problems, such as the inspection works and adjustments during an extension. There are also the legal procedures that must be observed. For example, an environmental impact report will be required. Up to 1000 km around the reactors, people and governments can object. Given that there are several countries within 1000 km that clearly speak out against nuclear energy, the potential scale of resistance is very real. Moreover, the operator must still want this. Engie has no nuclear power plants in France, and would like to get rid of the Belgian nuclear power plants. That would certainly mean that an extension of the two least old reactors could fail. And that could pose even greater risks to security of supply.

Again insufficient investments in renewable energy and sustainable mobility

At the same time, the government wants to focus on tripling the existing offshore capacity. They also want to promote wind on land, and solar energy. While just over 1 billion euro (after deducting the planned budget for SMRs) is not nothing, it is quite too little for a truly ambitious renewable energy program.

The planned budget of 15 million for the railways is absolutely crazy. That is far from enough if the aim is to double the mobility share of the railways. They also want to build two gas-fired power stations. This in turn increases dependence on fossil sources, which in themselves are problematic for the climate. And it becomes completely cynical when one investigates to have the two nuclear power plants also produce hydrogen, which cuts off the way for truly green hydrogen using renewable energy.

Towards a 100 % renewable and climate positive alternative

For the March 11 movement, this decision needs to be reoriented. Investments in wind, solar and green hydrogen need to be made more quickly. The complete nuclear phase-out must be carried out. At the same time, the existing non-nuclear parts of the nuclear power plants can be integrated into new installations that are responsible for the production of climate-neutral and climate-positive energy. We think of green (and not so-called purple) hydrogen. But also of the production of electricity and heat using circular and green gases. When the released greenhouse gases are captured and reused, even more greenhouse gases can be removed from the atmosphere. That makes us independent of fossil and nuclear sources. That is really positive for the climate. And it is good for sustainable employment in Doel and Tihange.

Related publications on https://elfmaartbeweging.be

– Book “Invest in Doel 5”

– Series of 4 articles on SMRs: SMRs Are Expensive SMRs Undermine The Climate Policy SMRs Safe Nuclear Energy Does Not Exist SMRs Threaten The Energy Transition

Source: https://www.premier.be/nl/verlenging-levensduur-kerncentrales-doel-4-en-tihange-3

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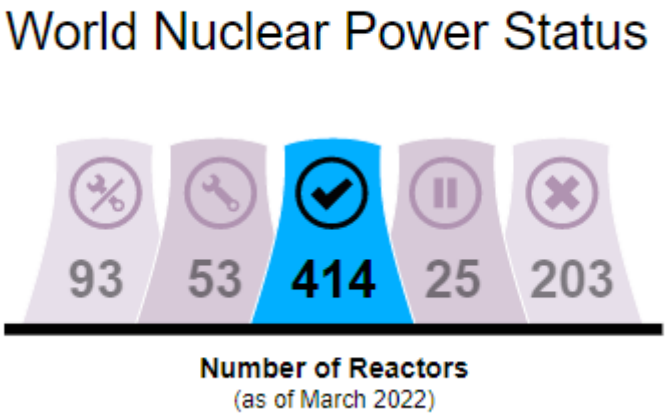

Source: https://www.worldnuclearreport.org/

New to grid

Finland, Finally after several years and numerous cost-overruns the Finnish Olkiluoto NPP came to grid. It is one of the three new nuclear power plants that are being build in Europe. In France there are still problems with the construction of Flamanville. In the Uk there are already huge delays in building two reactors at Hinkley Point C.

ANTI-NUCLEAR NEWS

Turkey The Turkish Greens started a petition to stop the Turkish-Russian cooperation on new Nuclear Power Plants. Russian Rosatom is the leading contractor to build Akkuyu NPP. The role of Rosatom worldwide in building sities has off course become questionable as a result of the sanctions imposed on Russia.

https://www.change.org/p/akkuyu-n%C3%BCkleer-santral-in%C5%9Faat%C4%B1-durdurulsun-t%C3%BCrkiye-rusya-n%C3%BCkleer-anla%C5%9Fmas%C4%B1-iptal-edilsin-www-change-org-akkuyudurdurulsun