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Monitored this issue:

Pınar Demircan wrote an analysis on Japans'policy of discharging nuclear wastewater and how it can be a precedent for more. This article was originally published in a shortened version by the Yesil Gazette of Turkey.

In this edition of the Nuclear Monitor, the second and final part of the lobby paper is published. This includes his analysis of the nuclear lobby in the European Union and the overall conclusions of his research

The first part was published in the previous edition of the Nuclear Monitor. The full article is also available via: https://eu.boell.org/sites/default/files/2023-06/nuclear_lobby_report_final.pdf

The Discharge of Fukushima's Radioactive Water Could Be a Precedent for Similar Actions

Behind the disregarding objections of global civil society and transforming the ocean into a nuclear waste dump lies a bigger goal inspired by capitalist practices that arise from its crisis: to achieve another thereshold by normalization of cost-cutting measures for the sake of nuclear industry.

This article was originally published in a shortened version by the Yesil Gazette of Turkey.

While the climate crisis is rapidly turning forests and habitats of living creatures into coal and ashes in Turkiye, Greece, Canada and in the world's seas, which are polluted with plastics and waste, these habitats are also recklessly covered with radioactivity due to profit and cost-centered policies. On the 24th of August, within the framework of the procedures carried out by the Japanese government and TEPCO, the discharge of 1.34 million tonnes of radioactive wastewater which is accumulated in tanks at the plant site was started.

The installation of a treatment system, costing a mere 23 million USD, and the discharge of wastewater without an Environmental Impact Assessment (EIA), foregoing safer alternatives such as solidification of wastewater into construction materials or long-term storage costing 100 times more, constitutes ecocide. Obviously this method of release that was stated to last for 40 years, indicates a systemic assault on the global ecosystem that is longer and more severe than apparent.

Japan is not telling the truth about 'purification'

The discharge process of the wastewater resulting from the complete meltdown of three reactor cores at Fukushima nuclear disaster started in 2011 is in the same danger level with the Chornobyl disaster. This fact highlights how it differs from the regular discharge processes of nuclear power plants and indicates the extent of danger that nuclear power plants are involved. Furthermore, the radioactive isotopes treated in the accumulated wastewater is only half of the true amount according to what was stated on the Japanese Ministry of the Environment's website.

A detail that has been overlooked untill today is that there is no information regarding the amount of discharge, while it is announced there is 40-year time frame for the disposal of radioactive water into the ocean. This indicates that the discharge amount may even be equivalent to the period of for example 100 years despite the duration is declared as 40 years. In addition, since the present objections are disregarded, it is worth considering the potential impact of future oppositions at the end of the 40 years.

A threshold to be achieved

Apparently, over the next decade, the radioactive water discharged from Fukushima is anticipated to disseminate into multiple seas worldwide, encompassing the Marmara, Mediterranean, Aegean, and

Black Sea. A scientific research[1] suggests that the evaporation in these seas will escalate industrial radioactivity levels in the ecosystem. But why can TEPCO, the Japanese government, and the IAEA disregard the adverse impact which puts them in a responsible position in the potential increase in cancer, DNA damage, increased miscarriages, and issues with raising unhealthy future generations worldwide? Behind the disregarding objections of global civil society and transforming the ocean into a nuclear waste dump lies a bigger goal inspired by capitalist practices that arise from its crisis: to achieve another thereshold by normalization of cost-cutting measures for the sake of nuclear industry.

It is also possible to consider the above statement with the possibility of adding the wastewater of other nuclear power plants across Japan to the 1 million 340 thousand tonnes of water accumulated in 10-12 years. While nuclear power plant operations are under higher costs and have to cope with four times cheaper renewable energy production costs, this action will create an ease for the nuclear industry. Crossing this threshold guarantees the capability to manage the hazards of the climate crisis to nuclear facilities since societal consent has been obtained for this plan of action. Imagine how beneficial it will be for he nuclear industry as the IAEA promises to support it by assisting it consisting of 410 reactors operating worldwide, 50 reactors under construction, and 80 reactors[2] in various stages of maintenance, repair, decommissioning, and dismantling.

Rosatom belonged to Russia, the owner of the Akkuyu Nuclear Power Plant of which the construction process reached final stage for the first reactor in Turkey, has a history of concealing accidents, such as the Mayak nuclear power plant accident, until the 1990s. Furthermore from 1948 to 2004 Rosatom discharged nuclear waste into the Techa River causing a questionable track record that suggests how legalization of nuclear discharge might be beneficial. It is also easy to predict the potential impact of this approach in the Mediterranean region by a nation with an underdeveloped democratic system and institutional dynamics dominated by political power[3]. This is especially important since an exemption made for the Akkuyu NPP in the article which allows the discharge water of the facilities around the Mediterranean temperature of the plant and allow the sea temperature to reach up to 35 Celsius and poses serious ecological indicating that Turkiye violates Barcelona Agreement.

The Role of the IAEA

The example of Fukushima's radioactive water discharege presents us a political power that has adopted the corporate management mantality prioritizing profits and interests under the guise of "efficiency" and profitability. The International Atomic Energy Agency (IAEA) plays a vital role in ensuring that nuclear energy generation is conducted safely and within established guidelines. However, a leaked document[4] from the IAEA reveals that the agency, which declared its support for TEPCO and the Japanese government, advised them to refrain from making statements that could portray nuclear power plants negatively and

[1] Nie, B., Yang, J., Yuan, Y., & Li, F. (2021). Additional radiation dose due to atmospheric dispersion of tritium evaporated from a hypothetical reservoir. Applied Radiation and Isotopes, 167, 109475.

[2] See https://www.worldnuclearreport.org/

[3] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=7221&MevzuatTur=7&MevzuatTertip=5 , article 33,table 2

[4] https://nuclear-news.net/2023/07/07/2-b1-iaea-chief-rafael-grossi-says-hes-satisfied-with-japans-plans-to-release-fukushima-wastewater/

disseminate information that influences the press and public opinion. As this scandal demonstrates how the IAEA, the Japanese government, and TEPCO are connected, it is important to consider the role of the IAEA as a highly regarded global organization.

It is noteworthy to mention the IAEA's involvement in the nuclear industry stems from a confidential agreement WHA 12-40[5] with the World Health Organization (WHO) in 1959. Stating that whenever either organization proposes to initiate a programme or activity on a subject in which the other organization has or may have a substantial interest, the first party shall consult the other with a view to adjusting the matter by mutual agreement.

Consequently, the IAEA, established to promote the growth of nuclear power plants worldwide, refrains from disclosing any potential health hazards faced.

Obviously, it would be misleading to rely on the IAEA's statements in which it was suggested that radioactive wastewater not posing any risk to global health. This information strengthens the likelihood that the IAEA did not reveal valid and precise radiation data regarding the Chornobyl and Zaporizhia nuclear power plants during the Ukrainian war too.

As it is important to inform the global society that the IAEA, which focuses mainly on promoting nuclear power plants, should not be involved in discussions related to public health in line with the principle of separating responsibilities to avoid conflict of interest. Therefore, it is recommended that civil society to inform the international community about the content of the recently disclosed IAEA document and demand an end to the discharge of radioactive water from Fukushima into the ocean. Accordingly, it should be ensured that all processes involved in disposing of radioactive contamination in Fukushima are subject to internal and financial control measures performed by a minimum of two separate units.

At this stage, it is essential to take measures by clarifying the issues emphasized by the non-governmental organizations following the processes, and it should be ensured that realistic solutions can only be produced with the involvement of a consortium of the neighbouring countries such as South Korea, China, Taiwan and Pasific Islands. In this regard, the process management for the construction of the steel dome shelter , which was completed in 2016 with the financing of 40 countries coming together in 1997 to protect the exploded fourth reactor of the Chornobyl Nuclear Power Plant from external weather conditions, can be taken as an example[6].

Undoubtedly, the economic and administrative control mechanism created for Chornobyl due to Ukraine's lack of financial resources is not acceptable for the technology giant Japan, which bears the costs of the disaster on its own. However, since global society has not entirely shown its commitment to changing the system, an in-system solution can prevent adding the radioactive disaster to the climate crisis before the transformation of life on the planet hits the constraints. In other words, claiming efficiency and profitability institutionalization of the logic of "running the state like a business," which has become the common discourse of political powers will at least help to achieve the rationality of emulated corporate management.

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[5] https://independentwho.org/en/who-and-aiea-aggreement/

[6] https://www.bechtel.com/projects/chernobyl-shelter-and-confinement/

Diversion from urgent climate action: How the European nuclear lobby undermines the EU's energy future – Part 2: the European Union

Nuclear lobby in the EU

The climate and energy debate within the EU is strongly influenced by national interests and views. Austria, Denmark, Germany, Lithuania, Portugal and Spain have traditionally developed a strong renewable energy-oriented discourse at the national level. In particular, the German energy transition, the Energiewende, that started in the late 1990s inspired many in the EU. An important role in this is played by the phase-out of nuclear energy that the country started in 2002, and confirmed in 2011 after the Fukushima catastrophe. The last three nuclear power plants were shut down in April 2023. On the other hand, countries in Central Europe have argued, both internally and with Brussels, that they can only face the climate challenge if they develop their traditional nuclear fleet. In Finland, Sweden and the Netherlands, new ecomodernist movements spread the belief that nuclear is now viewed positively, especially among the young – an image that draws attention in Brussels. France was divided and confused after its attempts to start a nuclear renaissance seemed to hit more and more barriers. The construction in Finland, France and the UK of what should have been the new nuclear flagship, the EPR reactor, became a saga of technical difficulties, resulting in construction delays and extreme budget overruns. Memorandum of understanding after memorandum of understanding did not bring any new contracts for the French nuclear industry, and new orders were delayed or simply did not materialise. Majority (and soon fully) state-owned nuclear giant EdF, which had acquired the French nuclear construction arm Framatom of the former Areva, slowly slipped into a de facto bankruptcy, but it was deemed too big to fail. In order to turn the tide, French president Macron decided to focus on a new nuclear renaissance, under French lead, building on the need for low-carbon energy: a jump forward to have nuclear declared "green" under the Taxonomy for Sustainable Finance and other EU policies. The traditional nuclear lobby saw the opportunity and jumped on board, ramping up its lobby efforts and communication in the Brussels bubble. On one side, they did this partially with the help of many new small groups that pushed nuclear as a key ingredient of climate action (active in the popular Brussels publication Euractiv, among others), and on the other side, supported by international institutions that traditionally promote nuclear technology, such as the IAEA and the OECDNEA, and those institutions that were instrumentalised to push a more nuclear-friendly message, such as the OECD's International Energy Agency (IEA) and the UNECE.

Who is who in the Brussels nuclear debate?

The traditional nuclear lobby

The nuclear industry has traditionally been very active in the Brussels bubble. Already at an earlier stage, during the development of the Euratom Treaty in 1957, large engineering firms with a potential stake in this then new market developed intensive networks to promote nuclear power. In 1960, six national associations of nuclear involved industries founded **Foratom** to represent the sector in

Brussels[1]. Since then, Foratom has been the main vehicle for the nuclear industry to influence policy in the EU institutions. In 2022, it changed its name to **nucleareurope**. According to its EU transparency register registration, it employs eight people on half-time basis, has an annual budget of up to EUR 400,000 and received EUR 70,772 in EU grants in 2022[2].It lists nine meetings with EU commissioners or their cabinets in the 2020/2021 run-up to the decision on inclusion of nuclear energy in the EU Taxonomy on Sustainable Financing[3]. It represents 15 national nuclear associations and six corporate members, as well as a total of nearly 3,000 companies, and has an office with 8 (half-time) lobbyists in Brussels[4]. Seven of its 22 member organisations are also individually registered in the EU Transparency Register[5], with a total of 45 lobbyists, most of them based in Brussels.

The former German Deutsches Atomforum, now called Kerntechnik Deutschland e.V., is not a member, but it is registered independently in the EU Transparency Register with one person working on European issues[6]. Kerntechnik Deutschland e.V. is further represented by the VGBE e.V. – the German association of energy companies, with three lobbyists.

Nucleareurope shares its office with two lobbyists from the European Nuclear Society (ENS) – the association of national nuclear societies and professionals[7]. Next to 22 national societies, ENS also has 31 corporate members, including nuclear construction companies Westinghouse, EdF/Framatom, GE-Hitachi, Rosatom (currently suspended), several main providers and operators, as well as research institutes.

Nucleareurope works closely with the global nuclear lobby **organisation World Nuclear Association** (WNA), with almost 200 member companies, among which are all the major actors on the global market. WNA has one

[1] Foratom, The History of Foratom 1960 – 2010, Brussels (2010): https://www.nucleareurope.eu/downloads/foratom-history/?wpdmdl=40836

[2] EU Transparency Register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=42433582-82, consulted 04/01/2023.

[3] https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=42433582-82&pdf=true

[4] file:///Users/laurence/Documents/%e2%80%a2%20JOB%20Laurence%20NEW/1199-HBS-E-paper/%20https://www.nucleareurope.eu/our-members/

[5] Registrations consulted 09/01/2023. Foro de la Industria Nuclear Española (Foro Nuclear) – 3 lobbyistsis: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=260551919108-63, Finnish Energy – 2 lobbyists in Brussels, total 19: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=68861821910-84 GIFEN – 6 lobbyists: https//ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=117423440302-21 ČEZ a.s. – 10 lobbyists: https:/c.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=429600710582-32 KGHM Polska – 16 lobbyists: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=458546625595-21 PGE (incl. PGE-EJ / PEJ) – 5 lobbyists: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=818300434979-49 URENCO – 3 lobbyists: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=352551438039-39

[6] https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=136929035888-78, consulted 09/01/2023.

[7] https://www.euronuclear.org/ EU Transparency Registry: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=083308125409-83, consulted 09/01/2023.

person dedicated to EU work.[8] All major nuclear operators and suppliers are represented in Brussels with their own lobby offices**. EdF/Framatom**, for example, operates an office with 14 lobbyists directly next to that of nucleareurope. It also houses a lobbyist for the Nuclear Generation II & III Association (**NUGENIA**)[9]. French nuclear fuel giant **Orano** has another office in Brussels, with nine people. **Hitachi** has an office with six, and **GE** has eight lobbyists. **Westinghouse** Europe/Middle East/Africa operates from Brussels, but is not registered in the EU Transparency Register. Korean nuclear conglomerate KHNP is represented in Brussels (with around 400 other companies, also including all the main Korean nuclear suppliers) through the Korea Business Association Europe (KBA Europe), which has four lobbyists in Brussels[10].

The Russian military–civilian nuclear giant **Rosatom** traditionally has a strong foothold in Europe, especially after the expansion of the EU eastwards. In 2017, it sponsored the Platts First European Power Generation Week in Brussels[11]. Rosatom played a strong and active role in the lobby towards taking up gas and nuclear energy in the EU Taxonomy on Sustainable Financing[12]. After the start of the Russian invasion in Ukraine, Rosatom largely escaped sanctions[13], and companies not falling under sanctions were explicitly exempted from the entrance ban to the European Parliament, decided on 22 June 2022[14]. Nevertheless, Rosatom seems to have disappeared from Brussels. It is no longer listed in the EU Transparency Register. Its subsidiary Rusatom International Network (RAIN), which on 19 April 2022 still featured on the EU Transparency Register[15],was removed. Rosatom subsidiaries Rosatom France, Atomenergoprom and AtomEnergoPromSbyt appeared on the EU Transparency Register in previous years – with Rosatom hiring at least two consultancies, and the other two having

[8] https://world-nuclear.org/ EU Transparency Registry: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=382541932700-21, consulted 09/01/2023.

[9] NUGENIA (https://snetp.eu/nugenia/) is not any longer registered in the EU Transparency Register. It used to be registered from 2017: https://www.lobbyfacts.eu/datacard/nuclear-generation-ii–iii-association?rid=499879825377-39, consulted 25/01/2023.

[10] Edf: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=39966101835-69 Orano: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=348369030395-22 Hitachi: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=50213201578-64 GE: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=4016736872-59 KBA: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=14966899031-34 All consulted 09/01/2023.

[11] https://rusatom-energy.com/media/rosatom-news/rosatom-supports-european-power-generation-week-in-brussels/

[12] Greenpeace Money for Change, How Russian Companies Lobbied for the EU Taxonomy to include Fossil Gas and Nuclear Energy, Brussels (2022) Greenpeace EU Unit: https://cdn.greenpeace.fr/site/uploads/2022/05/How-Russian-Companies-Lobbied-For-the-EU-Taxonomy-To-Include-Fossil-Gas-Nuclear-Energy-1.pdf

[13] Wesolowksy, Tony, The Rosatom Exemption: How Russia's State-Run Nuclear Giant Has Escaped Sanctions, Radio Free Europe / Radio Liberty, 15 June 2022: https://www.rferl.org/a/rosatom-russia-nuclear-giant-escapes-sanctions/31899192.html

[14] https://www.euractiv.com/section/politics/short_news/european-parliament-closes-doors-on-russian-lobbyists/

[15] See Greenpeace Money for Change (2022), end-note 110: https://cdn.greenpeace.fr/site/uploads/2022/05/How-Russian-Companies-Lobbied-For-the-EU-Taxonomy-To-Include-Fossil-Gas-Nuclear-Energy-1.pdf

top-level Commission meetings[16]. Rosatom's Brussels office is no longer listed on its webpages[17]. It was also ousted, after the Russian invasion in Ukraine, from one of its EU shop-window projects, the Fennovoima-led[18] nuclear project at Hanhikivi in Finland, with which it influenced Finnish positions in Brussels for quite a while[19]. In order to get a foot in the door, Rosatom even hired, in 2012, the Finnish head of the independent nuclear regulator STUK as vice-president of Rosatom Overseas – a function he started mere days after his retirement from STUK[20]. Given the increasing presence in Brussels of Rosatom in the last decade, it is unlikely it will have completely gone. Rosatom still has an office in France[21], it is still a member of the WNA, and customers with a large dependency, like Orano, EdF/Framatom and the Hungarian government, have continued to block any steps towards sanction measures against it. It also traditionally received extensive support from the Permanent Mission of the Russian Federation to the European Union in Brussels[22].

Next to the nuclear industry lobbying itself and its dedicated lobby companies, there is also a wide spectrum of **specialised lobby offices** that represent nuclear industry clients. For example, the former director of Foratom (now nucleareurope), Sami Tulonen, has run the Finnish business oriented Aula Europe consultancy since 2012[23]. Although the word nuclear does not appear in their PR material, nor in their EU Transparency Register entry, it is noticeable that in the run-up to the decision to include nuclear energy in the EU Taxonomy on Sustainable Finance, Aula Europe had several meetings with the European Commission on exactly that issue[24]. Aula Europe counts large nuclear companies like TVO and Westinghouse among its customers[25].

Another example is a report produced in January 2021, published by the Dutch far-right JA21 MEP Jan Roos for the European

[16] Rosatom France states in its 2016 entry that it hired lobby consultants Sass Consulting; it is also listed as a client of Acceleration Management Solutions in 2020: https://www.lobbyfacts.eu/datacard/rosatom-france?rid=114465516906-25; JSC Atomenergoprom: https://www.lobbyfacts.eu/datacard/jsc-atomenergoprom?rid=429690823502-77; AtomEnergoPromSbyt (AEPS): https://www.lobbyfacts.eu/datacard/atomenergopromsbyt?rid=820086423470-65; Acceleration Management Solutions S.A.M. (AMS S.A.M.), lobbying for INTER RAO (Rosatom's international branch): https://www.lobbyfacts.eu/datacard/acceleration-management-solutions-sam?rid=99314656229-90; consulted 17/01/2023; lobbying for Rosatom France: https://www.lobbyfacts.eu/datacard/acceleration-management-solutions-sam?rid=932094739001-26; all consulted 17/01/2023.

[17] https://www.rosatom-europe.com/contacts/

[18] EU Transparency Register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=51375423794-46, consulted 09/01/2023.

[19] https://www.reuters.com/world/europe/finnish-group-ditches-russian-built-nuclear-plantplan-2022-05-02/

[20] https://yle.fi/a/3-5054287

[21] Rosatom Western Europe SARL: https://www.rosatom-europe.com/

[22] Rosatom, Performance of State Atomic Energy Corporation Rosatom in 2020, Moscow (2021), page 70, 1.5.5. Developing the network of Rosatom's representative offices affiliated with embassies and trade missions abroad: https://rosatom.ru/upload/iblock/d83/d832075be25854001173de592f99953d.pdf

[23] http://www.aulaeurope.eu/en_GB/front-page

[24] https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=88742028087-64&pdf=true, consulted 31/01/2023.

[25] https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist. do?id=88742028087-64, consulted 31/01/2023

Conservatives and Reformists (ECR) group[26] to influence the discussion on inclusion of nuclear energy in the EU Taxonomy on Sustainable Finance[27]. This report was written by two professional lobbyists, the lawyers Katinka M. Brouwer, of consultancy Interlex N.V., and Lucas Bergkamp, at the time working for the large consultancy Hunter Andrews Kurth LLP[28]. The report does not assess legal aspects but mostly makes claims on the spatial requirements and costs of nuclear energy[29]. It was published with the claim that it is peer-reviewed, though potential co-authors and reviewers remain anonymous.

This means that there are well over 100 lobbyists from the top of the nuclear industry dedicated to influencing European nuclear policies. This is still apart from the presence in Brussels from the nuclear supply industry and the 19 other EU nuclear operators besides EdF. Furthermore, it must be noted that due to continuing poor registration, many of those lobbyists still do not appear on the EU Transparency Register or in compulsory meeting listings within the European Commission. A comprehensive listing of meetings with Members of the European Parliament or the delegations of the Member States to the European Council (among others, the Council Atomic Questions group) does not exist.

The SMR wave

Since the early 2000s, there has been an increasing interest in Brussels for so-called small modular reactors, or SMRs. These are new nuclear power reactor designs that are supposed to address the drawbacks of the current boiling water reactor (BWR) and pressurised water reactor (PWR) designs. The SMR narrative gained traction after the Fukushima nuclear accident and has been appearing everywhere in the nuclear debate in recent years, including in Brussels. Some of the designs come from the existing nuclear industry, like GE-Hitachi and EdF/Framatom, or from traditional nuclear countries like Belgium and the Czech Republic, and are lobbied for by them. But the SMR industry also includes new start-ups with new lines of financing and advocacy. How this SMR narrative influences the nuclear lobbying landscape can be illustrated by a recent article covering the SMR push in Canada[30].

A good example concerning the Brussels EU bubble is the **Breakthrough Energy Catalyst** Foundation of multi-billionaire and Microsoft founder Bill Gates. This organisation promotes

[26] https://ecrgroup.eu/article/ecr_co_commissioned_climate_study_advises_eu_to_embark_on_a_nuclear_renaiss

[27] Brouwer, Katinka M. LL.M. & Dr. Lucas Bergkamp (eds), Road to EU Climate Neutrality by 2050 – Spatial Requirements of Wind/Solar and Nuclear Energy and Their Respective Costs, Brussels (2021) ECR Group. Although it is mentioned in the report, the RENEW group never endorsed it: https://roadtoclimateneutrality.eu/Energy_Study_Full.pdf

[28] Neither of the authors or the consultancies they represent are listed in the EU Transparency Register, nor were registered before – searches done at https://ec.europa.eu/transparencyregister and https://www.lobbyfacts.eu/ on 31/01/2023.

[29] The study claims, for example, that 'In realistic scenarios, there is not enough land to meet all power demand if the Czech Republic and The Netherlands were to rely solely or predominantly on wind and solar power.' This is countered by most studies, including those of TNO and van de Ven e.a. in Nature (2021).

[30] Nelson & Joyce, Mini-Nukes, Big Bucks: The Interests Behind the SMR Push – Why Canada is now poised to pour billions of tax dollars into developing Small Modular Reactors as a "clean energy" climate solution, Sentinel 14 January 2021: https://watershedsentinel.ca/articles/mini-nukes-big-bucks-the-money-behind-small-modular-reactors/

SMRs worldwide, and Gates is involved in several SMR projects. The Brussels office registered six lobbyists active on the EU Transparency Register[31], but the list of meetings with the European Commission shows 27(!) meetings with European Commissioners or their cabinets in 2021 and 2022 concerning the energy transition, including meetings with Bill Gates himself[32].

Research groups

Another tool by which the nuclear industry traditionally influences Brussels nuclear policy is the use of **research groups**. The Euratom Treaty enables the establishment of large research projects on all aspects of nuclear technology. Participation in these groups consists of people from regulatory authorities, technical support organisations (some of which, like the French IRSN, are independent from industry, whereas others, like the Czech UJV or the Slovak VUJE, are owned by the industry), academia, industry and industry consultancies, and over the last few years have also included a few from civil society (French CLIs/ ANCCLI, Nuclear Transparency Watch and other civil society experts). For some issues, the industry has set up groups with their own specialists in order to run or co-ordinate research projects, or at least influence EU and Euratom research programmes. Examples include the Sustainable Nuclear Energy Technology Platform (SNETP), the Implementation of Geological Disposal Technology Platform (IGD-TP) and the Association for Multinational Radioactive Waste Solutions (ERDO).

SNETP[33] focuses on the development of small modular reactors and generation IV reactors (its original remit), mainly bringing together people from industry and the industry research community. It also hosts the SMR pre-Partnership, in which it brings together industry, staff of the European Commission DG ENER, the European Nuclear Regulator Group (ENSREG) and lobby group nucleareurope[34]. Through SNETP, the industry has regular access to the European Commission and policy making without it appearing in EU transparency registration.

IGD-TP is similarly organised around the issue of radioactive waste management[35]. Like SNETP on the issue of SMRs, IGD-TP wants to promote certain industry solutions to problems that the nuclear industry faces in order to take away barriers for further development of the sector. For IGD-TP, that is the issue of high-level and long-lived radioactive waste. It actively promotes deep geological disposal and wants to increase public confidence in it. It brings together a wide spectrum of consultancies and industrial research organisations with other industry lobbyists, such as nucleareurope and ENS. Although it initially stated it was open to all stakeholders in the field, an NGO like Greenpeace, that joined the Platform in 2010, left the organisation in 2012, after it became clear it was held outside of all important networking, decision making and working

[31] https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=424103441763-49, consulted on 31/01/2023.

[32] https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=424103441763-49&pdf=true, consulted 31/01/2023.

[33] https://snetp.eu/, European transparency register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=671767225420-82, consulted 17/01/2023.

[34] https://snetp.eu/european-smr-pre-parnership/

[35] https://igdtp.eu/

groups, and its suggestions were kept outside of policy and research documents[36].

ERDO started as an initiative to research the possibility for multi-national shared disposal sites for nuclear waste[37]. Radioactive waste organisations from Belgium, Croatia, Denmark, Italy, the Netherlands, Norway, Poland and Slovenia, as well as a Swiss consultants group, coordinate research and propagate a so-called dual-track approach that is used in the Netherlands, in effect, to silence much of the debate around nuclear waste. Temporary storage is made sufficiently long-term to pass the issue on to future generations, while at the same time the option of disposal outside of the country is kept open.

ERDO and IGD-TP are not registered on the EU transparency register, though they do facilitate contacts with the European Commission and the European Parliament and forward their agenda to argue that the radioactive waste problem should be seen as a minor issue.

Next to EU-wide nuclear research groups, national research institutes also reach out to the European Commission. These include, among others, the Commissariat a l'énergie atomique et aux énergies alternatives (CEA), from France[38]. The CEA has around 50 people involved in 'European Affairs', from which seven are accredited to access the European Parliament premises. Other research groups with a history of nuclear promotion that appear frequently at EU-organised events include SCK-CEN (Mol, Belgium)[39], NRG (Netherlands)[40], Helmholtz Gemeinschaft Deutscher Forschungszentren e.V. (Germany)[41], UJV (Řež, Czech Republic)[42] and others.

Under the Euratom Treaty, the European community plays an active role in promoting nuclear research to the benefit of the industry. For that, the **Joint Research Centre** was established in 1958, with research institutes in Belgium (Brussels – headquartered in Geel – directorate nuclear safety and security), Germany (Karlsruhe – research on nuclear safety and security), Italy (Ispra – nuclear safeguards, non-proliferation and nuclear security), the Netherlands (Petten – nuclear competence centre, policy support nuclear safety, JRC Euratom research and training) and Spain (Seville – economics). Over the years, the mandate of the JRC was expanded from Euratom and nuclear-related research to scientific support for the work of the European Commission. But due to JRC's history, it still has close links with the nuclear industry and is widely perceived as playing a promoting role for nuclear energy within the European Union. An important example of this was the JRC expert report to support the European Commission's decision to include nuclear energy in the Taxonomy on Sustainable Finance[43].

[36] https://www.nonuclear.se/files/greenpeace_withdrawl_letter_IGD_TP20120222.pdf

[37] https://www.erdo.org/

[38] https://www.cea.fr/, EU Transparency Register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=52774696782-43, consulted 17/01/2023.

[39] https://www.sckcen.be/en, not registered in the EU Transparency Register.

[40] https://www.nrg.eu/, not registered in the EU Transparency Register.

[41] https://www.helmholtz.de/, EU Transparency Register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=73792436593-97 – 10 people based in Brussels; consulted 17/01/2023.

[42] https://www.ujv.cz/en, not registered in the EU Transparency Register.

[43] https://publications.jrc.ec.europa.eu/repository/handle/JRC125953

Official European Commission advisory groups sometimes contain members from the nuclear industry. An example is the Group of experts on financial aspects of nuclear decommissioning and spent fuel and radioactive waste management[44], which counts four Bulgarian and four Slovak industry people among its members, as well as observers from the IAEA and OECD-NEA, two organisations with a nuclear energy promotion mandate.

Another large player in nuclear debates in Brussels is the Organisation on Economic Cooperation and Development (OECD), especially its nuclear agency **OECD-NEA**. This Parisbased agency brings together national governments and industry around nuclear issues, and participates in many meetings, commissions and other nuclear-related events. Where its sister agency the IEA has, over the last decades, been recognised as more or less objective, the OECD-NEA has a nuclear promotion mandate. This is not always very visible, and the organisation tries to keep up a veil of objectivity, but it can be recognised in its many reports that are widely used in the Brussels bubble[45], and during events that involve participation from the European Commission. It is important to note that the messaging of the OECD-NEA has also started influencing that of the IEA – especially where its energy scenarios are involved. The IEA has never modelled a development of nuclear phase-out in its annual World Energy Outlook, but did go along in modelling a scenario based on the WNA/OECD-NEA–promoted doubling of nuclear capacity in 2050[46].

Recently, the nuclear industry, and more specifically the WNA, has been using the front of the United Nations Economic Council for Europe (UNECE) for plugging positive studies about nuclear energy in Brussels, including a recent study on the footprint of different energy sources, where all sources of energy-related numbers in the nuclear sector appeared to stem from 'WNA consultation'(!)[47].

[44] https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=3777

[45] Although some OECD-NEA papers, like its regular overview table of nuclear liabilities or the famous annual red book on uranium resources, count as standard reference materials, others are strongly promotion biased. Recent examples of this include its Projected Costs of Generating Electricity, which reflects far lower LCOE costs for nuclear than, for example, the regularly updated independent Lazard Levelized Cost of Energy. Another example is the recent report on the Role of Nuclear Power in the Hydrogen Economy, which clearly has a promotion function. The NEA Small Modular Reactor Dashboard, starts on the basis of the highly non-scientific intervention of taking the average nuclear growth figures from all IPCC SR1.5 assessed scenarios to "predict" a tripling of nuclear capacity in 2050, and, in spite of an explicit emphasis on the use of public data, its SMR profiles show a strong optimistic bias regarding the stage of implementation, whereby any critical analysis of drawbacks (costs, risks, waste, proliferation, etc.) is completely lacking. The publication Meeting Climate Change Targets: The Role of Nuclear Energy repeats the earlier mentioned unscientific averaging of IPCC SR1.5 assessed scenarios, and already starts with the claim 'All credible models show that nuclear energy has an important role to play in global climate change mitigation efforts', in spite of IPPC's SR1.5 and AR6 clearly showing credible models that show global climate change mitigation pathways with a decreasing role of nuclear energy.

[46] In the IEA 2022 World Energy Outlook, its NZE-scenario postulates a more than doubling of nuclear capacity in 2050 compared to 2021: https://iea.blob.core.windows.net/assets/830fe099-5530- 48f2-a7c1-11f35d510983/WorldEnergyOutlook2022.pdf

[47] UNECE, Life Cycle Assessment of Electricity Generation Options, Paris (2021) United Nations: https://unece.org/sites/default/files/2021-10/LCA-2.pdf

The astroturf initiatives

Over several decades, quite a few people active within the industrial lobby and within the Euratom part of the European Commission have already found their way late in their careers, or after retirement, to small and often new organisations propagating nuclear energy, and are continuing to use their professional contacts and networks. These groups range from small, more research-oriented groups, like ENCO or Nucadvisor, to hard core propaganda groups like New Nuclear Watch.

The established nuclear lobby organisations have also set up astroturf initiatives. Nucleareurope (formerly Foratom) started the group Nuclear for Climate. WNA has its Women in Nuclear and Young Nuclear Generation. Nuclear utilities have set up the Group of European Municipalities with Nuclear Facilities (GMF).

This cloud of astroturf is present at all conferences and seminars organised around the EU institutions on the issue of nuclear power, and regularly issues reports that are implicitly or explicitly addressed to the European Institutions, or even on request of the European Commission itself[48].

Brussels also includes a large amount of more general lobbying NGOs, that cover a host of issues. Some of these have also taken up the role of nuclear propagandists, like the initiatives Confrontation Europe and its spin-off Entretiens Européens.

More recently, roughly since the dust of the Fukushima catastrophe started to settle a bit, another type of corporate organised non-governmental organisations (CONGOs) has started to appear. Small entities with names like Energy for Humanity and Voices of Nuclear were seen to enter the debate with argumentation that seems to be derived from, or is feeding into, the ecomodernist messaging. The larger ecomodernist movement joined the discussion around the EU Taxonomy debate in the form of the then just established brand RePlanet.

GMF – The Group of European Municipalities with Nuclear Facilities was established in 2000[49] by several mayors from nuclear municipalities with close relations to the nuclear industry. In the first decade and a half, it functioned as a nuclear promotion group, but in the latter half of the 2010s, participation from a more varied group of stakeholders has made it more independent, though many of its members are still close to the industry. After NGOs had left the European Nuclear Energy Forum because of greenwashing, GMF was invited to participate in the steering committee of this annual event to represent civil society.

Entretiens Européens[50] is an initiative of the study and training company ASCPE, set up by Claude Fischer-Herzog, which among other

[48] ENCO and Nucadvisor, for instance, participate in tenders for reports from the European Commission. Examples: https://op.europa.eu/en/publication-detail/-/publication/e6f9c4fb-8720-44e7-8ae5-331da3b1bfb8, https://op.europa.eu/en/publication-detail/-/publication/bf33494d-ec0d-11e9-9c4e01aa75ed71a1, https://op.europa.eu/en/publication-detail/-/publication/08f1e63d-a8cf-11ec-83e1-01aa75ed71a1/language-en

[49] https://gmfeurope.org/

[50] https://www.entretiens-europeens.org/ ASCPE, Entretiens Européens, andClaude Fischer-Herzog are all not registered in the EU Transparency Register. Confrontation Europe is registered as a think tank with five lobbyists, from which three with European Parliament accreditation: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=01995086879-32, consulted 25/01/2023.

issues, but with quite a bit of vigour, promotes nuclear energy at the European level. Fischer-Herzog, spouse of former communist MEP Philippe Herzog, boasts a large network in both the nuclear industry and Brussels. ASCPE/Entretiens Européens participated in the organisation of many nuclear promotion seminars in Brussels, including, for instance, in 2013 in Poland[51].

Voices of Nuclear is a French group that was set up by people with a background in the French nuclear industry[52], who earlier tried to improve the position of nuclear by industry activities within the climate debate. Although it claims to be independent, it receives funding from the French nuclear industry[53], and most of its active members also have backgrounds there. It indicates that it has six people actively working on EU nuclear policies. Its chair, Myrto Tripathi, suddenly rose to fame when she organised a debate in 2021 on the role of nuclear energy, together with Brussels media outlet Euractiv, in which she also used the RePlanet brand (as co-sponsor), but did disclose her links to the nuclear industry[54]. This led to the retraction of some members of the planned panel, including its moderator. Registration on the EU Transparency Register of Voices of Nuclear also dates from that period, possibly because such registration is compulsory when Members of the European Parliament participate in these kinds of activities organised by lobbyists.

Around this time, Voices of Nuclear became an important engine within the ecomodernist RePlanet movement. Tripathi wrote a piece with Dutch ecomodernist journalist and RePlanet co-founder Marco Visscher for Euractiv[55], on the day of the on-line seminar[56], promoting the uptake of nuclear in the EU Taxonomy. Furthermore, Tripathi registered the ecomodernist group RePlanet France – les Ecohumanistes, with five people involved in EU lobbying. Its sources of financing are unclear. It indicates that its entire income comes from the Stichting Ecomodernisme, the predecessor of RePlanet Netherlands[57].

Voices of Nuclear was one of the founding organisations of the ecomodernist umbrella organisation **RePlanet**[58]. RePlanet is not itself present in Brussels – its EU-relations person is Olguita Oudendijk, chair of RePlanet Netherlands. Besides its own registration, we also find its members RePlanet Netherlands[59],

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[51] http://agenda.euractiv.com/files/events/Invitation-EE-Pologne-2013_En.pdf

[52] https://www.voicesofnuclear.org/association/; EU Transparency Register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=069633344719-02, consulted 18/01/2023.

[53] See its EU Transparency Register entry: in 2021, it received €90,500 from French Framatom (EdF) and €10,000 from Orano.

[54] https://twitter.com/greenpeaceeu/status/1466029369969852427?lang=en

[55] https://www.euractiv.com/section/energy-environment/opinion/europe-must-support-nuclear-energy/

[56] https://events.euractiv.com/event/info/eu-taxonomy-for-sustainable-activities-should-nuclear-energy-be-left-out

[57] EU Transparency Register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=996159244455-38, consulted 30/01/2023.

[58] EU Transparency Register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=179551845769-58, consulted 30/01/2023.

[59] https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=766505844253-83 https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=996159244455-38 https://ec.europa.eu/transparencyregister/public/

RePlanet France – Ecohumanistes and the Öko-Progressives Netzwerk e.V. (ÖkoProg) in the EU Transparency Registration. Together they have 19 people listed as active on EU policy. In 2021, RePlanet Netherland's predecessor Stichting Ecomodernisme received a grant of EUR 900,000 from the foundation of the electronic finance market operator Quadrature.

Although RePlanet Netherlands, Finland and France have their own websites with full names, it is unclear who is behind RePlanet Europe, which only gives examples of activists under their first names. The website does not mention Oudendijk as EU-relations person.

One of the team members of Voices of Nuclear is the co-founder and director of another astroturf group, **Energy for Humanity**[60], Kirsty Gogan Alexander. In 2014, Gogan, a gifted speaker, set up this group with Robert Stone, the director of the ecomodernist and nuclear propaganda film Pandora's Promise[61]. In 2022, Energy for Humanity closed down. Although Gogan profiles herself as a former (or still active) environmental activist, her career started in UK government communication for, among others, the Department for Energy and Climate Change and the press office of the UK Deputy Prime Minister, after which she moved to the UK Nuclear Industry Association (UK-NIA) as a spokesperson.

After moving to Switzerland, she set up Energy for Humanity, profiling herself as an environmentalist who supports nuclear power. At Energy for Humanity, she was in close contact with other ecomodernists, like Voices of Nuclear[62] and the Finnish Ekomodernistit[63]. In 2022, she closed down Energy for Humanity after having joined the communication firm **LucidCatalyst**[64] as managing director and from there set up the non-profit **TerraPraxis**[65]. Both LucidCatalyst and TerraPraxis are promoting nuclear power, but hardly mention the word. In her bios for these organisations and others, as well as in media publications and her LinkedIn profile[66], Gogan Alexander's past in the UK-NIA is left out[67].

The former conservative Member of the UK Parliament Tim Yeo set up his own astroturf group New Nuclear Watch, also known as New Nuclear Watch Europe, and later turned into **New Nuclear Watch Institute (NNWI)**[68]. This group has regularly targeted the EU institutions, but has never included itself on the EU Transparency Register. In the past, two lobby companies registered New Nuclear Watch Europe as a client[69]. The NNWI cooperates with Bill Gates' TerraPower project (one of his SMR involvements) and Kirsty

consultation/displaylobbyist.do?id=645929844471-06, all consulted 30/01/2023.

[60] https://www.energyforhumanity.org/en/

[61] https://www.foe.org.au/pandora

[62] See: https://www.voicesofnuclear.org/association/

[63] See: https://ekomodernismi.fi/yhdistys/, where the Finnish Ecomodernists appear as the local branch of Gogan's Energy for Humanity

[64] https://www.lucidcatalyst.com/core-staff

[65] https://www.terrapraxis.org/about/our-team/kirsty-gogan

[66] https://www.linkedin.com/in/kirsty-gogan-alexander-frsa-fei-honfnuci-8153095/, consulted 25/01/2023.

[67] Although Gogan Alexander regularly has spoken at EU events, none of her initiatives, companies or even herself have ever been included in the EU Transparency Register.

[68] https://www.newnuclearwatchinstitute.org/

[69] Cambre Associates/SEC Newgate EU: https://www.lobbyfacts.eu/datacard/cambre-associates?rid=2 3020671103-67&sid=65113, https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=23020671103-67 Instinctif Partners: https://www.lobbyfacts.eu/datacard/instinctif-partners?rid=14365014904-34&s id=41946, consulted 06/02/2023.

Gogan's LucidCatalyst consultancy, as well as two Chinese entities (the Chinese nuclear operator and builder CGN and the Chinese Nuclear Energy Association), Korean KEPCO (the engineering firm working with KHNP) and the Canadian Nuclear Association[70]. Director Veronika Struharova comes from the UK chapter of Women in Nuclear (WiN)[71], the astroturf co-founded by Kirsty Gogan when she was still working as spokesperson for the UK Nuclear Industry Association.

Where Gogan and her groups came from outside the Brussels bubble, the astroturf organisation **weCARE** ('weCARE for Clean Affordable Reliable Energy for Societal Sustainability') was set up in 2019 by former employees of the European Commission DG Energy's nuclear departments, the Joint Research Council's nuclear research, Foratom/nucleareurope[72] and the nuclear industry. Among its member organisations, we see a mixture of industry astroturf[73], nuclear research astroturf organisations[74] and ecomodernist offspring[75]. WeCARE has built up a considerable lobby potential in Brussels with, according to its EU Transparency Registration, 13 people involved. None of its member organisations are registered on the EU Transparency Register. It claims to work on a zero budget.

It is noteworthy to see that in weCARE's self-descriptions, nuclear is only marginally mentioned, although its activities, as described in its activity reports, almost entirely centre on the promotion of nuclear power. This is something that reappears in several of their member organisations (e.g. Sauvons le Climat, TerraPraxis, EAES and ISE).

Networking

Next to one-on-one meetings with European Commission staff or Commissioners, networking during meetings plays an important role in the Brussels bubble. Seminars, workshops and conferences help in setting agendas and priorities. In the nuclear field, these include the bi-annual conference of the European Commission–established European Nuclear Regulators Group ENSREG[76], the annual European Nuclear Energy Forum (ENEF), workshops organised by the European Commission, the Aarhus Round Tables on Nuclear[77], conferences and workshops of the OECD-NEA, seminars in the European Parliament organised by one or more MEPs, and others.

In particular, **the European Nuclear Energy Forum (ENEF)**[78] plays an important role for the nuclear lobby. The Forum was established by a decision of the European Council in 2006 as a platform for discussion between all

[70] https://www.newnuclearwatchinstitute.org/about-us

[71] https://www.winuk.org.uk/about-us/governance/about-us-governance-executivecommittee/

[72] https://www.wecareeu.org/; weCARE founders are Marc Deffrennes (former European Commission DG ENER nuclear departments), Richard Ivens (former Foratom) and Serge Crutzen (former JRC nuclear). EU Transparency Register: https://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=473723535459-78, consulted 30/01/2023.

[73] These include: 100 TWh – Belgium; Jihočestí Tátkové – Czech Republic; Association for the Defense of Nuclear Heritage and Climate (PNC) – France; Sauvons Le Climat – France; Stichting Energietransitie & Kernenergie – Netherlands (see chapter on the Netherlands); 18for0 – Ireland.

[74] Including: the European Agency for Energy Security (EAES) – Slovakia, Austria, UK; Institute for Sustainable Energy (ISE) – Poland.

[75] Ekomodernistit Finland and TerraPraxis – UK.

[76] https://www.ensreg.eu/ensreg-conferences

[77] https://www.nuclear-transparency-watch.eu/acn-round-table

[78] https://energy.ec.europa.eu/topics/nuclear-energy/nuclear-safety/european-nuclear-energy-forum-enef_en

stakeholders on the opportunities and risks of nuclear energy and information and transparency on nuclear issues[79].It was shaped in a similar way as the already existing Madrid Forum on gas, the Berlin Forum on coal and the Amsterdam Forum on renewable energy and efficiency, with working groups and a plenary meeting organised in the capital of one of the, in this case, two organising Member States, namely the Czech Republic and Slovakia.

Initially, the Forum was accompanied by three thematic working groups, each with three sub-themes. The working group on opportunities was chaired by the then president of Foratom Jean-Pol Poncelet, and the working group on risks by EdF research director Noël Camercat. Only the working group on transparency had an independent chair, Janos Toth, succeeded by Richard Adams after his untimely passing, both from the European Economic and Social Council (EESC). The strong industrial bias within the working groups, as well as the small (invitation only) participation of civil society (Greenpeace, Friends of the Earth Europe and the French Réseau Sortir du nucléaire with each one person) made an objective discussion, as mandated by the Council, virtually impossible.

The important first half-yearly, later annual, plenary meetings of ENEF were run by the organising Member States Czech Republic and Slovakia as pro-nuclear events, where their top political brass, prime ministers and industry ministers, could especially show off to the national and international press the perceived importance of nuclear energy. Civil society groups tried to counter-balance this with critical interventions, even on some occasions with direct actions during the Forum, but in May 2009, the NGOs decided to withdraw from ENEF and called for a civil society boycott[80]. The ENEF continued without fulfilling its mandate from the Council. For that reason, there were discussions around 2015 to cancel it altogether, but the organising Member States Czech Republic and Slovakia used the European Council to force the European Commission to continue the Forum and make it live up to the mandate.

The European Commission then attempted to re-engage civil society participation over the newly established NGO Nuclear Transparency Watch (NTW) together with the European Environmental Bureau (EEB). These two organisations assessed, at the 2016 ENEF, possibilities to restart participation of civil society. They participated in the steering committee, next to the nuclear lobby, the organising Member States and the European Commission. After a very critical assessment[81], the working groups were abandoned, and an attempt was made to break open the format of the plenary sessions of the 2017 ENEF with the introduction of a World Cafe discussion in one of the topical sessions. Civil society participants without sufficient means were supported financially to attend. In an attempt to regain control, the Czech organisers suddenly, and without any coordination with the steering committee, featured Kirsty Gogan of astroturf Energy for Humanity as key-note speaker[82] Slovakia, as organiser of ENEF 2018, dropped changes to the format again and broke several agreements made during the steering committee sessions. Nuclear Transparency

[79] https://energy.ec.europa.eu/system/files/2022-06/2008_conclusion_mandate_of_the_forum.pdf
[80] https://friendsoftheearth.eu/press-release/ngos-walk-out-of-industry-dominated-nuclear-talking-shop/
[81] https://www.nuclear-transparency-watch.eu/a-la-une/opinion-on-ngo-participation-in-the-enef-conference-in-bratislava.html
[82] https://www.mpo.cz/assets/cz/rozcestnik/pro-media/tiskove-zpravy/2017/5/Programme-ENEF-2017.pdf

Watch and EEB decided to once more suspend their cooperation after this event[83]. Since 2022, the European Commission has again tried to involve civil society by inviting EEB and NTW, but it appears to be difficult to create a format in which Slovakia and the Czech Republic, as organisers, do not turn the event into greenwashing. ENEF 2023 will take place in Bratislava, with participation of the EEB and NTW in the steering committee, next to industry group Eurelectric, EESC, the originally astroturf group GMF, nucleareurope, the organising Member States Slovakia and Czech Republic, and European Commission DG ENER.

Pro-nuclear Member States

That the Czech Republic and Slovakia volunteered to organise the ENEF did not come as a surprise, nor that they use it as a vehicle for nuclear propaganda. In both countries, nuclear energy is historically deeply rooted (Slovakia producing well over 50% of its power from nuclear, the Czech Republic boasting a large nuclear construction industry), and can be considered as something like a religion. Critique on the technology is disproved of widely in both countries.

French president Macron announced in 2022 that France had abandoned its earlier policy to reduce reliance on nuclear energy. This happened in an attempt to tackle the financial and organisational problems its largely state-owned nuclear industry was sliding into. He easily found allies in Central and Eastern Europe. Within Poland, nuclear energy has become the golden bullet to end all energy discourse, and Hungary under Orbán is developing its nuclear sector arm in arm with Russia. Macron was easily able to bring in Slovenia, which was at the time ruled by the populist SDS of Janez Janša, as well as traditionally nuclear-oriented Romania. With this group of seven Member State allies, France launched a lobby push to get financing for nuclear energy falling under the Taxonomy on Sustainable Finance classification[84]. The group was later expanded, with the Christian Democrat–led Croatian government of Andrej Plenković and traditionally pro-nuclear Bulgaria, as well as Finland, Italy, the Netherlands, Romania and Sweden, to slide nuclear into any proposal from the European Commission dealing with renewable energy sources[85]. It is remarkable that at the founding meeting of this coalition, the European Commission was also represented.

France, the Czech Republic, Poland and Hungary most vigorously use their lobby machinery to support the nuclear industry. France and Hungary even use their veto, for instance, to prevent sanctions on the nuclear industry of Russia.

Who drives nuclear lobbying in the EU?

Where in the Netherlands the nuclear debate is mainly driven by political parties in parliament – either on ideological grounds (VVD and CDA) or a combination of ideology and opportunism (the far right) – in Brussels, the driving factors are governments of Member States, supported (or even spurred on) by a strong corporate

[83] https://www.nuclear-transparency-watch.eu/wp-content/uploads/2018/12/20181126-NTW-letterEU-Council-and-EU-Commission-on-ENEF-1.pdf

[84] https://www.euractiv.com/wp-content/uploads/sites/2/2021/03/Nuclear-letter-march-2021.pdf

[85] https://www.reuters.com/business/energy/france-seeks-pro-nuclear-alliance-eu-energy-talks-2023-02-27/

lobby under the lead of nucleareurope (formerly Foratom).

In both cases, a wave of mainly ecomodernist civil society groups and corporate astroturf organisations initiated this new nuclear lobby renaissance, but these seem to have lost a bit of their initial steam and moved more to the background.

The European Parliament appears to hardly play a role in this power field, apart from the odd parliamentarian questions or seminars. This is partly related to the fact that different than under the Treaty on the Functioning of the EU, under the Euratom Treaty, the European Parliament has no co-legislative functions. It only has an advisory role to the European Commission, comparable with the role of the EESC and the European Committee of the Regions.

The corporate pressure in Brussels can be relentless. For large nuclear corporations (like EdF, Westinghouse, KEPCO and GE-Hitachi), the many SMR-start-up lobbyists (like Bill Gates' Breakthrough Foundation) and companies (like Rolls Royce and NuScale), as well as several EU-based initiatives (like Thorion from the Netherlands and Fermi Energia from Estonia) and their corporate sponsors (e.g. Vattenfal from Sweden, Fortum from Finland, PGE and several other companies from Poland), the EU is the only market that could possibly give sufficient demand pull for a nuclear renaissance. With the existing reactor fleet steadily in decline, these companies are fighting for their survival, and the EU is a crucial market for that. This results in highly frequent meetings with top European Commission representatives, a lot of influencing in the European Parliament targeted at European Commission positions around financial support measures (Taxonomy, participation in renewables programmes, market mechanisms, etc.) and strong support (morally, but also logistically) for the pro-nuclear Member State coalition.

The European Commission has moved from its more or less neutral point of view at the end of the 2000s and 2010s, to a more supportive position. This is largely because of the pressure from the French-led coalition in the European Council, but also because of political position changes in key countries like the Netherlands, Sweden and Italy. Where a few years ago an older informal coalition of nuclear critical Member States, led by Austria and Luxembourg, but then also including Germany, Greece, Italy, Lithuania, Portugal, Spain and, at certain occasions, Ireland and Denmark, was able to generate attention and tone down support in the Council for nuclear interests, these have now been moved more to the background – not least because of political compromise positions weakening a strong critical stance on the side of Germany and the change of government in Italy.

The position of Germany deserves a bit more attention in this perspective. The Russian war in Ukraine has strengthened the position of the liberal FDP, as well as the pro-nuclear lobby within the social-democrat SPD, and facilitated some waves of attention for ecomodernist positions in the German media. This has made Germany more pragmatic in its dealings with nuclear issues at the EU level. However, because of a strong argumentative debate within the country itself, where not only the anti-nuclear movement is very vocal, but also renowned institutes like the German Institute for Economic Research (DIW), the Fraunhofer Institute or the traditionally nuclear-critical ÖkoInstitut, there continues to be balanced pressure on the government coalition not to completely let go of critical assessment of nuclear positions. This is true despite

Germany's recently completed nuclear power phase-out.

The point of gravity of the nuclear lobby is situated in the European Council and its interaction with the European Commission. This dynamic is the most difficult one to influence for civil society, because it involves national governments, where positions are adopted on a much more political, rather than an argumentative, basis.

In the argumentative debate, we see at the national level populist and political right-wing discussions building a positive image of nuclear energy, albeit based on simplified evidence. This undermines the anti-nuclear narrative, even if that is based on stronger evidence, and in spite of the realities on the ground in the form of a declining nuclear industry. But the open ears that the pro-nuclear lobby are finding, especially among young people, and the national political filter that influences positions of Member States in the European Council – the platform where the decisions that matter at the EU level are made – make it not exactly easy to overturn the current dynamic.

The only opening to counter the lobby seems to be over strong content argumentation directed towards the European Commission. Important, in this respect, is that the European Commission needs to deliver on an effective climate policy, which will be seriously undermined when money and political attention keep flowing to a non-delivering nuclear debate.

As we have seen earlier, the Council cannot bring an end to the diversion introduced by nuclear energy in the climate and energy debate under the barrage of lobbying from a large group of its Member States. The European Parliament has no decision power, but it could play a supportive role by organising seminars and direct contacts between MEPs and the European Commission, as well as blocking attempts to arrange further (climate-fruitless) financial support for nuclear energy at the EU level.

But the more visible these efforts are, the stronger counter-reaction they provoke from the side of the corporate lobby (especially nucleareurope and their allies) and from pro-nuclear movements like Entretiens Européens and RePlanet. And it is their visibility that gives wind in the sails to more pro-nuclear-oriented people within the European Commission. Which brings us back to the problem of the visibility of simplified bullet-point communication overruling the more tedious argumentation in all its necessary details, the latter of which is necessary to understand the counter-productive role of nuclear power in the climate, energy and sustainability discourses.

4. Final conclusions

There does not appear to be one coordinated nuclear lobby in Europe – neither at the EU level, nor at the national level. There are different streams that support the development of nuclear energy for different reasons: nuclear corporations, astroturf and/or "grassroots" initiatives, and political entities (political parties and EU Member States). But there is definitely synergy between these three streams. We see, as an example, the communication skills and bullet-point argumentation of the ecomodernist movement giving the more complex narrative of the nuclear industry the ammunition it needs to enter the party-political debate. And we have seen the simplified party-political debate at the national level create an unprecedented strong pro-nuclear coalition at the EU-level. This has resulted in a unified position with a very strong (mainly French, but not only) political drive to

push forward the nuclear agenda, no matter the negative consequences for the wider climate and energy debate. One observer characterised the current pro-nuclear movement in the EU as Macron and his 12 disciples, hinting at the messianic political drive behind it.

The combination of the rather catastrophic situation of the nuclear industry, a wave of populism riding social media dynamics, and financial and communicational opportunities arising from the need for urgent climate action within the EU, have all unleashed an unprecedented nuclear lobby effort in both national and EU platforms. Nuclear-critical actors – whether from the environmental movement, other civil society stakeholders, academia or stakeholders with a high interest in pushing forward urgent climate action – would be well advised to concentrate on those decision moments that currently divert substantial time, money and capacity from national governments away from effective urgent climate action. At the EU level, this should target the European Commission, which cannot afford to lose momentum in urgent climate action. At the Member State level, the power position of the nuclear coalition of Member States should be undermined, especially supporting nuclear-critical Member States with good, evidence-based information to counter the pro-nuclear narrative. And nuclear-critical Member States should be encouraged not to accept the diversion and slow-down with regard to urgent climate action that the pro-nuclear coalition is causing.

The upcoming crucial EU decisions on financial instruments, where the pro-nuclear Member State coalition are trying to find a way in, are, of course, fed by national debates on nuclear issues. And here, short, bullet-point pro-nuclear argumentation overshadows the complexity of the narrative that explains why nuclear energy is a barrier to urgent climate action. It also explains why the historical demise of nuclear power because of costs, complexity, risks, waste and proliferation continues to deserve paramount consideration. In particular, a lack of historical continuity in this debate has moved younger generations towards a less critical, or even supportive, position. In order to overcome the low level of critical reflection, more visibility by critical stakeholders on popular and social media platforms is needed to counterbalance the political pressure of the nuclear lobby. Good examples of that can be seen in the German debate around the nuclear phase-out, where top institutes, such as the Agora Energiewende, the German Institute of Economic Research (DIW), ÖkoInstitut and others, did not shy away from the public debate, to urge the energy transition forwards.

There is currently on the ground no visible renaissance of nuclear power in the Netherlands or the EU. All nuclear projects delivered in the EU this century have suffered, and continue to suffer, too many delays and cost overruns to give financiers sufficient trust for new nuclear adventures[86]. But there is undoubtedly a European renaissance of nuclear debates. These cover issues of lifetime extension of the current fleet, new projects based on existing nuclear power station designs and the introduction of new designs. In order to bring these about, the political and industrial nuclear lobbies focus all their efforts on securing finance – no matter what the cost. This includes painting nuclear energy as clean,

[86] These include: Temelín 1,2 in the Czech Republic; Cernavoda 1,2 in Romania; Mochovce 3 in Slovakia; and Olkiluoto 3 in Finland, as well as the three currently remaining nuclear construction projects (Mochovce 4 in Slovakia, Flamanville 3 in France and Hinkley Point C, construction of which started when the UK was still part of the EU.

green and sustainable, or even renewable. It encompasses attempts to ease planning procedures and reduce or undermine independence of the nuclear safety regulatory system, both in an attempt to reduce costs. It tries to ease financial state support at all levels.

These debates do not originate from a consideration for the climate, as is often claimed. The origin can be found in an industry that still has a high political standing because of its relation to nuclear weapons (at least in France and the UK), but also in its almost religious aura of being the pinnacle of engineering (especially in countries like the Czech Republic, Slovakia and Romania). Political opportunism also plays an important role: political groups that until recently, and in some instances still, deny the urgency of climate change push nuclear energy as a silver bullet for the climate in order to divert attention from the fact that they don't want urgent climate action to be taken at all. This is given extra air by populist ideologies that see an opportunity to counter the environmental movement narrative, which is perceived as over-directive.

This renaissance of nuclear debate should be considered dangerous because its diversion from urgent climate action can already be felt today. The greenwashing of the Taxonomy for Sustainable Finance has severely undermined the credibility of this tool, which was envisioned as speeding up corporate climate action. We see large sums of money diverted from climate funds towards nuclear projects that will unlikely be successful – for example, the EUR 5 billion from the EUR 35-billion climate fund of the Netherlands that will be spent on facilitation (not construction!) of new nuclear capacity (as mentioned above).

The influence of the nuclear lobby on national and EU decision processes is currently extra-proportional. To avoid nuclear diversion from urgent climate change causing real damage, academia, nuclear-critical governments and evidence-based independent civil society actors will need to recognise the deep roots that this nuclear lobby has grown within some of the EU Member States and the EU institutions, and that this influence is growing in conventional and new (social) media. Against the simplified claims about nuclear energy, it must now provide a clearer positive vision, where urgent climate action will be in the lead. A positive perspective of a more decentralised, less risky, more sustainable and cleaner energy system that can bring us, in reality, closer to a world where a 1.5° temperature increase this century is the maximum.

World Nuclear Power Status

Number of Reactors
(as of September 2023)

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

European Council agrees stance on electricity market reform

Following months of negotiations, the European Council has reached an agreement on a proposal to amend the EU's electricity market design, agreeing to include existing nuclear plants in the reform. The agreement could result in France dropping a scheme forcing state-controlled utility EDF to sell a portion of its nuclear energy production to competitors below market-level prices.

The European Council said the reform aims to "make electricity prices less dependent on volatile fossil fuel prices, shield consumers from price spikes, accelerate the deployment of renewable energies and improve consumer protection". The proposal is part of a wider reform of the EU's electricity market design which also includes a regulation focused on improving the EU's protection against market manipulation through better monitoring and transparency.

"The reform aims to steady long-term electricity markets by boosting the market for power purchase agreements (PPAs) generalising two-way contracts for difference (CfDs) and improving the liquidity of the forward market," the European Council said. "The Council agreed that member states would promote uptake of power purchase agreements by removing unjustified barriers and disproportionate or discriminatory procedures or charges. Measures may include among other things, state-backed guarantee schemes at market prices, private guarantees, or facilities pooling demand for PPAs."

The European Council - which is made up of representatives of the governments of EU member states - agreed that two-way CfDs would be the mandatory model used when public funding is involved in long-term contracts, with some exceptions. They would apply to investments in new power-generating facilities based on wind energy, solar energy, geothermal energy, hydropower without reservoir and nuclear energy.

The Council also agreed to remove the temporary nature of capacity mechanisms, support measures that member states can introduce to remunerate power plants in order to guarantee medium and long-term security of electricity supply.

The European Commission adopted the proposals on the reform of the EU's electricity market design on 14 March. However, a dispute between France and Germany over the role of nuclear power in European climate action has dominated negotiations for months.

Under the terms of the agreement, France will now be able to finance the extension of the operation of its existing fleet of reactors with two-way CFDs, in line with the Commission's initial proposal.

Currently, under the so-called Regulated Access to Incumbent Nuclear Electricity (Accès Régulé à l'Electricité Nucléaire Historique, ARENH) mechanism set up to foster competition, rival energy suppliers can buy electricity produced by EDF's nuclear power plants located in France that were commissioned before 8 December 2010. Under such contracts, between July 2011 and

December 2025, suppliers can buy up to 100 TWh - or about 25% of EDF's annual nuclear output - at a fixed price of EUR42 (USD47) per MWh. EDF operates 57 reactors in France, with a total capacity of 62.3 GWe, which together provide about 75% of the country's electricity.

Under the agreement reached by the European Council, the ARENH mechanism - which has attributed to lost earnings for EDF - could be replaced by CfDs when it expires at the end of 2025.

The Council's agreement will serve now as a mandate for negotiations with the European Parliament on the final shape of the legislation. The outcome of the negotiations will have to be formally adopted by the Council and the Parliament.

Researched and written by World Nuclear News