
European Nuclear Decommissioning Market Map



United Kingdom – Current Nuclear Decommissioning Sites

Nuclear Decommissioning Sites in the UK



Name	Information	Spend per annum
Dounreay Site Restoration Ltd	Large single site	£168m
Low Level Waste Repository Ltd	Small single site	£33m
Sellafield Ltd	Sellafield, Windscale, Calder Hall, Capenhurst	£1.7bn
Springfields Fuel Ltd	Fuel	£53m
Reactor Sites Restoration Ltd	Winfrith and Harwell	£65m
Magnox Ltd		£652m across all Magnox sites
Hunterston	Defuelling/decom	
Chapelcross	Defuelling	
Wylfa	Recent closure	
Trawsfynydd	Defuelling/decom	
Oldbury	Defuelling	
Sizewell A	Defuelling	
Bradwell	Defuelling/decom	
Berkeley	Defuelling/decom	
Dungeness A	Defuelling	
Hinkley A	Defuelling/decom	

*World Nuclear Association Country Profiles - www.world-nuclear.org

United Kingdom

United Kingdom - Future Nuclear Decommissioning Sites

Plant	Type	Present capacity (MWe net)	First power	Expected shutdown
Wylfa 1	Magnox	490	1971	Dec-15
Dungeness B 1&2	AGR	2 x 520	1983 & 1985	2028
Hartlepool 1&2	AGR	595, 585	1983 & 1984	2019 or 2024
Heysham I 1&2	AGR	580, 575	1983 & 1984	2019
Heysham II 1&2	AGR	2 x 610	1988	2023
Hinkley Point B 1&2	AGR	475, 470	1976	2023
Hunterston B 1&2	AGR	475, 485	1976 & 1977	2023
Torness 1&2	AGR	590, 595	1988 & 1989	2023
Sizewell B	PWR	1198	1995	2035
Total: 16 units		9373 MWe		

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France

Nuclear Power Plants



Class	Reactor	MWe net, each	Commercial operation	
900 MWe	Blayais 1-4	910	12/81, 2/83, 11/83, 10/83	
	Bugey 2-3	910	3/79, 3/79	
	Bugey 4-5	880	7/79-1/80	
	Chinon B 1-4	905	2/84, 8/84, 3/87, 4/88	
	Cruas 1-4	915	4/84, 4/85, 9/84, 2/85	
	Dampierre 1-4	890	9/80, 2/81, 5/81, 11/81	
	Fessenheim 1-2	880	12/77, 3/78	
	Gravelines B 1-4	910	11/80, 12/80, 6/81, 10/81	
	Gravelines C 5-6	910	1/85, 10/85	
	Saint-Laurent B 1-2	915	8/83, 8/83	
	Tricastin 1-4	915	12/80, 12/80, 5/81, 11/81	
	1300 MWe	Belleville 1 & 2	1310	6/88, 1/89
		Cattenom 1-4	1300	4/87, 2/88, 2/91, 1/92
		Flamanville 1-2	1330	12/86, 3/87
Golfech 1-2		1310	2/91, 3/94	
Nogent s/Seine 1-2		1310	2/88, 5/89	
Paluel 1-4		1330	12/85, 12/85, 2/86, 6/86	
Penly 1-2		1330	12/90, 11/92	
Saint-Alban 1-2		1335	5/86, 3/87	
N4 – 1450 MWe		Chooz B 1-2	1500	12/96, 1999
		Civaux 1-2	1495	1999, 2000
Total (58)		63,130		

*World Nuclear Association Country Profiles - www.world-nuclear.org

France

Back-End Fuel Cycle (without disposal)



Waste Treatment or Maintenance centres



Germany

Germany – Units that have been shutdown

Plant	Type	MWe (net)	Commercial operation	Operator	Provisionally scheduled shutdown 2001	2010 agreed shutdown	March 2011 shutdown & May 2011 closure plan
Biblis A	PWR	1167	2/1975	RWE	2008	2016	shutdown
Neckarwestheim 1	PWR	785	12/1976	EnBW	2009	2017	shutdown
Brunsbüttel	BWR	771	2/1977	Vattenfall	2009	2018	shutdown
Biblis B	PWR	1240	1/1977	RWE	2011	2018	shutdown
Isar 1	BWR	878	3/1979	E.ON	2011	2019	shutdown
Unterweser	PWR	1345	9/1979	E.ON	2012	2020	shutdown
Phillipsburg 1	BWR	890	3/1980	EnBW	2012	2026	shutdown
Krümmel	BWR	1260	3/1984	Vattenfall	2016	2030	shutdown
Grafenrheinfeld	PWR	1275	6/1982	E.ON	2014	2028	shutdown June 2015
Total shut down (9)		9611					



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Germany

Germany – Future Nuclear Decommissioning Sites

Plant	Type	MWe (net)	Commercial operation	Operator	Provisionally scheduled shutdown 2001	2010 agreed shutdown	March 2011 shutdown & May 2011 closure plan
Gundremmingen B	BWR	1284	4/1984	RWE	2016	2030	end 2017
Gundremmingen C	BWR	1288	1/1985	RWE	2016	2030	2021
Grohnde	PWR	1360	2/1985	E.ON	2017	2031	2021
Phillipsburg 2	PWR	1392	4/1985	EnBW	2018	2032	2019
Brokdorf	PWR	1370	12/1986	E.ON	2019	2033	2021
Isar 2	PWR	1400	4/1988	E.ON	2020	2034	2022
Emsland	PWR	1329	6/1988	RWE	2021	2035	2022
Neckarwestheim 2	PWR	1305	4/1989	EnBW	2022	2036	2022

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Italy

Italy's former nuclear power reactors

Reactor	Model	Net MWe	First power	Shutdown
Latina	GCR	153k	05/1963	12/1987
Garigliano	BWR	150	01/1964	03/1982
Enrico Fermi (Trino Vercellese)	PWR	260	10/1964	07/1990
Caorso	BWR	860	05/1978	07/1990
Montalto di Castro (Alto Lazio) 1 & 2	BWR	982 each	Cancelled	-
Total operated (4)		1423 MWe		

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Sweden

Reactor	Operator b	Type	MWe net	Commercial operation	Intended decommissioning
Oskarshamn 1	OKG	BWR	473	1972	2017-19
Oskarshamn 2	OKG	BWR	638	1974	Closed in 2015
Oskarshamn 3	OKG	BWR	1400	1985	2035 or 2045
Ringhals 1	Vattenfall	BWR	878	1976	2020
Ringhals 2	Vattenfall	PWR	807	1975	2019

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Spain

Power reactors operating in Spain

Reactors	Type	Net MWe	First power	Commercial operation	Owner (%); operator	Licenced to
Almaraz 1	PWR	947 (1015)	1981	1981	Iberdrola 53%, Endesa 36%, Gas Natural Fenosa 11%; CNAT	6/2020
Almaraz 2	PWR	956	1983	1984		6/2020
Asco 1	PWR	996	1983	1984	Endesa (100%); ANAV	10/2021
Asco 2	PWR	992	1985	1986	Endesa (85%); ANAV	10/2021
Cofrentes	BWR	1063	1984	1985	Iberdrola (100%); Iberdrola	3/2021
Trillo 1	PWR	1003	1988	1988	Iberdrola (48%), Gas Natural Fenosa (34.5%); CNAT	11/2024
Vandellos 2	PWR	1045	1987	1988	Endesa (78%); ANAV	7/2020
Total (7)		7002 MWe				

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Decommissioned reactors in Eastern Europe

Country:	Location:	Reactor typr:	Operative life:	Decommissioning phase:	Dismantling cost:
Bulgaria	Kozloduy NPP-1,2,3,4 ^[112]	PWR VVER-440 (4 x 408 MWe)	Reactors 1,2 closed in 2003, reactors 3,4 closed in 2006 (Closing forced by European Union)	De-fuelling	?
East Germany	Greifswald NPP-1, 2,3,4,5,6	VVER-440 5 x 408 MWe	Reactors 1-5 closed in 1989/1990, reactor 6: finished but never operated	Immediate dismantling (underwater cutting)	~ \$330/kWe
East Germany	Rheinsberg NPP-1	VVER-210 70–80 MWe	24 years (1966–1990)	In dismantling since 1996 Safstor (underwater cutting)	~ \$330/kWe
East Germany	Stendal NPP-1,2,3,4	VVER-1000 (4 x 1000 MWe)	Never activated (1st reactor 85% completed)	Not radioactive (Cooling towers demolished with explo- sives)	? (Structure in exhibition inside an industrial park)
Russia	Mayak ^[113] (Chelyabinsk-65)	PUREX plant for uranium enrichment	Several severe incidents (1946–1956)	?	?

Decommissioned reactors in Eastern Europe

Russia	Seversk ^[114] (Tomsk-7)	Three plutonium reactors Plant for uranium enrichment	Two fast-breeder reactors closed (of three), after disarmaments agreements with USA in 2003.[115]	?	?
	Jaslovske Bohunice NPP-1,2 (180 km east from Vienna) ^{[116][117]}	VVER 440/230 2 X 440 MWe	(1978–2006) (1980–2008)	?	?
Ukraine	Chernobyl NPP-4 (110 km from Kiev)	RBMK-1000 1000 MWe	hydrogen explosion, then graphite fire (1986) (INES 7)	ENTOMBMENT (armed concrete “sarcophagus”)	Past: ? Future: riding sarcophagus in steel[118]

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