POWER REACTORS OF THE WORLD

A. POWER REACTORS IN OPERATION, 1 September 1965

Name	*Location*	*Type*	*Net Output (MWe)*	*Criticality*
Belgium				
BR-3	Mol	Press. H_2O, 3.7 + 4.4% U	10.5	Aug 1962
Canada				
NPD	Rolphton	Press. D_2O, nat. U	20	Apr 1962
France				
G-1	Marcoule	Nat. U, graphite, air	3	Jan 1956
G-2 (G-3)	Marcoule	Nat. U, graphite, CO_2	2 × 40	Jul 1958/ Jun 1959
EDF-1	Chinon	Nat. U, graphite, CO_2	70	Sep 1962
EDF-2	Chinon	Nat. U, graphite, CO_2	200	Aug 1964
Germany, Federal Republic of				
KAHL	Grosswelzheim/ Kahl (Main)	Boiling H_2O 2.6% U	15	Nov 1960
Italy				
LATINA (SIMEA)	Latina (Foce Verde)	Nat. U, graphite, CO_2	200	Dec 1962
GARIGLIANO (SENN)	Garigliano (Sessa Aurunca)	Boiling H_2O 2% U	150	Jun 1963
ENRICO FERMI	Trino Vercellese	Press. H_2O 2.6% U	186 *	Jun 1964
Japan				
JPDR	Tokai-Mura	Boiling H_2O 2.5% U	11.7	Aug 1963
TOKAI-MURA	Tokai-Mura	Nat. U graphite, CO_2	158	May 1965

* to be raised to 257 MWe by the end of 1965.

Name	*Location*	*Type*	*Net Output (MWe)*	*Criticality*
Sweden				
R-3/ADAM	Agesta	Press. D_2O nat. U	9	Jul 1963
United Kingdom				
CALDER HALL	Calder Hall	Nat. U graphite, CO_2	4 × 45	May 1956/ Dec 1958
CHAPELCROSS	Chapelcross	Nat. U graphite, CO_2	4 × 45	Oct 1958/ Dec 1959
DFR	Dounreay	Fast breeder 45.5% U, NaK	15	Nov 1959
BERKELEY	Berkeley	Nat. U graphite, CO_2	2 × 138	Aug 1961/ Mar 1962
BRADWELL	Bradwell	Nat. U graphite, CO_2	2 × 150	Aug 1961/ Apr 1962
AGR	Windscale	2.5% U graphite, CO_2	32	Aug 1962
HUNTERSTON	Hunterston	Nat. U graphite, CO_2	2 × 160	Sep 1963/ Apr 1964
HINKLEY POINT	Hinkley Point	Nat. U graphite, CO_2	2 × 250	May 1964/ late 1964
TRAWSFYNYDD	Trawsfynydd	Nat. U graphite, CO_2	2 × 250	Sep 1964/ Dec 1964
SIZEWELL	Sizewell	Nat. U graphite, CO_2	289	Jun 1965
DUNGENESS A	Dungeness	Nat. U graphite CO_2	275	Jun 1965
United States of America				
EBWR	Lemont	Boiling H_2O 1.5 + 90% U	4.5	Dec 1956
SM-1	Fort Belvoir	Press. H_2O 93% U	1.9	Apr 1957
SRE	Santa Susana	Graphite-sodium 90% + Th	5.1	Apr 1957
VBWR	Pleasanton	Boiling H_2O 2-5% U	shut-down '63	Aug 1957
SHIPPINGPORT	Shippingport	Press. H_2O nat. + 93% U	60	Dec 1957
DRESDEN	Morris	Boiling H_2O 1.5% U	208	Oct 1959
YANKEE	Rowe	Press. H_2O 3.4% U	175	Aug 1960
PM-2A	Greenland	Press. H_2O 93% U	1.5	Oct 1960

Name	*Location*	*Type*	*Net Output (MWe)*	*Criticality*
BORAX-5	Idaho Falls	Nucl. superheat 5 + 93 % U	2.7	Feb 1962
PM-1	Sundance	Press. H_2O 93 % U	1.0	Feb 1962
PM-3A	Antarctica	Press. H_2O 93 % U	1.5	Mar 1962
SM-1A	Alaska	Press. H_2O 93 % U	1.7	Mar 1962
SAXTON	Saxton	Press. H_2O 5.7 % U	3.3	Apr 1962
INDIAN POINT	Indian Point	Press. H_2O 93 % U + Th	255	Aug 1962
HNPF	Hallam	Sodium-graphite 3.6 % U	75	Aug 1962
BIG ROCK POINT	Charlevoix	Boiling H_2O 3.2 % U	72.8	Sep 1962
ERR	Elk River	Boiling H_2O 93 % U + Th	23	Nov 1962
HUMBOLDT BAY	Humboldt Bay	Boiling H_2O 2.6 % U	62	Feb 1963
CVTR	Parr	Press. D_2O 1.5 + 2.0 % U	17	Mar 1963
PNPF	Piqua	Organic 1.9 % U	11.4	Jun 1963
ENRICO FERMI	Lagoona Beach	Fast breeder 25 % + nat. U	60.9	Aug 1963
EBR-2	Idaho Falls	Fast breeder 49 % + nat. U, Na	16.5	Nov 1963
NPR	Richland	0.9 % U graphite, H_2O	776	Dec 1963 [a]
PATHFINDER	Sioux Falls	Nucl. superheat 2.2 + 93 % U	58.5	Mar 1964
BONUS	Punta Higuera	Nucl. superheat nat. + 3 % U	16.5	Apr 1964
Union of Soviet Socialist Republics				
APS	Obninsk	5 %, graphite H_2O	5	May 1954
SIBERIAN	Troitsk	Nat. U graphite, H_2O	600 (6 × 100)	Sep 1958/ Dec 1962
URAL I.	Beloyarsk	Nucl. superheat 1.3 % U	94	Sep 1963

[a] Reactor critical, power generation scheduled for late 1965 or early 1966.

Name	*Location*	*Type*	*Net Output (MWe)*	*Criticality*
WWER I.	Novo Veronezh	Press. H_2O 1.5% U	196	Dec 1963
TES-3	Obninsk	Press. H_2O enr. UO_2	1.5	1961
ARBUS	Melekess	Organic 36% UAl_4 + Al	0.75	Jun 1963
VK-50 (Ulyanovsk)	Melekess	Boiling H_2O 1.5% U	70	Apr 1965

B. POWER REACTORS UNDER CONSTRUCTION, 1 September 1965

Canada				
CANDU-PHW-200	Douglas Point	Press. D_2O nat. U	203	1966
Czechoslovakia				
HWGCR	Bohunice	Nat. U, D_2O CO_2	150	1968
France				
CHOOZ (SENA)[a]	Chooz	Press. H_2O 3.1% U	266	1966
EDF-3	Chinon	Nat. U graphite CO_2	480	1965
EL-4	Brennilis	Enr. U D_2O, CO_2	73	1966
EDF-4	Saint Laurant des Eaux	Nat. U graphite CO_2	480	1967
Germany, Federal Republic of				
AVR	Jülich	Pebble bed 90% U, Th graphite, He	13.2	1965
KRB	Gundremmingen	Boiling H_2O enr. U	237	1966
MZFR	Karlsruhe	Nat. U press. D_2O	50	1965
KWL	Lingen	Boiling H_2O fossile superheat, enr. UO_2	250	1968

[a] Electricity production is equally shared between Belgium and France.

Name	*Location*	*Type*	*Net Output (MWe)*	*Criticality*
KWO	Obrigheim	Press. H_2O 3 % UO_2	283	1968
HDR	Grosswelzheim/ Kahl (Main)	Boiling H_2O nuclear superheat, enr. UO_2	25	1968
India				
TARAPUR	Tarapur	Boiling H_2O	2 × 190	1968
RAJASTHAN (1st unit) (CANDU type)	Rana Pratap Sagar	Press. D_2O nat. U	200	1969
Netherlands				
DODEWAARD	Dodewaard	BWR ("direct cycle")	47	1968
Spain				
ZORITA I	Zorita de los Canes	Press. H_2O	140	1968
Sweden				
R-4/EVA	Marviken	Boiling D_2O nat U	200	1968
Switzerland				
LUCENS	Lucens	1 % U, D_2O, CO_2	7.5	1966
United Kingdom				
DUNGENESS A	Dungeness	Nat. U graphite CO_2	275	1965
SIZEWELL	Sizewell	Nat. U graphite CO_2	289	1965
OLDBURY	Oldbury	Nat. U graphite CO_2	2 × 300	1966
SGHWR	Winfrith	1.4 % U, D_2O boiling H_2O	93	1967
WYLFA	Wylfa	Nat. U graphite, CO_2	2 × 590	1968/69
United States of America				
EGCR	Oak Ridge	2.5 % U graphite, He	21.9	1965
HTGR	Peach Bottom	93 % U + Th graphite He	40	1965
LACBWR	Genoa	3.4 % U boiling H_2O	50	1965

Name	*Location*	*Type*	*Net Output (MWe)*	*Criticality*
SAN ONOFRE	San Clemente	3.6 % U press. H_2O	375	1967
CONNECTICUT YANKEE	Haddam Neck	3-4 % U press. H_2O	462	1967
OYSTER CREEK	Oyster Creek	Boiling H_2O	515	1968
NINE MILE POINT	Oswego, N.Y.	Boiling H_2O	500	1968
Union of Soviet Socialist Republics				
WWER-II	Novo-Voronezh	Press. H_2O 1.5 % U	365	1965
URAL-II	Beloyarsk	Nucl. superheat 1.3 % U BWR	200	1965
BN-350	Shevchenko (Caspian Sea)	Fast breeder 23 % UO_2 + Pu, Na	350	