

# World Nuclear Power Reactors & Uranium Requirements

1 October 2009

This table includes only those future reactors envisaged in specific plans and proposals and expected to be operating by 2030. Longer-range estimates based on national strategies, capabilities and needs may be found in the WNA [Nuclear Century Outlook](#). The WNA country papers linked to this table cover both areas: near-term developments and the prospective long-term role for nuclear power in national energy policies.

COUNTRY <small>(Click name for Country Profile)</small>	NUCLEAR ELECTRICITY GENERATION 2008		REACTORS OPERABLE 1 Oct 2009		REACTORS UNDER CONSTRUCTION 1 Oct 2009		REACTORS PLANNED Oct 2009		REACTORS PROPOSED Oct 2009		URANIUM REQUIRED 2009
	billion kWh	% e	No.	MWe	No.	MWe	No.	MWe	No.	MWe	tonnes U
Argentina	6.8	6.2	2	935	1	692	1	740	1	740	122
Armenia	2.3	39.4	1	376	0	0	0	0	1	1000	51
Bangladesh	0	0	0	0	0	0	0	0	2	2000	0
Belarus	0	0	0	0	0	0	2	2000	2	2000	0
Belgium	43.4	53.8	7	5728	0	0	0	0	0	0	1002
Brazil	14.0	3.1	2	1901	0	0	1	1245	4	4000	308
Bulgaria	14.7	32.9	2	1906	0	0	2	1900	0	0	260
Canada	88.6	14.8	18	12652	2	1500	4	4400	3	3800	1670
China	65.3	2.2	11	8587	17	17540	34	36380	90	79000	2010
Czech Republic	25.0	32.5	6	3686	0	0	0	0	2	3400	610
Egypt	0	0	0	0	0	0	1	1000	1	1000	0
Finland	22.0	29.7	4	2696	1	1600	0	0	1	1000	446
France	418.3	76.2	59	63473	1	1630	1	1630	1	1630	10569
Germany	140.9	28.3	17	20339	0	0	0	0	0	0	3398
Hungary	14.0	37.2	4	1826	0	0	0	0	2	2000	274
India	13.2	2.0	17	3779	6	2976	23	21500	15	20000	961
Indonesia	0	0	0	0	0	0	2	2000	4	4000	0
Iran	0	0	0	0	1	915	2	1900	1	300	143
Israel	0	0	0	0	0	0	0	0	1	1200	0
Italy	0	0	0	0	0	0	0	0	10	17000	0
Japan	240.5	24.9	53	46236	2	2285	13	17915	1	1300	8388
Kazakhstan	0	0	0	0	0	0	2	600	2	600	0
Korea DPR (North)	0	0	0	0	0	0	1	950	0	0	0
Korea RO (South)	144.3	35.6	20	17716	6	6700	6	8190	0	0	3444
Lithuania	9.1	72.9	1	1185	0	0	0	0	2	3400	0
Mexico	9.4	4.0	2	1310	0	0	0	0	2	2000	242
Netherlands	3.9	3.8	1	485	0	0	0	0	0	0	97
Pakistan	1.7	1.9	2	400	1	300	2	600	2	2000	65
Poland	0	0	0	0	0	0	0	0	5	10000	0
Romania	7.1	17.5	2	1310	0	0	2	1310	1	655	174
Russia	152.1	16.9	31	21743	9	7130	7	8000	37	36680	3537
Slovakia	15.5	56.4	4	1760	2	840	0	0	1	1200	251

<b>Slovenia</b>	6.0	41.7	1	696	0	0	0	0	1	1000	137
<b>South Africa</b>	12.7	5.3	2	1842	0	0	3	3565	24	4000	303
<b>Spain</b>	56.4	18.3	8	7448	0	0	0	0	0	0	1383
<b>Sweden</b>	61.3	42.0	10	9399	0	0	0	0	0	0	1395
<b>Switzerland</b>	26.3	39.2	5	3237	0	0	0	0	3	4000	531
<b>Thailand</b>	0	0	0	0	0	0	2	2000	4	4000	0
<b>Turkey</b>	0	0	0	0	0	0	2	2400	1	1200	0
<b>Ukraine</b>	84.3	47.4	15	13168	0	0	2	1900	20	27000	1977
<b>UAE</b>	0	0	0	0	0	0	3	4500	11	15500	0
<b>United Kingdom</b>	52.5	13.5	19	11035	0	0	4	6400	4	6000	2059
<b>USA</b>	809.0	19.7	104	101119	1	1180	11	13800	19	25000	18867
<b>Vietnam</b>	0	0	0	0	0	0	2	2000	8	8000	0
<b>WORLD**</b>	<b>2601</b>	<b>15</b>	<b>436</b>	<b>372,900</b>	<b>52</b>	<b>47,888</b>	<b>135</b>	<b>148,825</b>	<b>295</b>	<b>303,405</b>	<b>65,405</b>
	<b>billion kWh</b>	<b>% e</b>	<b>No.</b>	<b>MWe</b>	<b>No.</b>	<b>MWe</b>	<b>No.</b>	<b>MWe</b>	<b>No.</b>	<b>MWe</b>	<b>tonnes U</b>
	NUCLEAR ELECTRICITY GENERATION 2008		REACTORS OPERATING		REACTORS BUILDING		ON ORDER or PLANNED		PROPOSED		URANIUM REQUIRED

*Sources:*

*Reactor data: WNA to 1/10/09*

*IAEA- for nuclear electricity production & percentage of electricity (% e) 5/09.*

*WNA: Global Nuclear Fuel Market (reference scenario) - for U.*

Operating = Connected to the grid;

Building/Construction = first concrete for reactor poured, or major refurbishment under way;

Planned = Approvals, funding or major commitment in place, mostly expected in operation within 8 years, or construction well advanced but suspended indefinitely;

Proposed = Specific program or site proposals, expected operation mostly within 15 years. Planned and Proposed are generally gross MWe.

New plants coming on line are balanced by old plants being retired. Over 1996-2008, 40 reactors were retired as 47 started operation. There are no firm projections for retirements over the period covered by this Table, but WNA estimates that at least 60 of those now operating will close by 2030, most being small plants. The 2009 WNA Market Report reference case has 143 reactors closing by 2030.

TWh = Terawatt-hours (billion kilowatt-hours), MWe = Megawatt net (electrical as distinct from thermal), kWh = kilowatt-hour.

65,405 tU = 77,132 t U<sub>3</sub>O<sub>8</sub>

\*\* The world total includes 6 reactors operating on **Taiwan** with a combined capacity of 4927 MWe, which generated a total of 39.3 billion kWh in 2008 (accounting for 17.1% of Taiwan's total electricity generation). Taiwan has two reactors under construction with a combined capacity of 2600 MWe, and six proposed, total 8000 MWe. U demand of 831t is expected in 2009.

See also: [WANO map \(PDF, 1.5 MB\)](#)

**Note:** This table is routinely updated every two months, and more frequently as required.

*Earlier tables: Sept 09, Aug 09, July 09, May 09, April 09, Feb '09, Dec '08, Oct '08, Sept '08, Aug '08, July '08, March '08, Jan '08, Dec '07, Nov '07, Sept '07, Aug '07, July '07, May '07, March '07, Jan '07.*