

Appendix F

Summary Table of Permanently Shutdown and Currently Operating Commercial Nuclear Reactors

Table F-1. Permanently Shutdown Commercial Nuclear Plants

1 2 3	October 2001	Nuclear Plant	Location	Reactor Type	Thermal Power	Decommissioning Option ^(a)	Total Site Area (ac.)	Cooling System	Cooling Water Source ^(b)	Fuel Location	Operating License	Shutdown Date ^(c)
4			Reactors that are Currently in the Process of Decommissioning									
5		Big Rock Point	Michigan	BWR	240 MW	DECON	593	OT	Lake Michigan	Fuel onsite	05/01/1964	08/30/1997
6		Dresden, Unit 1	Illinois	BWR	700 MW	SAFSTOR	953+1274 cooling pond	Cooling lake and spray system	Kankakee River	Fuel onsite	09/28/1959	10/31/1978
7		Fermi, Unit 1	Michigan	FBR	200 MW	SAFSTOR	1120	OT	NA	No fuel onsite	05/01/1963	09/22/1972
8		GE-VBWR	California	BWR	50 MW	SAFSTOR	-- ^(d)	-- ^(d)	-- ^(d)	No fuel onsite	05/14/1956	12/09/1963
9	F-1	Haddam Neck	Connecticut	PWR	1825 MW	DECON	524	OT	Connecticut River	Fuel onsite	12/27/1974	07/22/1996
10 11		Humboldt Bay, Unit 3	California	BWR	200 MW	SAFSTOR	143	OT	Humboldt Bay	Fuel onsite	08/28/1962	07/02/1976
12 13		Indian Point, Unit 1	New York	PWR	615 MW	SAFSTOR	239	OT	Hudson River	Fuel onsite	03/26/1962	10/31/1974
14	Draft NUREG-0586 Supplement 1	La Crosse	Wisconsin	BWR	165 MW	SAFSTOR	-- ^(d)	FCDC	Mississippi River	Fuel onsite	07/03/1967	04/30/1987
15		Maine Yankee	Maine	PWR	2700 MW	DECON	741	OT	Montsweag Bay	Fuel onsite	06/29/1973	12/06/1996
16		Millstone, Unit 1	Connecticut	BWR	2011 MW	SAFSTOR	500	OT	Long Island Sound	Fuel onsite	10/07/1970	11/04/1995
17 18		Peach Bottom, Unit 1	Pennsylvania	HTGR	115 MW	SAFSTOR	620	OT	NA	No fuel onsite	06/01/1967	10/31/1974

Table F-1. (contd)

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Nuclear Plant	Location	Reactor Type	Thermal Power	Decommissioning Option ^(a)	Total Site Area (ac.)	Cooling System	Cooling Water Source ^(b)	Fuel Location	Operating License	Shutdown Date ^(c)
Reactors that are Currently in the Process of Decommissioning (contd)										
Rancho Seco	California	PWR	2772 MW	SAFSTOR/ incremental decom	2480	NDCT	Folsom Canal	Fuel onsite/ partial DECON proposed in 1997	08/16/1974	06/07/1989
San Onofre, Unit 1	California	PWR	1347 MW	SAFSTOR	84	OT	Pacific Ocean	Fuel onsite	03/27/1967	11/30/1992
Saxton	Pennsylvania	PWR	28 MW	SAFSTOR	1.1	-- ^(d)	Juniata River	No fuel onsite/ currently in DECON	11/15/1961	05/01/1972
Three Mile Island, Unit 2	Pennsylvania	PWR	2772 MW	Accident cleanup followed by storage	472	NDCT	Susquehanna River	Approx 900 kg fuel onsite/ Post- Defueling Monitored Storage	02/08/1978	03/28/1979
Trojan	Oregon	PWR	3411 MW	DECON	635	NDCT	Columbia River	Fuel onsite	11/21/1975	11/09/1992
Yankee Rowe	Massachusetts	PWR	600 MW	DECON	1997	OT	Deerfield River	Fuel onsite	12/24/1963	10/01/1991
Zion, Unit 1	Illinois	PWR	3250 MW	SAFSTOR	250	OT	Lake Michigan	Fuel onsite	10/19/1973	02/21/1997
Zion, Unit 2	Illinois	PWR	3250 MW	SAFSTOR	250	OT	Lake Michigan	Fuel onsite	11/14/1973	09/19/1996

Table F-1. (contd)

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Nuclear Plant	Location	Reactor Type	Thermal Power	Decommissioning Option ^(a)	Total Site Area (ac.)	Cooling System	Cooling Water Source ^(b)	Fuel Location	Operating License	Shutdown Date (c)
Reactors that have had their Licenses Terminated										
Fort St. Vrain	Colorado	HTGR	842 MW	DECON	2798	OT	NA	Fuel ISFSI/ License terminated in 1997	12/01/1976	08/18/1989
Pathfinder	South Dakota	BWR	190 MW	SAFSTOR	1200	MDCT	Big Sioux River	No fuel onsite/ License terminated in 1992	01/01/1964	09/16/1967
Shoreham	New York	BWR	2436 MW	DECON	499	OT	Long Island Sound	No fuel onsite/ License terminated in 1995	06/01/1985	06/28/1989

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- (a) The option shown in the table for each plant is the option that has been officially provided to NRC. Plants in DECON may have had a short (1 to 4 yr) SAFSTOR period. Likewise, plants in SAFSTOR may have performed some DECON activities or may have transitioned from the storage phase into the decontamination and dismantlement phase of SAFSTOR.
- (b) OT = once through; NDCT = natural draft cooling tower; FCDC = forced-circulation, direct cycle; MDCT - Mechanical Draft Cooling Tower; NA = not applicable.
- (c) The shutdown date corresponds to the date of the last criticality.
- (d) Information not available.

Table F-2. Currently Operating Commercial Nuclear Plants

Nuclear Plant	Unit	Location	Reactor Type	Thermal Power ^(a)	Total Site Area, acres	Cooling System ^(b)	Cooling Water Source	Operating License	License Expiration ^(c)
Arkansas Nuclear One	1	Arkansas	PWR	2568 MW	1160	OT	Dardanelle Reservoir	05/21/1974	05/20/2034 ^(d)
Arkansas Nuclear One	2	Arkansas	PWR	2815 MW	1160	NDCT	Dardanelle Reservoir	09/01/1978	07/17/2018
Beaver Valley	1	Pennsylvania	PWR	2652 MW	501	NDCT	Ohio River	07/02/1976	01/29/2016
Beaver Valley	2	Pennsylvania	PWR	2652 MW	501	NDCT	Ohio River	08/14/1987	05/27/2027
Braidwood	1	Illinois	PWR	3411 MW	4457	CCCP	Kankakee River	07/02/1987	10/17/2026
Braidwood	2	Illinois	PWR	3411 MW	4457	CCCP	Kankakee River	05/20/1988	12/18/2027
Browns Ferry	1	Alabama	BWR	3293 MW	840	OT with towers	Tennessee River	12/20/1973	12/20/2013
Browns Ferry	2	Alabama	BWR	3293 MW	840	OT with towers	Tennessee River	08/02/1974	06/28/2014
Browns Ferry	3	Alabama	BWR	3293 MW	840	OT with towers	Tennessee River	08/18/1976	07/02/2016
Brunswick	1	North Carolina	BWR	2558 MW	1210	OT	Cape Fear River	11/12/1976	09/08/2016
Brunswick	2	North Carolina	BWR	2436 MW	1210	OT	Cape Fear River	12/27/1974	12/27/2014
Byron	1	Illinois	PWR	3411 MW	1398	NDCT	Rock River	02/14/1985	10/31/2024
Byron	2	Illinois	PWR	3411 MW	1398	NDCT	Rock River	01/30/1987	11/06/2026
Callaway		Montana	PWR	3565 MW	3188	NDCT	Missouri River	10/18/1984	10/18/2024
Calvert Cliffs	1	Maryland	PWR	2700 MW	1135	OT	Chesapeake Bay	07/31/1974	07/31/2034 ^(d)
Calvert Cliffs	2	Maryland	PWR	2700 MW	1135	OT	Chesapeake Bay	11/30/1976	08/31/2036 ^(d)
Catawba	1	South Carolina	PWR	3411 MW	391	MDCT	Lake Wylie	01/17/1985	12/06/2024
Catawba	2	South Carolina	PWR	3411 MW	391	MDCT	Lake Wylie	05/15/1986	02/24/2026
Clinton		Illinois	BWR	2894 MW	14090	OT	Salt Creek	04/17/1987	09/29/2026
Columbia Generating Station		Washington	BWR	3486 MW	DOE, Hanford Reservation	MDCT	Columbia River	04/13/1984	12/20/2023
Comanche Peak	1	Texas	PWR	3411 MW	7669	OT	Squaw Creek Reservoir	04/17/1990	02/08/2030
Comanche Peak	2	Texas	PWR	3411 MW	7669	OT	Squaw Creek Reservoir	04/06/1993	02/02/2033
Cooper		Nebraska	BWR	2381 MW	1090	OT	Missouri River	01/18/1974	01/18/2014
Crystal River	3	Florida	PWR	2544 MW	4738	OT	Gulf of Mexico	01/28/1977	12/03/2016
Davis Besse		Ohio	PWR	2772 MW	954	NDCT	Lake Erie	04/22/1977	04/22/2017
Diablo Canyon	1	California	PWR	3338 MW	741	OT	Pacific Ocean	11/02/1984	09/22/2021
Diablo Canyon	2	California	PWR	3411 MW	741	OT	Pacific Ocean	08/26/1985	04/26/2025
Donald C. Cook	1	Michigan	PWR	3250 MW	642	OT	Lake Michigan	10/25/1974	10/25/2014
Donald C. Cook	2	Michigan	PWR	3411 MW	642	OT	Lake Michigan	12/23/1977	12/23/2017
Dresden	2	Illinois	BWR	2527 MW	953+1274	Cooling lake and spray canal	Kankakee	02/20/1991	01/10/2006
Dresden	3	Illinois	BWR	2527 MW	953+1274	Cooling lake and spray canal	Kankakee	03/02/1971	01/12/2011
Edwin I Hatch	1	Georgia	BWR	2558 MW	2244	MDCT	Altamaha River	10/13/1974	08/06/2014
Edwin I Hatch	2	Georgia	BWR	2558 MW	2244	MDCT	Altamaha River	06/13/1978	09/05/1979
Fermi	2	Ohio	BWR	3430 MW	1120	NDCT	Lake Erie	07/15/1985	03/20/2025
Fort Calhoun	1	Nebraska	PWR	1500 MW	667	OT	Missouri River	08/09/1973	08/09/2013
Ginna	1	New York	PWR	1520 MW	338	OT	Lake Ontario	12/10/1984	09/18/2009
Grand Gulf	1	Mississippi	BWR	3833 MW	2100	NDCT	Mississippi River	11/01/1984	06/16/2022

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Table F-2. (contd)

Nuclear Plant	Unit	Location	Reactor Type	Thermal Power ^(a)	Total Site Area, acres	Cooling System ^(b)	Cooling Water Source	Operating License	License Expiration ^(c)
H.B. Robinson	2	South Carolina	PWR	2300 MW	4942	OT	Lake Robinson	09/23/1970	07/31/2010
Hope Creek	1	Delaware	BWR	3293 MW	740	NDCT	Delaware River	07/25/1986	04/11/2026
Indian Point	2	New York	PWR	3071 MW	239	OT	Hudson River	09/28/1973	09/28/2013
Indian Point	3	New York	PWR	3025 MW	239	OT	Hudson River	04/05/1976	12/15/2015
James A. Fitzpatrick		New York	BWR	2536 MW	702	OT	Lake Ontario	10/17/1974	10/17/2014
Joseph M. Farley	1	Alabama	PWR	2775 MW	1850	MDCT	Chattahoochee River	06/25/1977	06/25/2017
Joseph M. Farley	2	Alabama	PWR	2775 MW	1850	MDCT	Chattahoochee River	03/31/1981	03/31/2021
Kewaunee		Wisconsin	PWR	1650 MW	908	OT	Lake Michigan	12/21/1973	12/21/2013
La Salle	1	Illinois	BWR	3323 MW	3064	Cooling pond	Illinois River	08/13/1982	05/17/2022
La Salle	2	Illinois	BWR	3323 MW	3064	Cooling pond	Illinois River	03/23/1984	12/16/2023
Limerick	1	Pennsylvania	BWR	3458 MW	595	NDCT	Schuylkill River	08/08/1985	10/26/2024
Limerick	2	Pennsylvania	BWR	3458 MW	595	NDCT	Schuylkill River	08/25/1989	06/22/2029
McGuire	1	North Carolina	PWR	3411 MW	29900	OT	Lake Norman	07/08/1981	06/12/2021
McGuire	2	North Carolina	PWR	3411 MW	29900	OT	Lake Norman	05/27/1983	03/03/2023
Millstone	2	Connecticut	PWR	2700 MW	494	OT	Long Island Sound	09/26/1975	07/31/2015
Millstone	3	Connecticut	PWR	3411 MW	494	OT	Long Island Sound	01/31/1986	11/25/2025
Monticello		Minnesota	BWR	1670 MW	2125	OT with towers	Mississippi River	01/09/1981	09/08/2010
Nine Mile Point	1	New York	BWR	1850 MW	890	OT	Lake Ontario	12/26/1974	08/22/2009
Nine Mile Point	2	New York	BWR	3467 MW	890	NDCT	Lake Ontario	07/02/1987	10/31/2026
North Anna	1	Virginia	PWR	2893 MW	18643	OT	Lake Anna	04/01/1978	04/01/2018
North Anna	2	Virginia	PWR	2893 MW	18643	OT	Lake Anna	08/21/1980	08/21/2020
Oconee	1	South Carolina	PWR	2568 MW	519	OT	Lake Keowee	02/06/1973	02/06/2033 ^(d)
Oconee	2	South Carolina	PWR	2568 MW	519	OT	Lake Keowee	10/06/1973	10/06/2033 ^(d)
Oconee	3	South Carolina	PWR	2568 MW	519	OT	Lake Keowee	07/19/1974	07/19/2034 ^(d)
Oyster Creek	1	New Jersey	BWR	1930 MW	1416	OT	Barnegat Bay	04/09/1969	12/15/2009
Palisades	1	Michigan	PWR	2530 MW	487	MDCT	Lake Michigan	03/24/1971	03/14/2007
Palo Verde	1	Arizona	PWR	3800 MW	4050	MDCT	Phoenix City Sewage and Treatment Plant	06/01/1985	12/31/2024
Palo Verde	2	Arizona	PWR	3876 MW	4050	MDCT	Phoenix City Sewage and Treatment Plant	04/24/1986	12/09/2025
Palo Verde	3	Arizona	PWR	3876 MW	4050	MDCT	Phoenix City Sewage and Treatment Plant	11/25/1987	03/25/2027
Peach Bottom	2	Pennsylvania	BWR	3458 MW	618	OT with towers	Conowingo Pond	12/14/1973	08/08/2013
Peach Bottom	3	Pennsylvania	BWR	3458 MW	618	OT with towers	Conowingo Pond	07/02/1974	07/02/2014
Perry	1	Ohio	BWR	3579 MW	1112	NDCT	Lake Erie	11/13/1986	03/18/2026
Pilgrim	1	Massachusetts	BWR	1998 MW	517	OT	Cape Cod Bay	09/15/1972	06/08/2012
Point Beach	1	Wisconsin	PWR	1519 MW	2065	OT	Lake Michigan	10/05/1970	10/05/2010
Point Beach	2	Wisconsin	PWR	1519 MW	2065	OT	Lake Michigan	03/08/1973	03/08/2013
Prairie Island	1	Minnesota	PWR	1650 MW	568	MDCT or OT	Mississippi River	04/05/1974	08/09/2013
Prairie Island	2	Minnesota	PWR	1650 MW	568	MDCT or OT	Mississippi River	10/29/1974	10/29/2014

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Table F-2. (contd)

Nuclear Plant	Unit	Location	Reactor Type	Thermal Power ^(a)	Total Site Area, acres	Cooling System ^(b)	Cooling Water Source	Operating License	License Expiration ^(c)
Quad Cities	1	Illinois	BWR	2511 MW	784	OT	Mississippi River	12/14/1972	12/14/2012
Quad Cities	2	Illinois	BWR	2511 MW	784	OT	Mississippi River	12/14/1972	12/14/2012
River Bend	1	Louisiana	BWR	2894 MW	3342	MDCT	Mississippi River	11/20/1985	08/29/2025
Salem	1	New Jersey	PWR	3411 MW	691	OT	Delaware River	12/01/1976	08/13/2016
Salem	2	New Jersey	PWR	3411 MW	691	OT	Delaware River	05/20/1981	04/18/2020
San Onofre	2	California	PWR	3390 MW	84	OT	Pacific Ocean	09/07/1982	10/18/2013
San Onofre	3	California	PWR	3390 MW	84	OT	Pacific Ocean	09/16/1983	10/18/2013
Seabrook	1	New Hampshire	PWR	3411 MW	896	OT	Atlantic Ocean	03/15/1990	10/17/2026
Sequoyah	1	Tennessee	PWR	3411 MW	525	OT and/or NDCT	Chickamauga Lake	09/17/1980	09/17/2020
Sequoyah	2	Tennessee	PWR	3411 MW	525	OT and/or NDCT	Chickamauga Lake	09/15/1981	09/15/2021
Shearon Harris	1	North Carolina	PWR	2775 MW	10744	NDCT	Buckhorn Creek	01/12/1987	10/24/2026
South Texas	1	Texas	PWR	3800 MW	12350	CCCP	Colorado River	03/22/1988	08/20/2027
South Texas	2	Texas	PWR	3800 MW	12350	CCCP	Colorado River	03/28/1989	12/15/2028
St. Lucie	1	Florida	PWR	2700 MW	1132	OT	Atlantic Ocean	03/01/1976	03/01/2016
St. Lucie	2	Florida	PWR	2700 MW	1132	OT	Atlantic Ocean	06/10/1983	04/06/2023
Summer	1	South Carolina	PWR	2900 MW	2200	OT	Lake Monticello	11/12/1982	08/06/2022
Surry	1	Virginia	PWR	2546 MW	840	OT	James River	05/25/1972	05/25/2012
Surry	2	Virginia	PWR	2546 MW	840	OT	James River	01/29/1973	01/29/2013
Susquehanna	1	Pennsylvania	BWR	3441 MW	1075	NDCT	Susquehanna River	11/12/1982	07/17/2022
Susquehanna	2	Pennsylvania	BWR	3441 MW	1075	NDCT	Susquehanna River	06/27/1984	03/23/2024
Three Mile Island	1	Pennsylvania	PWR	2568 MW	472	NDCT	Susquehanna River	04/19/1974	04/19/2014
Turkey Point	3	Florida	PWR	2300 MW	23970	Closed cycle canal	Biscane Bay	07/19/1972	07/19/2012
Turkey Point	4	Florida	PWR	2300 MW	23970	Closed cycle canal	Biscane Bay	04/10/1973	04/10/2013
Vermont Yankee	1	Vermont	BWR	1593 MW	125	OT and towers	Connecticut River	02/28/1973	03/21/2012
Vogtle	1	Georgia	PWR	3565 MW	3169	NDCT	Savannah River	03/16/1987	01/16/2027
Vogtle	2	Georgia	PWR	3565 MW	3169	NDCT	Savannah River	03/31/1989	02/09/2029
Waterford	3	Louisiana	PWR	3390 MW	3561	OT	Mississippi	03/16/1985	12/18/2024
Watts Bar	1	Tennessee	PWR	3411 MW	1769	NDCT	Chickamauga Lake	02/07/1996	11/09/2035
Wolf Creek	1	Kansas	PWR	3565 MW	9818	CCCP	Wolf Creek	06/04/1985	03/11/2025

- (a) Licensees may seek power uprates.
 (b) OT = once-through; NDCT = natural draft cooling towers; CCCP = closed-cycle cooling pond; MDCT = mechanical draft cooling towers.
 (c) Licensees may seek a renewal of the license.
 (d) Includes 20-year license renewal period.