

ANNEX 5 - NUCLEAR REACTORS IN THE WORLD “UNDER CONSTRUCTION”

Table 25 · Nuclear Reactors in the World “Under Construction” (as of 1 July 2020)

Country	Units	Capacity MW net	Model	Construction Start (dd/mm/yyyy)	Expected Grid Connection	Delayed
ARGENTINA	25					
Carem25		25	CAREM (PWR)	08/02/2014	2021 ¹	yes
BANGLADESH	2	2 160				
Rooppur-1		1 080	VVER-1200	30/11/2017	2023 ² (commercial operation)	
Rooppur-2		1 080	VVER-1200	14/07/2018	2024 ³ (commercial operation)	
BELARUS	2	2 218				
Belarusian-1		1 109	VVER V-491	06/11/2013	2020 ⁴	yes
Belarusian-2		1 109	VVER V-491	03/06/2014	2021 ⁵	yes
CHINA	15	13 842				
CFR-600		600	FBR	29/12/2017	2023 ⁶	
Fangchenggang-3		1 000	HPR-1000	24/12/2015	2021 ⁷	
Fangchenggang-4		1 000	HPR-1000	23/12/2016	2022 ⁸	
Fuqing-5		1 000	HPR-1000	07/05/2015	2020 ⁹ (completion)	yes
Fuqing-6		1 000	HPR-1000	22/12/2015	2021 ¹⁰	yes
Hongyanhe-5		1 000	ACPR-1000	29/03/2015	2021 ¹¹	yes
Hongyanhe-6		1 000	ACPR-1000	24/07/2015	2022 ¹²	yes
Shidao Bay 1-1 ¹³		100	HTR-PM	01/12/2012	2021 ¹⁴	yes
Shidao Bay 1-2		100	HTR-PM	01/12/2012	2021 ¹⁵	yes
Shidao-Bay 2-1 ¹⁶		1 400	CAP1400	04/2019 ¹⁷	? ¹⁸	
Shidao-Bay 2-2		1 400	CAP1400	11/2019 ¹⁹	? ²⁰	
Taipingling-1		1 116	HPR-1000	26/12/2019 ²¹	2025 ²² (grid connection)	
Tianwan-5		1 000	CNP-1000	27/12/2015	2020 ²³	
Tianwan-6		1 000	CPR-1000	07/09/2016	10/2021 ²⁴ (commercial operation)	
Zhangzhou-1		1 000	HPR-1000	16/10/2019 ²⁵	2024 ²⁶ (grid connection)	
FINLAND	1	1 600				
Olkiluoto-3		1 600	EPR	12/08/2005	05/2021 ²⁷	yes
FRANCE	1	1 600				
Flamanville-3		1 600	EPR	03/12/2007	2022 ²⁸	yes

Country	Units	Capacity MW net	Model	Construction Start (dd/mm/yyyy)	Expected Grid Connection	Delayed
INDIA	7	4 824				
Kakrapar-3		630	PHWR-700	22/11/2010	2020 ²⁹	yes
Kakrapar-4		630	PHWR-700	22/11/2010	September 2021 ³⁰ (commissioning)	yes
Kudankulam-3		917	VVER V-412	29/06/2017	3/2023 ³¹ (commercial operation)	
Kudankulam-4		917	VVER V-412	23/10/2017	11/2023 ³² (commercial operation)	?
PFBR		470	FBR	23/10/2004	10/2021 ³³	yes
Rajasthan-7		630	PHWR	18/07/2011	02/2022 ³⁴ (expected completion)	yes
Rajasthan-8		630	PHWR	30/09/2011	03/2023 ³⁵ (commercial operation)	yes
IRAN	1	1 196				
Bushehr-2		1 196	VVER V-446	02/1976 ³⁶	2024	yes
JAPAN	1	1 325				
Shimane-3		1 325	ABWR	12/10/2007	? ³⁷	yes
PAKISTAN	2	2 028				
Kanupp-2		1 014	ACP-1000	20/08/2015	2021 ³⁸ (expected operation)	yes
Kanupp-3		1 014	ACP-1000	31/05/2016	2021 ³⁹ (expected operation)	
RUSSIA	3	3 115				
Kursk 2-1		1 115	VVER V-510	29/04/2018	2022 ⁴⁰	
Kursk 2-2		1 115	VVER V-510	15/04/2019	04/2023 ⁴¹	
Leningrad 2-2		1 085	VVER V-491	15/04/2010	2021 ⁴²	yes
SLOVAKIA	2	880				
Mochovce-3		440	VVER V-213	01/01/1985	2020 ⁴³	yes
Mochovce-4		440	VVER V-213	01/01/1985	2021 ⁴⁴	yes
SOUTH KOREA	4	5 360				
Shin-Hanul-1		1 340	APR-1400	10/07/2012	10/2020 ⁴⁵ (commercial operation)	yes
Shin-Hanul-2		1 340	APR-1400	19/06/2013	8/2021 ⁴⁶ (commercial operation)	yes
Shin-Kori-5		1 340	APR-1400	03/04/2017	3/2023 ⁴⁷ (commercial operation)	yes
Shin-Kori-6		1 340	APR-1400	20/09/2018	6/2024 ⁴⁸	yes
TURKEY	2	2 228				
Akkuyu-1		1 114	VVER V-491	03/04/2018	2024 ⁴⁹	yes
Akkuyu-2		1 114	VVER V-491	08/4/2020 ⁵⁰	2025 ⁵¹	
UAE	4	5 380				
Barakah-1		1 345	APR-1400	19/07/2012	2020 ⁵²	yes
Barakah-2		1 345	APR-1400	30/05/2013	2021 ⁵³	yes
Barakah-3		1 345	APR-1400	24/09/2014	2022 ⁵⁴	yes
Barakah-4		1 345	APR-1400	30/07/2015	2023 ⁵⁵	yes
U.K.	2	3 260				
Hinkley Point C-1	1	1 630	EPR-1750	11/12/2018 ⁵⁶	2025 ⁵⁷	
Hinkley Point C-2	1	1 630	EPR-1750	12/12/2019 ⁵⁸	2026 ⁵⁹	
USA	2	2 234				
Vogtle-3		1 117	AP-1000	12/03/2013	11/2021 ⁶⁰	yes
Vogtle-4		1 117	AP-1000	19/11/2013	11/2022 ⁶¹	yes
World	52	53 475		1976-2020	2020-2026	33

1 - Repeatedly delayed. In 2019, CAREM was rescheduled to begin operating in late 2021 or 2022. The construction, suspended in 2019 “due to breaches by contractor companies”, was expected to restart in May 2020, with no indication about the impact this would have on project’s timeline. See *NEI*, “Work resumes on nuclear projects in Argentina”, 23 April 2020, see <https://www.neimagazine.com/news/newswork-resumes-on-nuclear-projects-in-argentina-7887154>, accessed 30 July 2020.

2 - Rosatom, “First concrete poured at the constructed Rooppur NPP site (Bangladesh)”, Press Release, 30 November 2017, see <http://www.rusatom-overseas.com/media/news/first-concrete-poured-at-the-site-constructed-npp-rooppur-bangladesh.html>, accessed 17 August 2020.

3 - Rosatom, “Main construction of the 2nd Unit of Rooppur NPP begins with the ‘First Concrete’ ceremony”, Press Release, 14 July 2018, see <http://rosatom.ru/en/press-centre/news/main-construction-of-the-2nd-unit-of-rooppur-npp-begins-with-the-first-concrete-ceremony/>, accessed 15 July 2018.

4 - Further delayed by one year since WNISR2019. Fuel loading started in August 2020, with grid connection expected in fourth quarter of 2020, see *BelTA*, “Fueling of Belarusian nuclear power plant’s first reactor in progress”, 7 August 2020, see <https://eng.belta.by/economics/view/fueling-of-belarusian-nuclear-power-plants-first-reactor-in-progress-132336-2020/>, accessed 10 August 2020.

5 - First delay (formally acknowledged). In early 2020, startup of Belarusian-2 was officially delayed to 2021. The reactor is now expected to come online in 2021, a delay of one year since WNISR2019. *BelTA*, “Second reactor of Belarusian nuclear power plant getting flushed, cleansed”, 17 June 2020, see https://atom.belta.by/en/belaeas_en/view/second-reactor-of-belarusian-nuclear-power-plant-getting-flushed-cleansed-10678/, accessed 16 July 2020.

6 - CFR-600 is not listed as under construction by IAEA-PRIS. Concrete pouring is reported to have taken place in December 2017; commercial operation was then expected 2023. See *WNN*, “China begins building pilot fast reactor”, 29 December 2017, see <http://www.world-nuclear-news.org/NN-China-begins-building-pilot-fast-reactor-2912174.html>, accessed 30 December 2017.

7 - No information concerning expected startup date in CGN’s announcement of construction start. CGN’s Annual Reports for 2016 to 2018 refer to 2022 as “Expected Date of Commencement of Operation” for both units. CGN, “Annual Report 2018”, 2019, see <http://www3.hkexnews.hk/listedco/listconews/sehk/2019/0408/LTN20190408772.pdf>, accessed 9 April 2019. Sources in China suggest that because the two units are the first HPR-1000 to be constructed, grid connection appears impossible before 2020–21 for Unit 3 and 2021–22 for Unit 4, although CGN has pledged to do its utmost to connect its first domestic Generation III reactor to the grid in 2021, at the earliest in November 2021. WNISR2019 advanced the date from 2022 to 2021.

8 - See previous note.

9 - Further delayed since WNISR2019. Completion of the reactor, previously expected in June 2020, is however still expected in 2020. See *NIW*, “China: Economic Case for Nuclear Worsens With Covid-19”, 15 May 2020.

10 - Delayed. The completion date announced at construction start was 2020. See *WNN*, “First concrete for sixth Fuqing unit”, 22 December 2015, see <http://www.world-nuclear-news.org/NN-First-concrete-for-sixth-Fuqing-unit-2212154.html>, accessed 26 June 2016. Grid connection is now expected in 2021. *NEI*, “Outer containment installed at China’s Fuqing 6”, 30 July 2020, see <https://www.neimagazine.com/news/newsouter-containment-installed-at-chinas-fuqing-6-8053007>, accessed 4 August 2020.

11 - First delay. In January 2020, CGN announced that operation of Hongyanhe-5 was delayed to second half of 2021, a delay of one year. CGN Power, “Inside Information - Operation Briefings for the Fourth Quarter of 2019”, 6 January 2020, see <http://en.cgnp.com.cn/encgncp/c20191226/202001/917f4904f06d4826be1ae98e96780703/files/0627a0191ddb4a07bcfeob4764a196e4.pdf>, accessed 12 January 2020.

12 - First delay. In January 2020, CGN announced that operation of Hongyanhe-6 was delayed to 2022, a delay of six months. CGN Power, “Inside Information - Operation Briefings for the Fourth Quarter of 2019”, 6 January 2020.

13 - IAEA-PRIS reports the twin High-Temperature Reactors (HTR-PM) being under construction at the Shidao Bay site plant as consisting of one 200-MW unit. Accordingly, in previous WNISR editions, Shidao Bay-1 has been accounted for as one unit. However, it turns out that Shidao Bay-1 (also called Shidaowan-1) consists of two 100-MW reactors, and consequently, as of WNISR2020, they are considered separately, i.o.w. as two units under construction (Shidao Bay 1-1 and 1-2). See CNEA, “Key components of second HTR-PM reactor connected”, China Nuclear Energy Association, n.d., see <http://en.china-nea.cn/site/content/176.html>, accessed 10 May 2020.

14 - Further delayed since WNISR2019. Fu Li, “Chinese HTR Program”, presented at the IFNec SMR Webinar Series, 23 June 2020, see https://www.ifnec.org/ifnec/upload/docs/application/pdf/2020-06/slides_deck_-_webinar_4.pdf, accessed 5 July 2020.

15 - Twin reactor. See previous note.

16 - Provisional names for the two CAP1400 at Rongcheng/Shidaowan. Construction of those reactors was introduced in WNISR stats in 2020 following *NIW* articles (in particular 10 July 2019) and confirmation from sources in China. The two CAP1400 are not listed as under construction neither by WNA (planned, with construction start in 2020) nor IAEA-PRIS. In July 2019, *NIW* classified them as “under construction” on the basis of the NNSA map as of June 2019. See *NIW*, “Why the Secrecy Over Reactor Construction Start?”, 12 July 2019.

17 - According to sources in China, first basemat concrete for the first CAP1400 reactor was poured on 8 April 2019. See also C.F. Yu, “CGN’s Taipingling Project Moves Ahead”, *NIW*, 20 December 2019. See previous note.

18 - No official startup dates at this point. WNISR2020 uses 2025 for modelling purposes.

19 - According to sources in China, first basemat concrete for the second CAP1400 reactor was poured in November 2019. See previous notes.

20 - No official startup dates at this point. WNISR2020 uses 2025 for modelling purposes.

- 21 - CGN, “Annual Report 2019”, CGN Power, April 2020, see <http://en.cgnp.com.cn/encgnp/c100882/202004/f3c20533b65c4cf3a41583190c02057c/files/a5bc0c2ac79c425398a2296b2b054005.pdf>, accessed 2 April 2020.
- 22 - WNA, “Nuclear Power in China”, July 2020, see <https://www.world-nuclear.org/information-library/country-profiles/countries-a-f/china-nuclear-power.aspx>, accessed 29 July 2020.
- 23 - Connected to the grid on 8 August 2020. WNN, “Tianwan 5 achieves grid connection”, 10 August 2020, see <https://www.world-nuclear-news.org/Articles/Tianwan-5-achieves-grid-connection>, accessed 10 August 2020.
- 24 - WNISR, “China: Grid Connection for Fuqing-3 and Construction Start on Tianwan-6”, 9 September 2016, see <https://www.worldnuclearreport.org/China-Grid-Connection-for-Fuqing-3-and-Construction-Start-on-Tianwan-6.html>, accessed 22 August 2019.
- 25 - CNNC, “CNNC’s Zhangzhou nuclear plant goes into construction”, 23 December 2019, see http://en.cnncc.com.cn/2019-12/23/c_435889.htm, accessed 17 January 2020.
- 26 - WNA, “Nuclear Power in China”, July 2020.
- 27 - Further delayed. Grid connection is further delayed, at least to May 2021. A further delay of about one year compared to WNISR2019. Roger Fry, “TVO reporte le démarrage d’Olkiluoto 3 (1,6 GW) à mai 2021”, *Montel*, 2 July 2020 (in French), see <https://www.montelnews.com/fr/story/tvo-reporte-le-dmarrage-dolkiluoto-3-16-gw-%C3%A0-mai-2021/1128407>, accessed 12 July 2020. TVO, “TVO - OL3 EPR’s schedule work continues”, 2 July 2020, see <https://www.tvo.fi/en/index/news/presseleasesstockexchangereleases/2020/013eprsscheduleworkcontinues.html>, accessed 17 August 2020.
- 28 - Probably further delayed. Delayed many times from its original planned startup date of 2012. As of July 2019, startup was expected in 2022. No new schedule has been provided but in July 2020, EDF noted that “As regards Flamanville 3, in the context of health crisis, all construction activities have been temporarily interrupted between mid-March and early May, which could result in further delays and additional costs.”, see EDF, “2020 Half-Year Results”, 30 July 2020, see <https://www.edf.fr/en/the-edf-group/dedicated-sections/journalists/all-press-releases/2020-half-year-results>, accessed 30 July 2020.
- 29 - Further delayed. First criticality achieved on 22 July 2020. A further delay compared to WNISR2019, when commercial operation was expected in December 2019. NPCIL, “Unit-3 of Kakrapar Atomic Power Project achieves First Criticality”, 22 July 2020, see https://www.npcil.nic.in/writereaddata/Orders/202007220324143941331News_22jul2020_01.pdf, accessed 28 July 2020.
- 30 - Further delayed. Jitendra Singh, “Unstarred Question No. 1602: Commissioning of heavy water reactor at Kakrapar Nuclear Plant”, Parliament of India, Rajya Sabha, March 2020.
- 31 - Jitendra Singh, “Unstarred Question No. 1602: Commissioning of heavy water reactor at Kakrapar Nuclear Plant”, Parliament of India, Rajya Sabha, March 2020.
- 32 - Jitendra Singh, “Unstarred Question No. 1602: Commissioning of heavy water reactor at Kakrapar Nuclear Plant”, Parliament of India, Rajya Sabha, March 2020. In 2018, ASE quoted 2024 as “guarantee operation date”. See Atomstroyexport, “Kudankulam NPP (India)”, Undated, see http://www.atomstroyexport.ru/wps/wcm/connect/ase/eng/about/NPP+Projects/Current/Kudankulam_india/, accessed 9 May 2018. In December 2019, Jitendra Singh also quoted “2023-2024” as “expected completion” date for Kakrapar-4, see Department of Atomic Energy and Government of India, “Lok Sabha - Unstarred Question No.3702 To Be Answered on 11.12.2019—Nuclear Power Plants”, 11 December 2019, see <http://164.100.24.220/loksabhaquestions/annex/172/AU3702.pdf>, accessed 2 January 2020.
- 33 - Repeatedly delayed. Commissioning still expected in October 2021. Department-related Parliamentary Standing Committee on Science & Technology, Environment, Forests and Climate Change, “Demands for Grants (2020-2021) of the Department of Atomic Energy (Demand No. 03)”, Parliament of India, Rajya Sabha Secretariat, March 2020.
- 34 - Further delayed since WNISR2019. As of March 2020, anticipated date for commissioning is March 2022, a year and a half delay compared to WNISR2019. Jitendra Singh, “Unstarred Question No. 1602: Commissioning of heavy water reactor at Kakrapar Nuclear Plant”, Parliament of India, Rajya Sabha, March 2020.
- 35 - Further delayed since WNISR2019. As of March 2020, anticipated date for commissioning is March 2023, 1.5 year of delay compared to WNISR2019. Jitendra Singh, “Unstarred Question No. 1602: Commissioning of heavy water reactor at Kakrapar Nuclear Plant”, Parliament of India, Rajya Sabha, March 2020.
- 36 - Original construction of Bushehr-2 had started in February 1976, and the reactor remained listed as under construction in PRIS-IAEA “Nuclear Power Reactors in the World” until the 1994 edition. See WNISR, “Iran: Construction Restart of Busheer-2”, 14 November 2019, see <https://www.worldnuclearreport.org/Iran-Construction-Restart-of-Busheer-2.html>.
- 37 - Construction status unclear. Chugoku “took the first step” toward Shimane-3 startup by asking prefectural and local governments for their consent on applying to the Nuclear Regulation Authority (NRA) for safety screening; see *The Asahi Shimbun*, “Process begins at Shimane nuclear plant to operate new reactor”, 22 May 2018. Still no clear date for startup. 2021 is used for modeling purposes.
- 38 - First delay. Expected start of operation, according to PNRA, was 2020 “PNRA Annual Report 2018”, 2019, see <https://www.pnra.org/upload/pnrarpt/PNRA%20Report%202018.pdf>, accessed 15 May 2019. Kanupp-2 is now expected to come on line in 2021, see *The Nation*, “PAEC nuclear power plants expected to connect to grid by end of 2021”, 2 July 2020, see <https://nation.com.pk/02-Jul-2020/paec-nuclear-power-plants-expected-to-connect-to-grid-by-end-of-2021>, accessed 20 July 2020.
- 39 - No new information on expected start of operation. See “PNRA Annual Report 2018”, 2019 and “PNRA Annual Report 2019”, 2020.
- 40 - WNA, “Nuclear Power in Russia”, April 2020, see <https://www.world-nuclear.org/information-library/country-profiles/countries-o-s/russia-nuclear-power.aspx>, accessed 23 April 2020.

41 - WNA, “Nuclear Power in Russia”, April 2020.

42 - Delayed. In 2018, TASS agency reported that Russia was ready to postpone commissioning of Leningrad 2-2—then planned for February 2020—by two years. As of 2019, commissioning was expected in 2021. As of May 2020, commissioning is expected in April 2021, see *WNN*, “Leningrad II-2 start-up postponed to April 2021”, 19 May 2020, see <https://world-nuclear-news.org/Articles/Leningrad-II-2-start-up-postponed-to-April-2021>, accessed 19 May 2020. Fuel loading started in July 2020, see *WNN*, “Fuel loading starts at Leningrad II-2”, 20 July 2020, see <https://www.world-nuclear-news.org/Articles/Fuel-loading-starts-at-Leningrad-II-2>, accessed 2 August 2020.

43 - Further delayed since WNISR2019. Construction was suspended between March 1993 and June 2009. In the Framework of the Strategic Plan, approved by the extraordinary General Assembly of Slovenské Elektrárne, a.s. (SE) on 28 March 2017, operation of Mochovce-3 was expected by the end of 2018. In May 2019, CEO of SE Branislav Strycek announced that startup would be delayed again to March 2020. As of June 2020, the safety authority announced a further delay, partly due to the pandemic crisis, but no new deadline was provided. See ÚJD SR, “Announcement of the Nuclear Regulatory Authority of the Slovak Republic on the extension of the period for decision in the administrative proceeding for authorization for commissioning of nuclear installation of the Unit 3 - NPP Mochovce”, 16 June 2020, see [https://www.ujd.gov.sk/ujd/www1.nsf/\\$All/4188834860C1B178C125858B002981AB](https://www.ujd.gov.sk/ujd/www1.nsf/$All/4188834860C1B178C125858B002981AB), accessed 7 August 2020; and Chris Johnstone, “Six-month commissioning delay for Mochovce-3”, *Power in Europe*, 29 June 2020.

44 - Further delayed since WNISR2019. Construction was suspended between March 1993 and June 2009. In the Framework of the Strategic Plan, approved by the extraordinary General Assembly of Slovenské Elektrárne, a.s. (SE) on 28 March 2017, operation of Mochovce-4 was expected by the end of 2019. As of July 2020, it is still expected in 2021. See previous note.

45 - Further delayed since WNISR2019. In August 2019, KHNP’s webpage dedicated to Shin-Hanul-1 introduced a change in Commercial Operation (October 2020), a delay of one year compared to WNISR2019. However, in this revised schedule, fuel loading was to take place in April 2020, which did not happen as of 1 July 2020. KHNP, “Nuclear Power Construction—Shin-Hanul #1,2”, 1 January 2020, see <http://cms.khnp.co.kr/eng/content/547/main.do?mnCd=EN03020303>, last accessed 8 August 2020.

46 - Further delayed. In August 2019, KHNP’s webpage dedicated to Shin-Hanul-2 announced a change in Commercial Operation (August 2021) a delay of one year compared to WNISR2019. See previous note.

47 - Delayed. Construction officially started in April 2017, suspended in July to resume in October of the same year. Commercial operation at construction start was October 2021, it is now expected in March 2023, almost 1.5 year of delay. KHNP, “Nuclear Power Construction – Shin-Kori #5,6”, various dates, see <http://cms.khnp.co.kr/eng/content/548/main.do?mnCd=EN03020304>, last accessed 8 August 2020.

48 - Delayed. KHNP, “Nuclear Power Construction—Shin-Kori #5,6”, Various dates, see <http://cms.khnp.co.kr/eng/content/548/main.do?mnCd=EN03020304>, last accessed 8 August 2020

49 - Delayed. In March 2019, the project management announced that it had finished the concreting of the basemat for the nuclear island and that it was now expected that Akkuyu-1 would be physically completed in 2023, with generation coming at a later date. Phil Chaffee, “New Build, Revised 2023 Milestone for Akkuyu”, *NIW*, 29 March 2019.

50 - See *NIW*, 31 July 2020.

51 - Officials have repeatedly indicated the scheduled startup date as 2024, but that seems rather impossible. WNISR2020 uses a 5-year construction period. *Daily Sabah*, “Construction starts on 2nd unit of Turkey’s 1st nuclear power plant Akkuyu”, 28 June 2020, see <https://www.dailysabah.com/business/energy/construction-starts-on-2nd-unit-of-turkeys-1st-nuclear-power-plant-akkuyu>, accessed 28 June 2020.

52 - Repeatedly delayed. In May 2017, startup of Barakah-1 was first postponed to 2018. In May 2018, the reviewed forecast of its operator, Nawah, after it had “completed a comprehensive operational readiness review to generate an updated schedule for the start-up”, is that “the loading of nuclear fuel assemblies required to commence nuclear operations at Barakah Unit 1 will occur between the end of 2019 and early 2020”. See Nawah, “Next phase of preparations for Barakah Unit 1 Nuclear Operations starts”, 28 May 2018, Press Release, see <https://www.nawah.ae/media/press-news/2018/05/26/Next-phase-of-preparations-for-Barakah>, accessed 26 July 2019. In July 2019, FANR announced that “Unit 1 construction is complete and the unit is currently undergoing commissioning and testing, prior to receipt of the Operating License from FANR, which is currently in the final stages of reviewing the Operating License application for the Unit, in preparation for the loading of the first nuclear assemblies”. See FANR, “FANR Certifies ENEC’s First group of UAE National Nuclear Reactor Operators”, 8 July 2019, see <https://www.fanr.gov.ae/en/media-centre/news?g=ob7fd437-2044-4346-90ef-76d8eae5c59>, accessed 8 July 2019.

The reactor was connected to the grid in August 2020, see ENEC, “Barakah Nuclear Energy Plant Unit 1 Successfully Connects to UAE’s Transmission Grid”, 19 August 2020, see <https://www.enec.gov.ae/news/latest-news/barakah-nuclear-energy-plant-unit-1-successfully-connects-to-uae-transmission-grid/>, accessed 23 August 2020.

53 - Delayed. No new date for Barakah-2. WNA uses 2021, a three-year delay compared to original schedule. See WNA, “Plans For New Reactors Worldwide”, August 2020, see <https://www.world-nuclear.org/information-library/current-and-future-generation/plans-for-new-reactors-worldwide.aspx>, accessed 21 August 2020. In July 2020, ENEC announced construction completion of Unit 2. ENEC, “ENEC Completes Construction of Unit 2 of the Barakah Nuclear Energy Plant”, 15 July 2020, see <https://www.enec.gov.ae/news/latest-news/enec-completes-construction-of-unit-2-of-the-barakah-nuclear-energy-plant/>, accessed 16 July 2020.

54 - Delayed. No new date for Barakah-3 in updated schedule. WNA uses 2022, a three-year delay compared to original schedule. (See previous notes).

55 - Delayed. No new date for Barakah-4 in updated schedule. WNA uses 2023, a three-year delay compared to original schedule. (See previous notes).

56 - See WNISR, “The Oddly Discreet Construction Start of Hinkley Point C”, 29 December 2018, see <https://www.worldnuclearreport.org/The-Oddly-Discreet-Construction-Start-of-Hinkley-Point-C.html>, accessed 24 August 2019.

57 - EDF, “Clarifications on Hinkley Point C project”, 3 July 2017, see <https://www.edf.fr/en/the-edf-group/dedicated-sections/journalists/all-press-releases/clarifications-on-hinkley-point-c-project>, accessed 7 May 2018.

58 - See WNISR, “Strangely Belated Announcement of Hinkley Point C-2 Construction Start”, 18 March 2020, see <https://www.worldnuclearreport.org/Strangely-Belated-Announcement-of-Hinkley-Point-C-2-Construction-Start.html>.

59 - No official startup date announced.

60 - Delayed. Georgia Power is expressing confidence that it can meet target dates of November 2021 and November 2022 for Units 3 and 4 respectively, announced in 2018. Georgia Power, “Georgia Power Announces Resequencing of Vogtle Units 3 & 4 Planned Activities”, 23 June 2020, see <https://www.prnewswire.com/news-releases/georgia-power-announces-resequencing-of-vogtle-units-3--4-planned-activities-301081896.html>, accessed 17 August 2020. No change since WNISR2019.

61 - Delayed. No change since WNISR2019. (See previous note).