

— Press Coverage —
as of 27 Dec. 2020

— Press Agencies

- ⇒ **U.K.** – **Reuters** | Susanna Twidale – 24 Sept. 2020
« World's operating nuclear fleet at 30 year low as new plants stall: report »
→ <https://www.reuters.com/article/global-nuclearpower/worlds-operating-nuclear-fleet-at-30-year-low-as-new-plants-stall-report-idUSKCN26F0DQ>
- Also published by: • **Pakistan** – [Technology Times.pk](#)
• **India** – [Energyworld.com /The Economic Times India](#)
• **Russia** – [WOGNews](#)
• [Deccan Herald](#)
• [Carbon Brief](#)
• **Canada** – [Financial Post](#)
...
- ⇒ **FRANCE** – **Agence France Presse (AFP)** | 24 Sept. 2020 **in French**
« Renewable energy "restisted better to the pandemics than nuclear (report) »
« L'énergie renouvelable a "mieux résisté" à la pandémie que le nucléaire (rapport) »
- Also published by: • **France** – [Ouest France](#)
• **France** – [Le Figaro](#)
• **France** – [France 24](#)
• **France** – [RTL Info](#)
• **Belgium** – [RTBF](#)
• **France** – [L'info Durable](#)
• **France** – [Challenges](#)
• **France** – [La Croix](#)
• **France** – [Connaissance des Énergies](#)
• **France** – [La Tribune + YAHOO!](#)
• **France** – [Sciences & Avenir](#)
• **France** – [msn news](#)
• [ABC Bourse](#)
• [ALGERIE ÉCO](#)
• [TV5 Monde](#)
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- ⇒ **PORTUGAL** – **LUSA - Agencia de Noticias de Portugal SA** | 24 Sept. 2020 **in Portuguese**
« Covid-19: Produção da energia renovável resistiu melhor à pandemia do que a nuclear »
- Also published by: • **Portugal** – [Saudemais.tv](#)
• **Portugal** – [tvi24](#)
- ⇒ **ITALY** – **Agencia Telegrafica Svizzera**
« PROGRAMMA ODIERNO - ESTERO »
→ Simple announcement of the release

- ⇒ **U.S. – Bloomberg Quint** | Jonathan Tirone – 25 Sept. 2020
 « Nuclear Power Wants to Hitch Its Fortune to the Hottest New Fuel »
 → <https://www.bloombergquint.com/business/nuclear-power-wants-to-hitch-its-fortune-to-the-hottest-new-fuel>
- Also published by: • Canada – **Yahoo! Finance (Canada)**
 • Canada – **Financial Post**
 • India – **The Print**
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- ⇒ **U.K. – Reuters** | Nina Chestney & Susanna Twidale – 21 Dec. 2020
 « Climate could pay the price as Europe's nuclear plants age »
 → <https://www.reuters.com/article/us-europe-nuclearpower-analysis/climate-could-pay-the-price-as-europes-nuclear-plants-age-idUSKBN28V26D>
- Also published by: • U.S. – **Oil & Gas 360**
 • U.S. – **News Break**
 • Singapore – **The Straits Times**
 • South Africa – **Share Net**
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Trade Journals

- ◆ **Montel** | Leila Fernández Thévoz – 24 Sept. 2020 Paywall **[Full Text]**
 « EDF's reactor outage extensions rise 44% in 2019 »
 → <https://www.montelnews.com/en/story/edfs-reactor-outage-extensions-rise-44-in-2019/1150981>
- ◆ **pv magazine** | Emiliano Bellini – 24 Sept. 2020
 in EN « 'Nuclear power is now the most expensive form of generation, except for gas peaking plants' »
 → <https://www.pv-magazine.com/2020/09/24/nuclear-power-is-now-the-most-expensive-form-of-generation-except-for-gas-peaking-plants/>
- in FR « Le nucléaire est aujourd'hui la forme de production la plus coûteuse, hors centrales à gaz de pointe (WNISR) »
 → <https://www.pv-magazine.fr/2020/09/25/le-nucleaire-est-aujourd'hui-la-forme-de-production-la-plus-couteuse-hors-centrales-a-gaz-de-pointe-wnizr/?>
- ◆ **S&P Global** | Henry Edwardes-Evans & Jonathan Fox – 24 Sept. 2020
 « Global nuclear needs 105 GW of additions to 2030 to stand still: report »
 → <https://www.spglobal.com/platts/ru/market-insights/latest-news/electric-power/092420-global-nuclear-needs-105-gw-of-additions-to-2030-to-stand-still-report>
- ◆ **NucNet** | David Dalton – 24 Sept. 2020
 « Status Report/Number Of Operating Reactors Has Fallen, But Sector Expands In China »
 → <https://www.nucnet.org/news/number-of-operating-reactors-has-fallen-but-sector-expands-in-china-9-4-2020>
- ◆ **ENDS Europe** | Laura Cole – 25 Sept. 2020 Paywall **[Full Text]**
 « Nuclear power 'irrelevant' to climate crisis »
 → [https://www.endseurope.com/article/1695416/nuclear-power-irrelevant-climate-crisis?bulletin=bulletin%2Fendseurope&utm_medium=EMAIL&utm_campaign=eNews%20Bulletin&utm_source=20200924&utm_content=ENDS%20Europe%20Daily%20\(188\);www_endseurope_com_articl_7&email_hash=](https://www.endseurope.com/article/1695416/nuclear-power-irrelevant-climate-crisis?bulletin=bulletin%2Fendseurope&utm_medium=EMAIL&utm_campaign=eNews%20Bulletin&utm_source=20200924&utm_content=ENDS%20Europe%20Daily%20(188);www_endseurope_com_articl_7&email_hash=)
- ◆ **OilPrice.com** | Haley Zaremba – 27 Sept. 2020
 « Why Is Nuclear Energy So Expensive? »
 → <https://oilprice.com/Alternative-Energy/Nuclear-Power/Why-Is-Nuclear-Energy-So-Expensive.html>
- Also published by: • **Yahoo! Finance**
 • Denmark – **Finanz.dk**
- ◆ **Kitco** | Michael McCrae – 29 Sept. 2020
 « Renewables tighten chokehold on nuclear- report »
 → <https://www.kitco.com/news/2020-09-29/Renewables-tighten-chokehold-on-nuclear.html>
- ◆ **Nucleonics Week and S&P Platts – Inside NRC** | Andrea Jennetta – 01 and 12 Oct. 2020 **[Full Text]**
 « US nuclear outages shorter as pandemic measures curb scope of work »
- ◆ **Power in Europe | Platts** | Henry Edwardes-Evans – 05 Oct. 2020 **[Full Text]**
 « Global nuclear needs 105 GW of additions to 2030 to stand still: report »

- ◆ **Clean Technica** | Johnna Crider – 06 Oct. 2020
« Nuclear Energy — The High Cost Of A Dying Industry »
→ <https://cleantechnica.com/2020/10/06/nuclear-energy-the-high-cost-of-a-dying-industry/>
French translation also published on: • [FR24News](#)
- ◆ **Hazardex** | 06 Oct. 2020
« Size of global nuclear fleet reaches 30-year low, new report shows »
→ <http://www.hazardexonthenet.net/article/181245/Size-of-global-nuclear-fleet-reaches-30-year-low--new-report-shows.aspx>
- ◆ **EnergyTrend** | 13 Oct. 2020
« Nuclear Energy Sustains Worsening Development Under COVID-19 Pandemic Due to Highest Power Generation Cost »
→ <https://www.energytrend.com/news/20201013-19486.html>
- ◆ **OilPrice.com** | Haley Zaremba – 15 Oct. 2020
« The World's Growing Nuclear Waste Dilemma »
→ <https://oilprice.com/Alternative-Energy/Nuclear-Power/The-Worlds-Growing-Nuclear-Waste-Dilemma.html>
- ◆ **pv magazine** | Hans-Josef Fell (President of EWG) – 15 Oct. 2020 **in German**
« The Future is solar, and not nuclear »
“Die Zukunft ist solar und nicht nuclear”
→ <https://www.pv-magazine.de/2020/10/15/die-zukunft-ist-solar-und-nicht-nuklear/>
Also published by: • [FinanzNachrichten.de](#)
• [Sonnenseite](#)
- ◆ **S&P Platts — Nuclear Fuel** | William Freebairn – 19 Oct. 2020 **[Full Text]**
« US nuclear outages shorter as pandemic measures curb scope of work »

Professional & Other NGOs

- ◆ **CZECH REPUBLIC – Temelín.cz (by CALLA)** | 24 Sept. 2020 **in Czech**
« World Nuclear Industry Status Report: We produce more electricity from renewable sources than from nuclear power »
« Zpráva o stavu jaderné energetiky 2020: Z obnovitelných zdrojů vyrábíme více elektřiny než z jádra »
→ <https://temelin.cz/aktuality/energeticka-politika/zprava-o-stavu-jaderne-energetiky-2020-z-obnovitelnych-zdroju-vyrabime-vice-elektriny-nez-z-jadra>
- ◆ **Beyond Nuclear** | 25 Sept. 2020 **with VIDEO**
« Renewables soar while nuclear continues to struggle »
→ <http://www.beyondnuclear.org/home/2020/9/25/renewables-soar-while-nuclear-continues-to-struggle.html>
- ◆ **Nuclear Free Local Authorities** | 25 Sept. 2020
« EDF's reactor outage extensions rise 44% in 2019 »
→ <https://www.nuclearpolicy.info/news/key-findings-2020-world-nuclear-industry-status-report-nuclear-industry-in-crisis-renewables-rapidly-growing/>
- ◆ **SOUTH KOREA – Energy Transition** | 25 Sept. 2020 **in Korean**
« WNISR2020 assessment task facing the era of nuclear power and COVID-19 »
« WNISR2020 평가 과제 원자력의 시대에 직면하고 COVID -19 »
→ <http://energytransitionkorea.org/post/36695>
- ◆ **CANADA – Various public interest groups** | 20 Oct. 2020 **News Release**
« Groups say federal funding of new nuclear reactors is a “dirty, dangerous distraction” from tackling climate change »
→ <https://miningwatch.ca/news/2020/10/20/groups-say-federal-funding-new-nuclear-reactors-dirty-dangerous-distraction-tackling?>
- ◆ **Beyond Nuclear** | David Thorpe – 8 Nov. 2020
« A secret military-energy agenda »
→ <https://beyondnuclearinternational.org/2020/11/08/a-secret-military-energy-agenda/>
Also published on: • [The Fifth Estate](#) – “[How the UK's secret defence policy is driving energy policy – with the public kept in the dark](#)”
- ◆ **HUNGARY – EU SOLAR** | 11 Nov. 2020 **in Hungarian**
« Nuclear power plants break negative records! So what will save the future? »
→ <https://www.eu-solar.hu/blog/negativ-rekordokat-dontogetmek-az-atomeromuvek-akkor-mi-menti-meg-a-jovot/>

- ◆ **GERMANY – IWR (Internationalen Wirtschaftsforums Regenerative Energien)** | 13 Nov. 2020 **in German**
 « Atomenergie wird für Stromerzeugung irrelevant - zu teuer und zu langsam »
 → <https://www.iwr.de/news/atomenergie-wird-fuer-stromerzeugung-irrelevant-zu-teuer-und-zu-langsam-news37071>

- ◆ **CANADA – Canadian Environmental Law Association** | 17 Nov. 2020
 « Statement on Small Modular Reactors »
 → <https://cela.ca/statement-on-small-modular-reactors/>

- ◆ **SWITZERLAND – Swiss Energy Foundation (SES)** | Valentin Schmidt – Issue 4/2020 of « Energy und Umwelt » [Interview with Mycle Schneider]
 « Every technology reaches its economical limits with age »
 «Jede Technologie kommt im Alter an ihre wirtschaftlichen Grenzen»
 → <https://www.energiestiftung.ch/id-2020-4-world-nuclear-industry-status-report-2020.html>

Politicians & Political Parties

- ◆ **CANADA – Green Party of Canada** | 10 Nov. 2020
 « Greens call on federal government to abandon nuclear and invest in renewables »
 → <https://www.greenparty.ca/en/media-release/2020-11-10/greens-call-federal-government-abandon-nuclear-and-invest-renewables>

Blogs & Podcasts

- ◆ **GERMANY – UmweltFAIRaendern** | Dirk Seifert – 25 Sept. 2020 **in German**
 « Renewables outpace Nuclear Electricity: World Nuclear Industry Status Report 2020 »
 « Erneuerbare überholen Atomstrom: World Nuclear Industry Status Report 2020 »
 → <https://umweltfairaendern.de/2020/09/erneuerbare-ueberholen-atomstrom-world-nuclear-industry-status-report-2020/>

- ◆ **AUSTRALIA – Solar Quotes** | Michael Bloch – 28 Sept. 2020
 « World Nuclear Industry Status Report 2020 Released »
 → <https://www.solarquotes.com.au/blog/nuclear-report-2020-mb1699/>

- ◆ **Watt-Logic** | Kathryn Porter – 30 Oct. 2020
 « Nuclear power could be a key enabler for net zero »
 → <http://watt-logic.com/2020/10/30/options-for-nuclear-power/>

- ◆ **SWITZERLAND – 2000Watts.org** | Laurent Horvath – 01 Nov. 2020
 « Energies, Economie, Pétrole et Peak Oil: Revue Mondiale Octobre 2020 »
 → <https://2000watts.org/index.php/energies-fossiles/peak-oil/1178-energies-economie-petrole-et-peak-oil-revue-mondiale-octobre-2020.html>

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- ◆ **AUSTRALIA – Solar Quotes** | Michael Bloch – 11 Nov. 2020
 « Senator Sam McMahon Still Backing Nuclear Power For NT »
 → <https://www.solarquotes.com.au/blog/mcmahon-nuclear-renewables-mb1756/>

- ◆ **Redefining Energy** | Laurent Segalen (Investor) – Dec. 2020 [30min]
 « Episode 39. Nuclear Industry, the autopsy »
 → <https://energycentral.com/c/pip/39-nuclear-industry-autopsy-redefining-energy-podcast>

BY COUNTRY

Austria

- ◆ **Oekonews.at** | Fritz BinderKrieglstein – 01 Oct. 2020 **in German**
« Nuclear power isn't advancing and grows old »
« Atomkraft kommt nicht voran und veraltet »
→ <https://www.pressreader.com/austria/der-standard/20201012/281767041692739>
- ◆ **Der Standard** | Günther Strobl – 12 Oct. 2020 **in German**
« The nuclear industry also suffers under Corona »
« Auch Atomindustrie leidet unter Corona »
→ <https://www.pressreader.com/austria/der-standard/20201012/281767041692739>

Belgium

- ◆ **Le Soir** | Bernard Padoan (with AFP) - 25 Sept. 2020 **Paywall** **in French**
« Energy: the Nuclear Industry wasn't spared by the pandemic »
« Energie: l'industrie nucléaire n'a pas été épargnée par la pandémie »
→ <https://plus.lesoir.be/327334/article/2020-09-24/energie-lindustrie-nucleaire-na-pas-ete-epargnee-par-la-pandemie>
- ◆ **Business am Weekend** | Marc Horckmans (with Reuters) - 25 Sept. 2020 **in Dutch**
« Number of nuclear reactors worldwide at lowest level in more than thirty years »
« Aantal kernreactoren wereldwijd op laagste niveau in ruim dertig jaar »
→ <https://businessam.be/aantal-kernreactoren-wereldwijd-op-laagste-niveau-in-ruim-dertig-jaar/>
- ◆ **deMoeial.be** | Auriane van der Vaeren - 17 Nov. 2020
« Nuclear Energy: Two words radiating powerfully when whispered jointly »
→ <https://demoeial.be/2020/11/17/nuclear-energy-two-words-radiating-powerfully-when-whispered-jointly/>

Bulgaria

- ◆ **The Bulgarian Times** | **in Bulgarian**
→ <https://thebulgariantimes.com/Статус-на-световната-ядрена-мафия-към/>
- ◆ **Money.bg** | Bozhidar Angelov - 24 Oct. 2020 **in Bulgarian**
“The dilemma of the growing amount of nuclear waste”
Дилемата за нарастващото количество на ядрените отпадъци
→ <https://money.bg/panorama/dilemata-za-narastvashoto-kolichestvo-na-yadrenite-otpadatsi.html>

Canada

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« World Nuclear Industry Loses Ground to Cheap Renewables as Canada Considers Small Modular Reactors »
→ <https://theenergymix.com/2020/09/27/world-nuclear-industry-loses-ground-to-cheap-renewables-as-canada-considers-small-modular-reactors/>
- ◆ **The Energy Mix** | 05 Oct. 2020
« Throne Speech Quietly Declares Support for Nuclear Reactor Development, New Brunswick Opponent Warns »
→ <https://theenergymix.com/2020/10/05/throne-speech-quietly-declares-support-for-nuclear-reactor-development-new-brunswick-opponent-warns/>

China

- ◆ **South China Morning Post** | Echo Xie - 28 Sept. 2020
« China says it has completed development of CAP 1400 third-generation nuclear technology »
→ <https://www.scmp.com/news/china/society/article/3103398/china-says-it-has-completed-development-cap-1400-third>

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• [Asia One](#)

Czech Republic

- ◆ **Sedma generace** | Radek Kubala (in collaboration with HBS) - 17 Dec. 2020 **in Czech**
« Nuclear energy? And wouldn't you want to invest in a steam locomotive? »
« Jaderná energie? A do parní lokomotivy byste investovat nechtěli? »
→ <https://sedmagenerace.cz/jaderna-energie-a-do-parni-lokomotivy-byste-investovat-nechteli/>

France

- ◆ **Les Échos** | Sharon Wajsbrot - 23 Sept. 2020 **in French**
« Will the energy transition be nuclear's new chance? »
« La transition énergétique sera-t-elle la nouvelle chance du nucléaire ? »
→ <https://www.lesechos.fr/idees-debats/editos-analyses/la-transition-energetique-sera-t-elle-la-nouvelle-chance-du-nucleaire-1247993>
- ◆ **L'Info du Jour** | 24 Sept. 2020 **in French**
« Nuclear Power in the age of COVID-19 »
« L'énergie nucléaire à l'heure de la Covid-19 »
→ <https://infodujour.fr/economie/energie/40330-lenergie-nucleaire-a-lheure-de-la-covid-19>
- ◆ **Les Échos** | Sharon Wajsbrot - 28 Sept. 2020 **in French** Paywall **[Full Text]**
« Nuclear caught up by Windmills and solar pannels »
« Le nucléaire doublé par les éoliennes et les panneaux solaires »
→ <https://www.lesechos.fr/industrie-services/energie-environnement/le-nucleaire-double-par-les-eoliennes-et-les-panneaux-solaires-1249502>
- ◆ **L'Union/L'Ardennais** | Julien Bouillé - 29 Sept. 2020 **in French**
« Is nuclear green? » [Editorial]
« Le nucléaire est-il vert » [Edito Eco]
→ <https://www.lunion.fr/id193985/article/2020-09-28/le-nucleaire-est-il-vert>
- ◆ **Revue Passages** | 17 Oct. 2020 **in French**
« Renewable energy did better than nuclear in the face of the pandemic »
« L'énergie renouvelable a fait mieux que le nucléaire face à la pandémie »
→ <https://revue-passages.fr/2020/10/17/lenergie-renouvelable-a-fait-mieux-que-le-nucleaire-face-a-la-pandemie/>
- ◆ **Ouest France** | 9 Dec. 2020 **in French** **[Full Text]**
« Nuclear resists »
« Le nucléaire fait de la résistance »
- ◆ **Reporterre** | Émilie Massemin - 9 Dec. 2020 **in French**
« Macron's untruths on nuclear »
« Les contre-vérités d'Emmanuel Macron sur le nucléaire »
→ <https://reporterre.net/Les-contre-verites-d-Emmanuel-Macron-sur-le-nucleaire>

Germany

- ◆ **taz** | Bernward Janzing - 24 Sept. 2020 **in German**
« Renewables outstrip nuclear power »
« Erneuerbare überflügeln Atomkraft »
→ <https://taz.de/Stromerzeugung-weltweit/!5716407/>
- ◆ **Badische Zeitung** | Bernward Janzing - 25 Sept. 2020 **in German**
« Power from Wind and Solar becomes continuously cheaper, Nuclear Electricity more expensive »
« Energie aus Wind und Sonne wird immer billiger, Atomstrom teurer »
→ <https://www.badische-zeitung.de/erneuerbare-ueberfluegeln-atomkraft--194800126.html>
- ◆ **ARD//Deutschlandfunk** | Suzanne Krause - 24 Sept. 2020 **AUDIO** **in German**
« Nuclear Power caught up by Renewables: World Nuclear Industry Status Report 2020 »
« Atomkraft von Erneuerbaren überholt: World Nuclear Industry Status Report 2020 »
→ <https://www.deutschlandfunk.de/umwelt-und-verbraucher.696.de.html>
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- ◆ **Nordwest-Zeitung** | Volker Kühn – 17 Dec. 2020 **in German** **[Full Text]**

« Nuclear Power – Part of the solution or part of the problem ? »
« Atomkraft – Teil der Lösung oder Teil des Problems? »

India

- ◆ **Times of India** | Srinivas Laxman – 24 Sept. 2020

« Nuclear-based power industry has little or no oversight during the pandemic »

→ <https://timesofindia.indiatimes.com/business/india-business/nuclear-based-power-industry-has-little-or-no-oversight-during-the-pandemic/articleshow/78302598.cms>

- ◆ **The New Indian Express** | SV Krishna Chaitanya – 30 Oct. 2020

« India's first Prototype Fast Breeder Reactor in final stages of commissioning »

→ <https://www.newindianexpress.com/states/tamil-nadu/2020/oct/30/indias-first-prototype-fast-breeder-reactor-in-final-stages-of-commissioning-2217153.html>

Italy

- ◆ **Energia Oltre** | Sebastiano Torrini – 26 Sept. 2020

« Nuclear, in 10 years at least 105 GW of new capacity to remain at the 2019 level »

« Nucleare, in 10 anni almeno 105 GW di nuova capacità per rimanere al livello 2019 »

→ <https://energiaoltre.it/nucleare-in-10-anni-almeno-105-gw-di-nuova-capacita-per-rimanere-al-livello-2019/>

Romania

- ◆ **CAPITAL** | Iulian Luca – 24 Sept. 2020 **in Romanian**

« The number of nuclear reactors in operation, at an all-time low globally »

« Numărul reactoarelor nucleare în funcțiune, la un minim istoric la nivel global »

→ <https://www.capital.ro/numarul-reactoarelor-nucleare-in-functiune-la-un-minim-istoric-la-nivel-global.html>

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→ <https://www.money.ro/acesta-este-sfarsitul-energiei-nucleare-o-situatie-fara-precedent-in-ultimii-30-de-ani/>

- **Romania – Economica.net**

→ https://www.economica.net/intarzierea-noilor-proiecte-a-dus-flota-de-centrale-nucleare-la-minimul-ultimilor-30-de-ani_190284.html

South Africa

- ◆ **fin24** | Sibongile Khumalo – 24 Sept. 2020 **Paywall**

« South Africa's planned nuclear plant unlikely to be built this decade - report »

→ <https://www.news24.com/fin24/economy/south-africas-planned-nuclear-plant-unlikely-to-be-built-this-decade-report-20200924>

- ◆ **New Frame** | Neil Overy – 8 Dec. 2020

« Part three | Nuclear energy in Africa »

→ <https://www.newframe.com/part-three-nuclear-energy-in-africa/>

- ◆ **Daily Maverick** | Kevin Mileham (MP & Shadow Minister of Mineral Resources & Energy) – 20 Dec. 2020

« Gwede Mantashe's performance agreement includes a nuclear vanity project that we cannot afford »

→ <https://www.dailymaverick.co.za/opinionista/2020-12-20-gwede-mantashe-performance-agreement-includes-a-nuclear-vanity-project-that-we-cannot-afford/>

Turkey

- ◆ **Yeşil Gazete** | Pınar Demircan –

« Nuclear Energy in Covid Age, 2020 World Nuclear Industry Status Report announced »

« Covid Çağında Nükleer Enerji, 2020 Dünya Nükleer Endüstri Durum Raporu açıklandı »

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- **Turkey – Gazete Patika**

- ◆ **TRT World (TV)** | 16 Dec. 2020 [26min debate, with Mycle Schneider]

« France Energy: The nuclear option? »

→ <https://www.trtworld.com/video/roundtable/france-energy-the-nuclear-option/5fda14f2b790740018538112>

U.S.

- ◆ **MarketPlace** | Kristin Schwab – 24 Sept. 2020 **AUDIO**
« World Nuclear Industry Status Report shows number of nuclear reactor units operating globally is at a 30-year low »
→ <https://www.marketplace.org/shows/marketplace-morning-report/nuclear-energy-30-year-low-reactors-weekly-jobless-claims-fed-congress-coronavirus-relief-auto-industry-mexico/>
- ◆ **Washington Examiner** | Abby Smith & Josh Siegel – 24 Sept. 2020
« Daily on Energy, presented by National Clean Energy Week: Number of nuclear reactors at 30-year low — what it means »
→ <https://www.washingtonexaminer.com/policy/energy/daily-on-energy-presented-by-national-clean-energy-week-number-of-nuclear-reactors-at-30-year-low-what-it-means>
- ◆ **Bulletin of the Atomic Scientists** | John Krzyzaniak – 25 Sept. 2020
« Three takeaways from the 2020 World Nuclear Industry Status Report »
→ <https://thebulletin.org/2020/09/three-takeaways-from-the-2020-world-nuclear-industry-status-report/>
- ◆ **The New Republic** | Mike Pearl – 23 Dec. 2020
« The Green Fantasy and Messy Reality of Nuclear Power »
→ <https://newrepublic.com/article/160712/green-fantasy-messy-reality-nuclear-power>

Full articles (otherwise unavailable online)

Montel

24 September 2020 | Leila Fernández Thévoz

EDF's reactor outage extensions rise 44% in 2019

(Montel) French utility EDF had extended planned outages at 54 of 58 nuclear reactors by an additional 1,705 days in 2019, an increase of 44% over the expected outage duration, a report said on Thursday.

Only one unit – Dampierre 3 (890 MW) – restarted as planned after an 82-day outage, while outages were shortened at the two Fessenheim units (1.8 GW), which have been closed since then, said the World Nuclear Industry Status Report in its annual update.

The outage extensions at EDF's reactors ranged from 1.3 to 175 days, with the longest occurring [at the Flamanville plant](#) (2.6 GW). Units 2 and 1 are still offline and are expected to restart on 31 October and 15 December, respectively, adding 305 and 350 extra days for each reactor in 2020.

The availability or unavailability of French nuclear power capacity can affect wholesale power prices in France as well as in neighbouring countries.

"Despite the fact that EDF's nuclear fleet is the most standardised in the world, each reactor is different," said independent energy expert and nuclear industry critic Mycle Schneider, who is also lead author of the 360-page report.

In the report, according to EDF, the outage extensions were caused "in equal measure by maintenance and operational quality issues, technical failures and project management deficiencies".

Four units off per day

Considering "forced" and "planned" outages together, the total duration of zero output of the French reactor fleet reached 5,580 reactor-days in 2019, up 500 days or 10% compared to 2018, the report said.

All 58 reactors were subject to outages ranging from 5 to 356 days, which meant "an average of 96.2 days [of zero output] per reactor", not including load following or other operational situations which reduced the output, as it happened during the heatwave and drought, it added.

"At least four reactors (4.8 GW) were down (zero capacity) simultaneously at any day of the year [and] a maximum of 24 (27.9 GW) of the 58 units were down at the same time. On 303 days (83% of the year), at least 10 units were down during the same day."

EDF explained that its nuclear generation was affected by environmental constraints, such as [an earthquake in southern France](#) in November, which led to the temporary shutdown of the 3.7 GW Cruas plant, or restrictions due to a lack of cooling water or high water temperatures.

"Dramatically low output"

The utility's nuclear production – at 379.5 TWh last year, a 3.5% drop year on year – was below 400 TWh for the fourth consecutive year. And it provided the lowest share of France's power mix since 1989, at 70.6%.

"Production was already bad in 2019, and it looks set to be dramatic this year, with the coronavirus crisis adding to the malfunctioning of the reactors," Schneider said. To limit the damage, "EDF has shortened and postponed interventions on the reactors but this will likely generate safety problems," he stressed.

So far this year, the impact of coronavirus has forced French utility EDF to revise its 2020 nuclear production target downwards to **315-325 TWh**, a significant drop from earlier estimates of 375-379 TWh.

Public debate

In a context of lifetime extension beyond 40 years of the reactors that will require "significant additional upgrades", "the bad performance with outage durations [...] is particularly costly", the WNISR said.

"EDF must publish its costs reactor by reactor, as there are great disparities in terms of productivity from one unit to another," Schneider said. "They should be part of the guidance provided to policymakers prior to decision making".

The French nuclear safety authority ASN is due to launch a public consultation on its position on lifetime extensions at the end of 2020 and must publish its generic order in 2021.

Les Échos

26 September 2020 – Updated 29 September 2020 | Sharon Wajsbrot

L'atome doublé par les éoliennes et les panneaux solaires

Pour la première fois en 2019, les énergies renouvelables de nouvelle génération ont pesé davantage dans le mix électrique mondial que le nucléaire.

En compétition pour tenir une place de choix dans le mix électrique des Etats, les énergies renouvelables et le nucléaire sont désormais au coude-à-coude. Pour la première fois en 2019, les énergies renouvelables de nouvelle génération (solaire, éolien, biomasse, etc.) ont même pesé davantage dans le mix électrique mondial que le nucléaire.

Selon le World Nuclear Industry Status Report (WNISR), un rapport réalisé par le consultant Mycle Schneider (connu pour ses positions peu favorables au nucléaire), ces énergies ont produit 10,39 % du mix électrique mondial en cumulé, contre 10,35 % pour les réacteurs nucléaires installés.

Stagnation du développement

« La stagnation du développement de nouvelles capacités de production nucléaire engendre un rattrapage des capacités de production éoliennes et solaires », pointe le rapport. De fait, selon les données collectées par le WNISR, les capacités de production d'électricité nucléaire mondiales ont baissé de 2,1 % entre mi-2019 et mi-2020, pour atteindre 362 gigawatts (GW).

En cause : des ouvertures de nouvelles centrales qui ne compensent pas les fermetures. Selon le rapport, cinq réacteurs nucléaires ont été fermés en 2019, puis encore trois au premier semestre 2020 (dont les deux réacteurs de la centrale d'EDF à Fessenheim). Or, sur la période, seuls six réacteurs ont été branchés aux réseaux électriques.

« Treize réacteurs devaient démarrer en 2019, mais seuls six y sont parvenus. Aucun n'a par ailleurs démarré au premier semestre 2020 », note le rapport. Il ne précise pas si la crise sanitaire est directement en cause mais note un allongement des délais de construction.

Des chiffres à nuancer

Ces chiffres sont toutefois à nuancer parce qu'ils n'intègrent pas la production hydroélectrique des grands barrages, qui dope très largement la capacité de production d'origine renouvelable dans le monde. Autrement dit, si on regarde les énergies renouvelables au sens large (avec les grands barrages), leur contribution au mix électrique mondial est bien au-delà de celle de l'énergie nucléaire.

Par ailleurs, comme le souligne le rapport, l'énergie nucléaire séduit toujours. Entre 2019 et mi-2020, la construction de sept nouveaux réacteurs a été lancée : quatre en Chine, un en Russie, un au Royaume-Uni sur le site d'Hinkley Point et un autre en Turquie. La vague est toutefois nettement moins forte que par le passé, pointe le WNISR, qui comptait quinze mises en chantier en 2010 et dix en 2013.

Ouest-France

9 December 2020 | Patrice Moyon

Le nucléaire fait de la résistance

Ne comptez pas sur lui pour couper le courant qui relie la France au nucléaire. Paris ne suivra pas l'exemple de Berlin. Emmanuel Macron l'avait déjà laissé entendre la semaine dernière lors de l'entretien donné à Brut.

Sa visite, hier, au Creusot (Saône-et-Loire), et le choix de la propulsion nucléaire pour le prochain porte-avions confirment cette orientation. Notre avenir énergétique et écologique passe par le nucléaire, estime le président de la République. Quitte à se fâcher avec les écologistes.

Ce secteur est pourtant tout sauf triomphant. S'il a longtemps symbolisé l'excellence technologique française, il cumule depuis dix ans les déboires et parfois les scandales. On l'a vu avec Areva devenu Orano dont la gestion a été épinglée par la Cour des comptes. Entre 2001 et 2011, sa présidente Anne Lauvergeon a conduit ce fleuron au bord du gouffre.

Il y a aussi de la friture sur la ligne à EDF. Défauts de soudure, erreurs de conception, à Flamanville, le chantier de l'EPR qui devait être une vitrine pour conquérir de nouveaux marchés a déjà plus de dix ans de retard et le coût final du chantier devrait dépasser 20 milliards d'euros contre 3,4 milliards annoncés au départ.

Pourquoi, dans ces conditions, persister dans le nucléaire au moment où les énergies renouvelables bénéficient enfin de vents porteurs ? Dans le solaire ou l'éolien, les coûts de fabrication et de production ne cessent de chuter.

L'an dernier, le vent et le soleil ont même devancé d'une tête le nucléaire dans la production d'électricité dans le monde : 10,55 % contre 10,39 % selon le World Nuclear Industry Status Report. Ils devraient jouer un rôle moteur pour faire face au réchauffement climatique.

Le nucléaire n'a pas dit son dernier mot

Le nucléaire conserve un avantage. Sa production, sauf lorsque les centrales sont à l'arrêt à cause de la sécheresse, se fait en continu. Ce n'est pas le cas des énergies renouvelables qui butent encore sur l'obstacle de leur intermittence et de leur stockage.

Paris veut aussi tenir compte de l'exemple allemand. La fermeture des centrales nucléaires a contraint Berlin à laisser en activité les centrales à charbon pendant une période intermédiaire. Pas très bon pour la planète.

La France fait donc le choix de maintenir en activité une partie au moins de ses centrales nucléaires pour continuer à bénéficier de l'effet neutralité, ou presque, carbone garanti par le nucléaire. Quitte à faire l'impasse sur la question redoutable des déchets qu'on ne sait pas traiter. La part du nucléaire dans la production électrique devrait donc atteindre 50 % à l'horizon 2035 contre 70 % aujourd'hui.

S'y ajoute un pari lié au lancement du prochain porte-avions à propulsion nucléaire. La technologie développée par la France pour ce type de réacteur devrait permettre avec EDF et le CEA (Commissariat à l'énergie atomique) de lancer une nouvelle filière avec des petites centrales nucléaires très compactes (small modular reactor). C'est sur ce marché très convoité par les Russes, les Coréens, les Américains mais aussi la Chine que la France veut regagner des lettres d'excellence.

Le nucléaire n'a pas dit son dernier mot. En Provence, à Cadarache, le projet Iter qui associe une trentaine de pays pourrait à terme déboucher sur la production d'électricité par fusion thermonucléaire. La même que celle à l'œuvre avec le soleil. Et cette fois, avec des déchets radioactifs à très courte vie.

(*) Journaliste en charge de l'économie à la rédaction Ouest-France de Paris.

24 September 2020 | Laura Cole

Nuclear power 'irrelevant' to climate crisis

The share of nuclear in European power generation continues to drop compared to renewables, according to a report launched on Thursday, while experts voiced scepticism about the potential role of nuclear fusion and hydrogen in a zero-carbon future

The annual World Nuclear Industry Status Report, which is produced independently by sector experts around the world, showed a continued downward trend for nuclear energy in Europe, with reactors providing just 25.5% of the EU's electricity in 2019, compared to a record 35% from renewables, including hydropower.

The authors predict that in the next year, renewable power generation will "almost certainly" exceed that of nuclear plants. For the first time, solar installed capacity of 130GW now exceeds the 116GW of nuclear installed capacity in the EU28.

"The results clarify that nuclear has become pretty much irrelevant towards electricity generating capacity," said sector expert and lead author Mycle Schneider at a virtual press conference on the report's release.

Currently the EU27 operates 107 reactors, accounting for around a quarter of the world total. Four were closed last year alone: two in France and one each for Sweden and Germany. Many EU countries plan to phase out nuclear in the coming years, but some, such as Poland plan to use nuclear to meet EU emissions reduction targets.

"It becomes more and more clear that nuclear power's role in fighting the climate crisis is, at best, marginal," said Green MEP Jutta Paulus, commenting on the report. Lengthy development times and high cost play into the hands of renewables, she said.

Schneider said the report also debunks arguments that nuclear provides stable electricity generation compared to weather-dependent renewables. France, Europe's biggest nuclear power, saw an average 96.2 days of power outage for its fleet of 58 reactors – a nine-day increase from the year before.

"The operator has no idea how long the outages will last and extends them almost on a daily basis," he said.

In recent months, the nuclear industry has explored the role nuclear power could play in hydrogen production. Meanwhile, dreams of clean, inexhaustible energy from nuclear fusion continue to attract attention. In July, the EU earmarked €5 billion for the ITER fusion project in Provence, France.

However, one contributor to the report said policy makers did not have the luxury of time to wait for new technologies. "To tackle the climate crisis we have to go with our best bet," said Ali Ahmad, research fellow at the Harvard Kennedy School. "With technologies that are economic and scalable."

S&P platts

01 October 2020 (*Nucleonics Week*) – 12 October 2020 (*Inside NRC*) | Andrea Jenetta

Coronavirus measures impacted nuclear plant safety and security: report

Protocols to protect nuclear industry workers from contracting coronavirus such as telework and social distancing have resulted in "degradation of safety and security" at nuclear power reactors, said the World Nuclear Industry Status Report 2020 published Sept. 24.

That is because various safety and security routines at the plants become "more difficult or impossible during a pandemic" when health protocols are put in place, leading to the deferral of physical inspections and testing, and curtailment or postponement of maintenance and refueling, the report said. The report is prepared annually by a group of researchers, professors and consultants supported by environmental organizations, foundations and other donors.

Several nuclear regulators deferred certain inspections during the pandemic and allowed some oversight to be carried out remotely, in addition to permitting operators to defer some maintenance and/or testing until the

pandemic eases. Regulators and nuclear operators have said nuclear safety is being preserved as key work continues to be carried out and deferred work is less safety significant.

Testing and inspection, performed under the “four-eyes principle” in which at least two people must be present, “becomes challenging if social distancing is followed,” the report said.

“Particular staff groups, like [reactor] control-room personnel, with specific knowledge and qualification for specific facilities cannot easily be replaced” if they become sick, the report said.

Utilities in several countries had isolated some workers this spring in preparation for the potential of widespread absenteeism, but no global operator has reported problems with control-room staffing.

Emergency situations such as a fire or toxic gas buildup in the control room “could easily be exacerbated by the need of social distancing,” it said.

“Infections amongst [plant] security staff, a limited number of highly trained forces for specific facilities, could rapidly lower the protection level,” the report said.

Mycale Schneider, the report’s principal author, said during a Sept. 24 live-streaming presentation on the report’s findings that he “could definitely not find any evidence” that nuclear plant safety was maintained while the coronavirus health protocols were in place, despite statements by nuclear officials.

The report described an April 9 event at EDF’s Belleville-1 reactor, in which two workers were injured and a fire broke out during the replacement of a hydrogen rack. According to the report, which said it was based on information from French nuclear regulator ASN, the fire “could have had catastrophic consequences” and “was clearly due to lack of oversight and ‘numerous deficiencies’ of various types.”

The Schneider report said “a large share of EDF staff, including oversight personnel, was on telework” at the time of the incident, and “[r]eportedly, there were cases where intermediate checks during maintenance interventions were made over the phone.”

ASN has said safety has been maintained during the outbreak.

The report said, “This confidence is difficult to comprehend because working conditions have clearly deteriorated in many nuclear facilities, because scheduled repair and upgrading work was often not carried out or delayed for many months.”

Operators of many nuclear plants globally “were left without any physical regulatory oversight as inspectors stayed home.”

“The NRC remains satisfied U.S. nuclear power plants continue to operate safely and securely during the public health emergency,” agency spokesman Scott Burnell said Sept. 30. “The NRC continues to consider appropriately supported requests for temporary relief from some requirements that nonetheless maintain proper nuclear safety,” he said.

Such requests are described on the agency’s website’s COVID-19 pages, Burnell added.

According to the website, NRC has been working during the pandemic to approve temporary exemptions to requirements related to work hours, fire brigade staffing, reactor operator licensing, physical protection and emergency exercises.

“Any speculation about coronavirus impacting nuclear power plant safety is unfounded,” Mary Love, a Nuclear Energy Institute spokeswoman, said Sept. 30. “There have not been any nuclear safety incidents related to the coronavirus in the U.S.,” she said.

The US nuclear industry trade organization “continues to engage with the U.S. Nuclear Regulatory Commission as well as other federal, state and local agencies to monitor the dynamic situation and support the industry’s continued focus on safe and reliable operation,” Love said.

Little information on COVID-19 cases

The report said that neither nuclear regulators nor nuclear companies have routinely provided information on the number of employees infected by the coronavirus.

“Remarkably little information is available on COVID-19 cases in nuclear facilities and amongst regulator staff,” the report said.

Some nuclear operators such as France’s EDF “have explicitly refused to publish any data,” the report said.

“So we gave up” trying to obtain such information, said Schneider.

Only Russia’s state-owned nuclear company Rosatom provided weekly live updates on employee infections within the company, Schneider said.

As of the end of July 2020, the company had about 4,500 cases with 1,200 people still recovering, the report said.

Information on active cases in other countries “was sparse,” Schneider said.

He said that nine of the 13 people tested at IRSN, the French government’s Institute for Radiation Protection and Nuclear Safety, were infected. The agency has a staff of 1,800, he said.

“That seems like a very low number for a staff of that size,” Schneider said.

DTE Energy, owner and operator of Fermi-2 in the US, “refused” to release the real numbers of workers infected by coronavirus during the reactor’s outage in the spring, he said.

Fermi-2 was connected to the grid Aug. 6, following a refueling and maintenance outage that began March 21 and was extended by the coronavirus outbreak.

DTE confirmed it had employees test positive for the coronavirus but has declined to release the number of positive cases. Ron Maracle, vice president of Local 687 of the Michigan Regional Council of Carpenters and Millwrights, said May 13 that almost 250 workers at the plant had tested positive during the outage.

On May 1, DTE implemented a stand-down of activities that interrupted the outage work, some of which resumed May 4.

Power in Europe | Platts

05 October 2020 | Henry Edwardes-Evans

Global nuclear needs 105 GW of additions to 2030 to stand still: report

Some 105 GW of nuclear capacity would need to start up this decade to maintain the technology’s end-2019 market position, according to Mycle Schneider Consulting’s World Nuclear Industry Status Report 2020.

This implied the need to more than double the annual build rate of the past decade at a time when construction starts are in decline, the report, published Sept. 24, said.

“The required number of new units might be even higher because many reactors are being shut down long before their licenses are terminated,” the report said. “The mean age at closure of the 17 units taken off the grids between 2015 and 2019 was 42.4 years.”

The average age of the world’s operating reactor fleet has continued to rise, reaching 30.7 years in July.

“A total of 270 reactors, two-thirds of the world’s operating fleet, have operated for 31 or more years, including 81 (20% of the total) that have operated for 41 years or more,” the report said.

While global operating nuclear capacity declined 2.2% from one year earlier to reach 362 GW as of mid-2020, nuclear production was up in 2019.

Global nuclear output reached 2,657 TWh in 2019, a 3.7% increase over the previous year and only 3 TWh below nuclear’s historic peak in 2006.

Half of 2019’s increase was due to China’s nuclear output increasing by over 19%. Five nuclear generating countries (the US, France, China, Russia and South Korea) generated 70% of all nuclear electricity in the world in 2019.

Two countries, the US and France, accounted for 45% of 2019 global nuclear production, two percentage points lower than in the previous year as France’s output shrank by 3.5%, it said.

Nuclear energy’s share in the global generation mix edged up 0.2 percentage point to 10.35% in 2019. It peaked at 17.5% in 1996.

“Nuclear power plants are usefully producing a little less than one third of global low-carbon-emission electric power,” a foreword to the report by US academic Frank von Hippel and South Korean nuclear official Jungmin Kang said.

“Increasingly, therefore, the issue is not one of nuclear new-builds but nuclear life extension. Even there, however, nuclear is struggling.”

In the US, 30-year-old plants whose capital costs had been paid off could not compete economically with new renewable power plants, it said.

The operating costs of nuclear plants were high in part because 100-200 workers and guards were required on site per reactor at all times in case of accident or terrorist attack.

“Subsidies justified by their low carbon emissions have become critical to the continued operation of many US nuclear power plants,” it said.

REACTORS UNDER CONSTRUCTION, JULY 2020

	Units	Total capacity (MW)	Expected connection
ARGENTINA	1	25	2021
BANGLADESH	2	2,160	2023-2024
BELARUS	2	2,218	2020-2021
CHINA	15	13,842	2020-2025
FINLAND	1	1,600	2021
FRANCE	1	1,600	2022
INDIA	7	4,824	2020-2023
IRAN	1	1,196	2024
JAPAN	1	1,325	?
PAKISTAN	2	2,028	2021
RUSSIA	3	3,115	2021-2023
SLOVAKIA	2	880	2021-2021
SOUTH KOREA	4	5,360	2020-2024
TURKEY	2	2,228	2024-2025
UAE	4	5,380	2020-2023
UK	2	3,260	2025-2026
USA	2	2,234	2021-2022
World	52	53,475	2020-2026

Source: World Nuclear Status Report 2020

Mochovce-3 'set for Q1 2021'

One of the reactors in construction, Slovakia's Mochovce-3, is likely to start operations in the first quarter of 2021, the Slovakian economy ministry said Oct. 1.

"The operational launch of the third unit, given the current state of completion together with the time for dealing with remaining problems, is realistic for the first quarter of 2021," the office of State Secretary responsible for energy policy, Karol Galek, told S&P Global Platts.

The ministry noted that a final decision on approval of fuel loading for the 471-MW VVER-440 reactor was in the hands of the independent nuclear regulator, the Nuclear Regulatory Authority of the Slovak Republic, or UJD.

The adjacent Mochovce-4, meanwhile, was now expected to start operations two years later than the more advanced Mochovce-3, the ministry said.

"The start-up of the fourth unit would under ideal conditions outlined by [utility] Slovenske Elektrarne take place a year after the start up of the third unit, but given past experience, it is more likely to be after two years," the office said.

Slovenske Elektrarne, Slovakia's dominant power producer and the investor and manager of the project to complete the two Mochovce units, did not reply to emails requesting confirmation of the likely completion dates.

In its last update on May 31, SE reported that Mochovce-3 was 99.7% complete, while Mochovce-4 was 87.3% complete.

The ministry said some of the extra investment required on Mochovce-4 could be covered by profits from the start-up of Mochovce-3.

In case this was insufficient, the Slovak state, which has a 34% stake in SE, would expect SE's main shareholder, Slovak Power Holding, to provide extra funding.

Slovak Power Holding, with a 66% shareholding in SE, is jointly owned by Italian power company Enel and Czech energy company Energeticky a Prumyslový Holding, or EPH.

Both reactors are significantly delayed and over budget. The initial budget for completion of the two units has ballooned from Eur2.8 billion (\$3.71 billion) when work was restarted in 2008 to the current Eur5.4 billion. Both units were initially expected to be commissioned and operating by 2013.

S&P platts — Nuclear Fuel

19 October 2020 | William Freebairn

US nuclear outages shorter as pandemic measures curb scope of work

* Outages, excluding an extended one, a week shorter

* Unclear if there is impact on future length from deferred work

US nuclear plant refueling and maintenance outages in the first half of the year were shorter on average than a year earlier as the coronavirus pandemic caused operators to narrow the scope of activities.

While most outages were far shorter than usual, one outage was lengthened to more than four months as a result of the pandemic, affecting the average.

The average first-half nuclear refueling outage lasted 33.5 days, compared to an average outage length of 37.3 days in the first half of 2019, according to S&P Global Platts data. Excluding the pandemic-lengthened outage at DTE Energy's Fermi-2 in Michigan, the average first-half 2020 outage was 30.4 days, almost a week shorter than a year earlier.

Nuclear refueling outage lengths have been declining for several years as plant operators seek efficiencies and conduct more maintenance and inspection while the units are online.

However, the spring outage season was remarkable in featuring a series of requests from plant operators to dispense with or postpone certain inspections and maintenance activities in an effort to reduce the number of workers needed and to permit social distancing during busy refueling outages.

The Fermi-2 refueling outage, which began March 21 and ended Aug. 5, was the longest in the US since 2018 at 137 days. The timing meant that more than 200 workers were reported by a labor union to have been infected with the coronavirus during work there. All work was halted for several days mid-outage as the operator took additional measures to protect workers.

Like many US plants, Fermi-2 sought and received an exemption from NRC to rules limiting the number of hours workers can be on the job in a week, and deferred some maintenance work to the next inspection.

Five of the 34 first-half outages were completed in under 20 days, including two — at Exelon's Braidwood-2 and Quad Cities-2, both in Illinois — completed in 16 days. Only two of the 30 units that refueled in the first half of 2019 did so in under 20 days.

Exelon said its four refueling outages this spring in Illinois averaged 17 days, with two units — LaSalle-1, with an 18-day outage, and Quad Cities-2 — setting plant records for shortest-ever outages.

Most of the deferred work will have to be carried out during the next scheduled refueling outage for each unit, utility and NRC officials have said.

Two-thirds of the units that refueled in the first half of 2020 will do so again in the second half of 2021, and about a dozen will do so in the first half of 2022.

That does not mean that those outages will necessarily be longer, the Nuclear Energy Institute said in a statement Oct. 7.

"We would caution against drawing conclusions on the duration of future refueling outages but we are confident based on extensive planning, that the industry will continue to operate nuclear plants safely throughout the pandemic with limited effect on refueling outages," said Jennifer Uhle, vice president of generation and suppliers for NEI, in the statement.

Most nuclear operators have been unwilling to discuss the impact of the potential changes on the length of outages, citing the sensitivity of the information to electricity markets.

In Europe, however, where outage schedules must generally be disclosed publicly, nuclear operators have said refueling outages might be trimmed, in some cases from four weeks to two. Operators in France, Spain, and

Switzerland have announced shorter outages, but in France and Sweden some reactors are being shut for longer because of a dramatic decline in demand as the economic impact of stay-at-home orders to fight the virus are felt.

Authors of the World Nuclear Industry Status Report 2020, published Sept. 24, said delays to inspections and surveillance of equipment as a result of the coronavirus could represent a safety issue.

The report said "working conditions have clearly deteriorated in many nuclear facilities, because scheduled repair and upgrading work was often not carried out or delayed for many months." Operators of many nuclear plants globally "were left without any physical regulatory oversight as inspectors stayed home."

The report is prepared by consultants and others who have historically been critical of nuclear power and is funded by environmental organizations and foundations.

"Over the course of the pandemic, the U.S. nuclear industry has continued to operate at a high level of safety, while supplying vital electricity to our nation. We are very proud of the industry's performance during the spring refueling outages where we very successfully met the unprecedented challenges of the pandemic to safely refuel the plants," Uhle said.

"The NRC remains satisfied U.S. nuclear power plants continue to operate safely and securely during the public health emergency," agency spokesman Scott Burnell said Sept. 30. "The NRC continues to consider appropriately supported requests for temporary relief from some requirements that nonetheless maintain proper nuclear safety," he said.

Nordwest-Zeitung

17 December 2020 | Volker Kühn

Atomkraft – Teil der Lösung oder Teil des Problems?

Gut 35 Jahre nach Tschernobyl und zehn Jahre nach Fukushima feiert die Atomenergie ein glänzendes Comeback. Der Eindruck zumindest drängt sich auf, wenn man Meldungen wie diese aus den vergangenen beiden Jahren liest:

Dezember 2019: Russland nimmt das erste schwimmende Kernkraftwerk der Welt in Betrieb.

Juli 2020: Joe Biden verspricht im Fall seines Wahlsiegs die Forschung an einer neuen Generation kleiner Atomreaktoren zu fördern.

August 2020: China nimmt Block fünf des AKW Tianwan in Betrieb. Fast ein Dutzend weiterer chinesischer Reaktoren befindet sich im Bau.

September 2020: Die Niederlande erwägen den Neubau von bis zu zehn Kernkraftwerken. Eine im Parlament diskutierte Studie nennt Atomkraft eine der kostengünstigsten Optionen, um CO₂-freie Energie zu produzieren.

Beschreitet Deutschland mit dem Atomausstieg also einen Sonderweg? Wären vielmehr neue Meiler nötig, um die Welt zu dekarbonisieren? Fragt man Klimaschützer und Energiewissenschaftler, ist die Antwort ein klares Nein. Sie führen starke Argumente gegen eine Renaissance der Kernkraft ins Feld: Sie sei zu teuer, zu ineffizient, zu gefährlich und – gerade hierzulande – gesellschaftlich nicht akzeptiert. Ganz abgesehen von der ungeklärten Endlagerfrage. Die Entwicklung der Atomenergie in den vergangenen zehn Jahren spricht allerdings auch weniger für eine Renaissance als vielmehr für einen allmählichen Niedergang. Zwar sind laut der Internationalen Atomenergie-Organisation (IAE) in China, Russland und Südkorea auch 2019 noch neue Reaktoren mit zusammen mehr als fünf Gigawatt ans Netz gegangen. Allerdings werden weltweit mehr Reaktoren stillgelegt als in Betrieb genommen. Noch deutlicher zeigt sich die schwindende Bedeutung der Atomkraft im Boom der erneuerbaren Energien. Während die Kapazität der weltweiten AKW 2019 um zwei Gigawatt sank, wurden laut dem **World Nuclear Industry Status Report** im selben Zeitraum Ökostromkraftwerke mit zusammen 184 Gigawatt in Betrieb genommen. Der Grund für den Niedergang der Kernkraft sind vor allem ihre horrenden Kosten. Bauprojekte wie in Finnland, Großbritannien und Frankreich verzögern sich zum Teil um Jahrzehnte und verschlingen Milliarden. Ohne erhebliche staatliche Subventionen wären sie undenkbar. Zugleich wird Ökostrom von Jahr zu Jahr billiger. Auch die massiv gesunkenen Erdgaspreise drängen die Atomkraft aus dem Markt. Selbst China investiert deshalb längst weitaus stärker in andere Energieträger. Das Klimaargument zieht aus Sicht des Atomexperten **Mykle Schneider** ebenfalls nicht. „Es ist bedeutungslos, wenn ein sehr teures Atomkraftwerk in 20 Jahren CO₂-Ausstoß vermeidet. Wir können die Treibhausgasemissionen viel schneller und billiger reduzieren“, sagte er der „Zeit“.

Volker Kühn