Annex 2: Japanese Nuclear Reactor Status

Table 18 : Japanese Nuclear Reactor Status (as of 1 July 2016)

Operator	Reactor	MW	Grid year - Startup - Age (year)	Shutdown	Shutdown duration	NRA Guidelines Compliance		Status
						Application	Approval	
CHUBU	Hamaoka-3 (BWR)	1056	1987 -29,4	29/11/10	5,6	15/06/15[1]		
	Hamaoka-4 (BWR)	1092	1993 -23,4	13/5/11	5,1	14/2/14		
	Hamaoka-5 (ABWR)	1325	2004 -12,2	14/5/11	5,1	30/5/14		
CHUGOKU	Shimane-2 (BWR)	789	1988 -28	27/1/12	4,4	25/12/13		
HEPCO	Tomari-1 (PWR)	550	1988 -27,6	22/4/11	5,2	8/7/13		
	Tomari-2 (PWR)	550	1990 -25,8	26/8/11	4,8	8/7/13		
	Tomari-3 (PWR)	866	2009 -6,6	5/5/12	4,2	8/7/13		
HOKURIKU	Shika-1 (BWR)	505	1993 -23,5	1/3/11	5,3			
	Shika-2 (ABWR)	1108	2005 -11	11/3/11	5,3	12/8/14		
JAEA	Monju (FBR)	246	1995 -20,8	8/12/95	20,6			
JAPCO	Tokai-2 (BWR)	1060	1978 -38,3	21/5/11	5,1	20/5/14		
	Tsuruga-2 (PWR)	1108	1986 -30	29/8/11	4,8	5/11/15[946]		
KEPCO	Mihama-3 (PWR)	780	1976 -40,4	14/5/11	5,1	17/3/15		
	Ohi-1 (PWR)	1120	1977 -38,5	10/12/10	5,6			
	Ohi-2 (PWR)	1120	1978 -37,7	16/12/11	4,5			
	Ohi-3 (PWR)	1127	1991 -25,1	2/9/13	2,8	8/7/13		
	Ohi-4 (PWR)	1127	1992 -24	15/9/13	2,8	8/7/13		
	Takahama-1 (PWR)	780	1974 -42,3	10/1/11	5,5	17/3/15	20/6/16	
	Takahama-2 (PWR)	780	1975 -41,5	25/11/11	4,6	17/3/15	20/6/16	
	Takahama-3 (PWR)	830	1984 -	20/2/12		8/7/13	9/10/15	Shutdown
	Takahama-4 (PWR)	830	1984 -31,7	21/7/11	4,9	8/7/13	20/6/16	

946 JAIF, "JAPC Files Application for Compatibility Examination for Tsuruga-2", 9 November 2015, see http://www.jaif.or.jp/en/japc-files-application-for-compatibility-examination-for-tsuruga-2/, accessed 2 July 2016.

Operator	Reactor	MW	Grid year - Startup - Age (year)	Shutdown	Shutdown duration	NRA Guidelines Compliance		Status
						Application	Approval	
KYUSHU	Genkai-2 (PWR)	529	1980 -36,1	29/1/11	5,4			
	Genkai-3 (PWR)	1127	1993 -23	11/12/10	5,6	12/7/13		
	Genkai-4 (PWR)	1127	1996 -19,6	25/12/11	4,5	12/7/13		
	Sendai-1 (PWR)	846	1983 -	10/5/11		8/7/13	27/5/15	Restarted
	Sendai-2 (PWR)	846	1985 -	1/9/11		8/7/13	27/5/15	Restarted
SHIKOKU	Ikata-2 (PWR)	538	1981 -34,9	13/1/12	4,5			
	Ikata-3 (PWR)	846	1994 -22,3	29/4/11	5,2	8/7/13	18/5/16	
TEPCO	Kashiwazaki-Kariwa-1 (BWR)	1067	1985 -31,4	6/8/11	4,9			
	Kashiwazaki Kariwa-2 (BWR)	1067	1990 -26,4	19/2/07	9,4			
	Kashiwazaki Kariwa-3 (BWR)	1067	1992 -23,6	16/7/07	9			
	Kashiwazaki Kariwa-4 (BWR)	1067	1993 -22,5	16/7/07	9			
	Kashiwazaki Kariwa-5 (ABWR	1067	1989 -26,8	25/1/12	4,4			
	Kashiwazaki Kariwa-6 (ABWR	1315	1996 -20,4	26/3/12	4,3	27/9/13		
	Kashiwazaki Kariwa-7 (BWR)	1315	1996 -19,5	23/8/11	4,9	27/9/13		
TOHOKU	Higashidori-1 (BWR)	1067	2005 -10,8	6/2/11	5,4	20/6/14		
	Onagawa-1 (BWR)	498	1983 -32,6	10/9/11	4,8			
	Onagawa-2 (BWR)	796	1994 -21,5	6/11/10	5,7	27/12/13		
	Onagawa-3 (BWR)	796	2001 -15,1	10/9/11	4,8			

Notes: *(1) Grid connection year*
(2) The shutdown dates are from Japan Atomic Industrial Forum (JAIF), "Nuclear Power Plants in Japan - In operation and under construction", as of 10 June 2014, see http://www.jaif.or.jp/english/news_images/pdf/ENGNEWS02_1402531967P.pdf, accessed 13 June 2014.
(3) NRA Draft Review Report on Sendai.

Comments

WNISR considers that the 10 Fukushima units are shut down and will never restart. All of the remaining 40 reactors (including Monju) fall under the criteria of the WNISR Long Term Outage (LTO) category since none of them has generated any electricity in 2014 nor in the first half of 2015.

All these units should also be included in the Long-term Shutdown (LTS) under the criteria set by the International Atomic Energy Agency (IAEA).[947] However, the Japanese government and the IAEA have chosen to limit the LTS classification to only one reactor (Monju) and consider all of the other reactors as "in operation".

In March 2015, five units were officially closed and thus taken off the list of units in LTO. These are Mihama-1 and -2 and Tsuruga-1 on 17 March 2015 and Genkai-1 and Shimane-1 on 18 March 2015.

In July 2013, the NRA established a three-step review process for any company planning a reactor restart, designed to ensure that facilities meet the new regulatory requirements. The three steps of this process, are summed up as: "Permission for change in reactor installation license", "Approval of plan for construction works", and "Approval of operational safety programs".

The NRA received Applications for Review for 25 reactors from 11 power companies. Half were submitted in July 2013, immediately after the regulation was first issued. As of 1 July 2015, only Sendai-1 and -2, on 27 May 2015, received Final Approval for Operation.[948] Takahama-3 and -4, on 12 February 2015, passed the first of the three approval levels.

[947] IAEA, Power Reactor Information System, "Glossary of Terms in PRIS Reports", see http://www.iaea.org/pris/Glossary.aspx, accessed 6 June 2014.

[948] NRA, "Approval of Operational Safety Programs for Kyushu Electric Power Company's Sendai Nuclear Power Station Units 1 and 2", 27 May 2015, see http://www.nsr.go.jp/data/000108443.pdf, accessed 30 June 2016.