

Table A-1. Technology Subsidy Data (In Millions of 1999 Dollars)

	1947	1948	1949	1950	1951	1952	1953	1954	1955
Direct Program Budget Subsidies									
Nuclear									
DOE/ERDA									
NRC									
AEC	672.0	1071.6	1259.6	798.9	2421.1	1358.5	4414.8	1668.5	2277.6
Subtotal	672.0	1071.6	1259.6	798.9	2421.1	1358.5	4414.8	1668.5	2277.6
Solar									
Photovoltaic									
Solar Thermal									
Subtotal									
Wind									
Subtotal									
Off-Budget Subsidies									
Nuclear									
Solar									
Wind									
Subtotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Subsidy (Direct and Off-Budget)									
Nuclear	672.0	1071.6	1259.6	798.9	2421.1	1358.5	4414.8	1668.5	2277.6
Solar									
Wind									
Total	672.0	1,071.6	1,259.6	798.9	2,421.1	1,358.5	4,414.8	1,668.5	2,277.6

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

Table A-2. Hydropower Subsidy Data (In Millions of 1999 Dollars)

	1943	1944	1945	1946	1947	1948	1949	1950
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Direct Program Budget Subsidy

Off-Budget Subsidies	5.0	1.9	7.9	0.0	0.0	0.0	5.8	16.3
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Total Subsidy (Direct and Off-E)	5.0	1.9	7.9	0.0	0.0	0.0	5.8	16.3
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Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1951	1952	1953	1954	1955	1956	1957	1958
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Direct Program Budget Subsidy

Off-Budget Subsidies	31.5	22.2	102.5	133.8	80.7	45.1	49.5	67.3
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Total Subsidy (Direct and Off-E)	31.5	22.2	102.5	133.8	80.7	45.1	49.5	67.3
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Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1959	1960	1961	1962	1963	1964	1965	1966
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Direct Program Budget Subsidy

Off-Budget Subsidies	9.1	7.1	4.1	12.7	7.5	8.7	9.4	11.5
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Total Subsidy (Direct and Off-E)	9.1	7.1	4.1	12.7	7.5	8.7	9.4	11.5
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Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1967	1968	1969	1970	1971	1972	1973	1974
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Direct Program Budget Subsidy

Off-Budget Subsidies	8.5	23.9	51.7	65.5	29.4	13.6	55.6	23.6
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Total Subsidy (Direct and Off-E)	8.5	23.9	51.7	65.5	29.4	13.6	55.6	23.6
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Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1975	1976	1977	1978	1979	1980	1981	1982
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Direct Program Budget Subsidy

Off-Budget Subsidies	87.0	67.0	42.9	39.4	44.9	1.3	22.6	66.0
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Total Subsidy (Direct and Off-E)	87.0	67.0	47.0	63.2	104.9	41.8	28.3	71.0
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Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1983	1984	1985	1986	1987	1988	1989
Direct Program Budget Subsidy	3.2	1.1	0.7	0.7	0.7	0.7	0.1
Off-Budget Subsidies	28.1	11.7	66.2	6.9	2.2	0.8	1.4
Total Subsidy (Direct and Off-Budget) Millic	31.3	12.8	66.8	7.6	2.9	1.5	1.5

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1991	1990	1991	1992	1993	1994	1995	1996
Direct Program Budget Subsidy	1.2	0.0	1.2	1.2	1.2	1.2	1.6	1.6
Off-Budget Subsidies	0.004	0.3	0.004	0.001	0.001	0.002	0.004	0.003
Total Subsidy (Direct and Off-Budget)	1.2	0.3	1.2	1.2	1.2	1.2	1.6	1.6

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1997	1998	1999	Total
Direct Program Budget Subsidy	1.0	0.8	3.3	159.4
Off-Budget Subsidies	0.003	0.003	0.003	1,385.1
Total Subsidy (Direct and Off-Budget) Millic	1.0	0.8	3.3	1,544.5

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1956	1957	1958	1959	1960	1961	1962	1963	1964
Direct Program Budget Subsidies									
Nuclear									
DOE/ERDA									
NRC									
AEC	2449.9	3029.5	3590.6	4439.7	4863.1	4939.5	4482.0	4222.5	3617.1
Subtotal	2449.9	3029.5	3590.6	4439.7	4863.1	4939.5	4482.0	4222.5	3617.1
Solar									
Photovoltaic									
Solar Thermal									
Subtotal									
Wind									
Subtotal									
Off-Budget Subsidies									
Nuclear				19.8	39.6	39.6	59.5	59.5	59.5
Solar									
Wind									
Subtotal	0.0	0.0	0.0	19.8	39.6	39.6	59.5	59.5	59.5
Total Subsidy (Direct and Off-Budget)									
Nuclear	2449.9	3029.5	3590.6	4459.5	4902.8	4979.2	4541.5	4282.0	3676.5
Solar									
Wind									
Total	2,449.9	3,029.5	3,590.6	4,459.5	4,902.8	4,979.2	4,541.5	4,282.0	3,676.5

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1965	1966	1967	1968	1969	1970	1971	1972	1973
Direct Program Budget Subsidies									
Nuclear									
DOE/ERDA									
NRC									
AEC	4062.8	3703.2	3554.0	3481.1	3219.3	2901.8	2113.3	3148.3	2506.4
Subtotal	4062.8	3703.2	3554.0	3481.1	3219.3	2901.8	2113.3	3148.3	2506.4
Solar									
Photovoltaic									
Solar Thermal									
Subtotal									
Wind									
Subtotal									
Off-Budget Subsidies									
Nuclear	59.5	59.5	79.3	79.3	178.4	257.6	356.7	475.6	832.3
Solar									
Wind									
Subtotal	59.5	59.5	79.3	79.3	178.4	257.6	356.7	475.6	832.3
Total Subsidy (Direct and Off-Budget)									
Nuclear	4122.3	3762.6	3633.3	3560.4	3397.6	3159.5	2470.0	3623.9	3338.7
Solar									
Wind									
Total	4,122.3	3,762.6	3,633.3	3,560.4	3,397.6	3,159.5	2,470.0	3,623.9	3,338.7

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1974	1975	1976	1977	1978	1979	1980	1981	1982
Direct Program Budget Subsidies									
Nuclear									
DOE/ERDA	2,622.0	1,143.0	1,261.1	2,582.0	2,405.5	2,283.3	2,123.5	1,993.7	1,811.9
NRC	239.2	357.3	293.3	354.3	372.6	389.4	433.7	449.0	439.4
AEC									
Subtotal	2,861.1	1,500.3	1,554.4	2,936.3	2,778.1	2,672.7	2,557.2	2,442.8	2,251.3
Solar									
Photovoltaic		14.2	73.0	135.4	145.3	253.4	290.4	235.6	123.2
Solar Thermal		36.1	68.0	171.4	238.3	247.5	277.1	212.3	93.1
Subtotal		50.3	141.0	306.8	383.6	501.0	567.5	447.9	216.3
Wind		15.6	49.2	55.3	84.0	125.8	117.2	95.9	57.3
Subtotal		65.9	190.2	362.1	467.6	626.8	684.7	543.7	273.6
Off-Budget Subsidies									
Nuclear	1,089.9	1,129.6	1,248.5	1,327.7	1,387.2	1,367.4	1,407.0	1,486.3	1,545.7
Solar									
Wind									
Subtotal	1,089.9	1,129.6	1,248.5	1,327.7	1,387.2	1,367.4	1,407.0	1,486.3	1,545.7
Total Subsidy (Direct and Off-Budget)									
Nuclear	3,951.1	2,629.8	2,802.8	4,264.1	4,165.3	4,040.1	3,964.2	3,929.1	3,797.0
Solar		50.3	141.0	306.8	383.6	501.0	567.5	447.9	216.3
Wind		15.6	49.2	55.3	84.0	125.8	117.2	95.9	57.3
Total	3,951.1	2,695.8	2,993.0	4,626.2	4,633.0	4,666.9	4,648.9	4,472.8	4,070.6

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1983	1984	1985	1986	1987	1988	1989	1990	1991
Direct Program Budget Subsidies									
Nuclear									
DOE/ERDA	1,372.3	1,067.1	911.9	898.5	848.4	824.0	816.2	425.1	368.2
NRC	423.5	411.3	375.0	337.8	325.8	298.5	289.6	331.2	26.0
AEC									
Subtotal	1,795.8	1,478.4	1,286.8	1,236.3	1,174.2	1,122.5	1,105.8	756.4	394.1
Solar									
Photovoltaic	93.0	76.9	81.3	71.8	57.6	48.0	46.8	44.0	56.6
Solar Thermal	79.3	66.8	50.4	37.7	33.7	27.4	19.8	19.1	23.5
Subtotal	172.3	143.7	131.7	109.4	91.3	75.4	66.6	63.0	80.1
Wind	50.3	40.3	42.2	39.9	23.4	12.6	11.6	11.6	13.5
Subtotal	222.6	184.0	173.9	149.3	114.7	88.0	78.2	74.6	93.7
Off-Budget Subsidies									
Nuclear	1,605.2	1,724.1	1,902.4	2,001.5	2,120.4	2,160.1	383.1	386.6	383.1
Solar	0.0	3.5	3.8	3.9	3.8	3.6	3.5	3.4	3.2
Wind	24.5	25.5	1.8	2.7	0.0	0.0	0.0	0.0	0.0
Subtotal	1,629.6	1,753.1	1,908.0	2,008.2	2,124.2	2,163.7	386.7	390.0	386.3
Total Subsidy (Direct and Off-Budget)									
Nuclear	3,400.9	3,202.5	3,189.3	3,237.8	3,294.7	3,282.6	1,488.9	1,143.0	777.2
Solar	172.3	147.2	135.5	113.3	95.1	79.0	70.1	66.4	83.4
Wind	74.8	65.8	43.9	42.6	23.4	12.6	11.6	11.6	13.5
Total	3,648.0	3,415.5	3,368.7	3,393.8	3,413.1	3,374.3	1,570.6	1,221.0	874.1

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1992	1993	1994	1995	1996	1997	1998	1999	Total
Direct Program Budget Subsidies									
Nuclear									
DOE/ERDA	445.1	361.3	380.5	420.6	274.9	243.5	231.5	326.0	28,441.0
NRC	28.7	14.2	18.9	38.2	57.3	33.3	23.5	0.0	6,360.9
AEC									80,266.9
Subtotal	473.8	375.5	399.4	458.8	332.2	276.7	255.0	326.0	115,068.8
Solar									
Photovoltaic	70.4	75.0	87.7	99.4	69.0	62.4	67.8	72.2	2,450.3
Solar Thermal	33.9	30.9	36.7	35.7	26.5	23.1	17.1	17.0	1,922.6
Subtotal	104.3	105.9	124.4	135.1	95.5	85.6	85.0	89.2	4,372.9
Wind	24.9	27.5	34.1	53.5	34.5	30.2	33.7	34.8	1,118.8
Subtotal	129.2	133.3	158.5	188.7	130.0	115.7	118.6	124.0	5,491.7
Off-Budget Subsidies									
Nuclear	376.2	379.7	376.2	376.2	376.2	376.2	359.0	359.0	30,290.2
Solar	3.1	3.1	3.0	2.9	2.8	2.8	2.8	2.8	52.0
Wind	0.0	0.0	0.0	6.5	6.8	3.6	3.5	3.6	78.4
Subtotal	379.3	382.7	379.2	385.6	385.9	382.6	365.2	365.4	30,420.6
Total Subsidy (Direct and Off-Budget)									
Nuclear	850.0	755.2	775.6	835.0	708.4	653.0	614.0	685.0	145,359.0
Solar	107.4	108.9	127.4	138.1	98.4	88.4	87.7	92.0	4,424.8
Wind	24.9	27.5	34.1	60.0	41.3	33.7	37.2	38.4	1,197.2
Total	982.3	891.6	937.1	1,033.1	848.0	775.1	738.9	815.3	150,981.1

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

**Table A-3. Department of Energy and Energy Research and Development Administration Direct Program Outlays
(In Millions of 1999 Dollars)**

	1974	1975	1976	1977	1978	1979	1980	1981
Nuclear Program (Civilian Fission related)								
Nuclear research & development	2,622.0	1,143.0	1,261.1	2,582.0	2,405.5	2,283.3	2,123.5	1,993.7
Nuclear safety policy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uranium supply and enrichment activiti	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Collections (non-federal sources)	0.0	1,819.1	1,976.3	1,843.3	2,210.6	2,570.5	2,161.6	2,207.3
Obligations	0.0	1,730.5	2,554.0	2,165.2	2,669.2	2,926.4	2,161.9	2,533.7
Total Obligations	0.0	-88.6	577.7	321.9	458.5	355.9	0.3	326.3
Nuclear Waste Disposal								
Receipts								
Receipts from nuclear elec utlities								
Net earning on investments								
Credits to utilities								
Total receipts for year								
Appropriations								
Nuclear Waste Fund								
NRC								
Nuclear Waste Technical Review Board								
Office of Nuclear Waste Negotiator								
Decontamination and Decommissioning Fund								
Total Appropriations								
Total Obligations								
Uranium Enrichment Decontamination and Decommissioning Fund								
Receipts								
Assessments, Decontamination and Decommissioning Fund								
Earnings on investments, D&D Fund								
General Fund payment, Defense, D&D Fund								
Total receipts for year								
Appropriations								
Uranium enrichment and Decontamination Fund								
Total Appropriations								
Total Obligations								

Note: See Appendix A for more detail on sources.

Table A-3.

	1982	1983	1984	1985	1986	1987	1988	1989
Nuclear Program (Civilian Fission related)								
Nuclear research & development	1,811.9	1,372.3	1,067.1	911.9	898.5	848.4	824.0	816.2
Nuclear safety policy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uranium supply and enrichment activiti	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Collections (non-federal sources)	3,004.7	3,082.2	3,425.8	2,455.3	2,349.0	1,819.6	1,773.2	1,686.0
Obligations	3,053.5	2,690.5	2,965.9	2,498.2	1,479.1	1,458.9	1,273.6	1,711.3
Total Obligations	48.8	-391.7	-459.9	42.9	-869.9	-360.7	-499.6	25.3
Nuclear Waste Disposal								
Receipts								
Receipts from nuclear elec utlities	64.8	329.5	1,794.8	367.8	440.8	472.1	519.2	
Net earning on investments	0.0	0.0	-73.7	73.4	88.7	179.8	196.0	
Credits to utilities								
Total receipts for year	64.8	329.5	1,721.0	441.2	529.5	651.8	715.2	
Appropriations								
Nuclear Waste Fund	184.4	317.3	327.7	494.8	499.0	360.0	369.8	
NRC								
Nuclear Waste Technical Review Board								
Office of Nuclear Waste Negotiator								
Decontamination and Decommissioning Fund								
Total Appropriations	184.4	317.3	327.7	494.8	499.0	360.0	369.8	
Total Obligations	119.6	-12.2	-1,393.3	53.5	-30.5	-291.8	-345.4	
Uranium Enrichment Decontamination and Decommissioning Fund								
Receipts								
Assessments, Decontamination and Decommissioning Fund								
Earnings on investments, D&D Fund								
General Fund payment, Defense, D&D Fund								
Total receipts for year								
Appropriations								
Uranium enrichment and Decontamination Fund								
Total Appropriations								
Total Obligations								

Note: See Appendix A for more detail on sources.

Table A-3

	1990	1991	1992	1993	1994	1995	1996	1997
Nuclear Program (Civilian Fission related)								
Nuclear research & development	425.1	361.0	430.5	361.3	364.3	404.2	261.1	243.5
Nuclear safety policy	0.0	7.1	14.6	0.0	16.1	16.4	13.8	0.0
Uranium supply and enrichment activiti	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Collections (non-federal sources)	1,636.8	1,417.0	1,991.1	971.3	78.7	10.8	37.0	43.9
Obligations	1,735.4	1,618.5	1,508.0	1,168.4	361.3	99.4	94.4	62.4
Total Obligations	98.6	201.5	-483.1	197.0	282.7	88.6	57.4	18.5
Nuclear Waste Disposal								
Receipts								
Receipts from nuclear elec utlities	576.1	605.2	603.5	596.9	396.6	597.0	634.0	596.0
Net earning on investments	160.8	241.0	268.2	296.1	187.7	242.0	208.0	471.0
Credits to utilities			-29.3	-160.0				
Total receipts for year	737.0	846.3	842.4	733.0	584.3	839.0	842.0	1,067.0
Appropriations								
Nuclear Waste Fund	295.2	242.8	275.1	275.1	250.0	375.0	151.0	182.0
NRC	22.9	19.7	20.0	21.1	22.0	22.0	11.0	11.0
Nuclear Waste Technical Review Boa	2.0		3.3	2.1	2.2	3.0	3.0	3.0
Office of Nuclear Waste Negotiator	2.0							
Decontamination and Decommissioning Fund			7.5					
Total Appropriations	322.0	262.5	305.8	298.2	274.2	400.0	165.0	196.0
Total Obligations	-415.0	-583.8	-536.6	-434.8	-310.1	-439.0	-677.0	-871.0
Uranium Enrichment Decontamination and Decommissioning Fund								
Receipts								
Assessments, Decontamination and Decommissioning Fund					172.5	160.0	160.0	165.0
Earnings on investments, D&D Fund					4.4	24.0	20.0	37.0
General Fund payment, Defense, D&D Fund					129.8	134.0	350.0	377.0
Total receipts for year					306.8	318.0	530.0	579.0
Appropriations								
Uranium enrichment and Decontamination Fund					286.3	349.0	317.0	180.0
Total Appropriations					286.3	349.0	317.0	180.0
Total Obligations					-20.4	31.0	-213.0	-399.0

Note: See Appendix A for more detail on sources.

Table A-3

	1998	1999	Total
Nuclear Program (Civilian Fission related)			
Nuclear research & development	231.5	326.0	28,372.9
Nuclear safety policy	0.0	0.0	68.1
Uranium supply and enrichment activiti	0.0	0.0	0.0
Collections (non-federal sources)	0.0	0.0	40,571.1
Obligations	0.0	0.0	40,519.7
Total Obligations	0.0	0.0	-51.4
Nuclear Waste Disposal			
Receipts			
Receipts from nuclear elec utlities	602.0	625.0	9,821.4
Net earning on investments	450.0	507.0	3,496.0
Credits to utilities			-189.3
Total receipts for year	1,052.0	1,132.0	13,128.1
Appropriations			
Nuclear Waste Fund	156.0	190.0	4,945.2
NRC	15.0	19.0	183.6
Nuclear Waste Technical Review Boa	3.0	3.0	24.5
Office of Nuclear Waste Negotiator			2.0
Decontamination and Decommissioning Fund			7.5
Total Appropriations	174.0	212.0	5,162.7
Total Obligations	-878.0	-920.0	-7,965.4
Uranium Enrichment Decontamination and Decommissioning Fund			
Receipts			
Assessments, Decontamination and E	148.0	179.0	984.5
Earnings on investments, D&D Fund	56.0	73.0	214.4
General Fund payment, Defense, D&E	388.0	398.0	1,776.8
Total receipts for year	592.0	650.0	2,975.8
Appropriations			
Uranium enrichment and Decontaminat	214.0	260.0	1,606.3
Total Appropriations	214.0	260.0	1,606.3
Total Obligations	-378.0	-390.0	-1,369.4

Note: See Appendix A for more detail on sources.

Table 4-A. Nuclear Regulatory Commission and Atomic Energy Commission Outlays (In Million of 1999 Dollars)

	1947	1948	1949	1950
Nuclear Regulatory Commission				
Total Direct Obligations				
Non-Federal receipts and reimbursements				
Total NRC Obligations minus non-federal receipts and reimbursements				
Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations	672.0	1,071.6	1,259.6	800.3
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)	0.0	0.0	0.0	1.3
Subtotal Civilian/Commercial Obligations	672.0	1,071.6	1,259.6	798.9
Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)	2,018.6	2,854.6	2,378.0	2,419.3
Total Obligations	2,690.6	3,926.3	3,637.7	3,218.3

Note: See Appendix A for more detail on sources.

	1951	1952	1953	1954
Nuclear Regulatory Commission				
Total Direct Obligations				
Non-Federal receipts and reimbursements				
Total NRC Obligations minus non-federal receipts and reimbursements				
Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations	2,421.1	1,359.4	4,417.9	1,668.5
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)	0.0	0.9	3.1	0.0
Subtotal Civilian/Commercial Obligations	2,421.1	1,358.5	4,414.8	1,668.5
Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)	8,086.5	5,181.7	14,203.6	5,635.1
Total Obligations	10,507.5	6,540.3	18,618.4	7,303.6

Note: See Appendix A for more detail on sources.

Table 4-A.

	1955	1956	1957	1958
Nuclear Regulatory Commission				
Total Direct Obligations				
Non-Federal receipts and reimbursements				
Total NRC Obligations minus non-federal receipts and reimbursements				
Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations	2,368.6	2,602.0	3,207.7	3,757.0
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)	91.0	152.1	178.3	166.5
Subtotal Civilian/Commercial Obligations	2,277.6	2,449.9	3,029.5	3,590.6
Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)	4,779.4	5,698.9	7,327.7	8,157.3
Total Obligations	7,057.0	8,148.8	10,357.1	11,747.9

Note: See Appendix A for more detail on sources.

	1959	1960	1961	1962
Nuclear Regulatory Commission				
Total Direct Obligations				
Non-Federal receipts and reimbursements				
Total NRC Obligations minus non-federal receipts and reimbursements				
Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations	4,580.5	5,013.4	5,083.8	4,644.7
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)	140.8	150.2	144.2	162.7
Subtotal Civilian/Commercial Obligations	4,439.7	4,863.1	4,939.5	4,482.0
Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)	8,562.5	8,516.9	8,096.3	8,867.5
Total Obligations	13,002.1	13,380.0	13,035.8	13,349.5

Note: See Appendix A for more detail on sources.

Table 4-A.

	1963	1964	1965	1966
Nuclear Regulatory Commission				
Total Direct Obligations				
Non-Federal receipts and reimbursements				
Total NRC Obligations minus non-federal receipts and reimbursements				
Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations	4,378.3	3,749.1	4,279.2	4,030.3
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)	155.8	132.0	216.4	327.1
Subtotal Civilian/Commercial Obligations	4,222.5	3,617.1	4,062.8	3,703.2
Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)	104,969.8	9,191.9	8,059.2	6,930.7
Total Obligations	109,192.3	12,809.0	12,122.0	10,633.9

Note: See Appendix A for more detail on sources.

	1967	1968	1969	1970
Nuclear Regulatory Commission				
Total Direct Obligations				
Non-Federal receipts and reimbursements				
Total NRC Obligations minus non-federal receipts and reimbursements				
Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations	3,956.0	3,804.4	3,693.9	3,617.2
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)	402.0	323.3	474.6	715.4
Subtotal Civilian/Commercial Obligations	3,554.0	3,481.1	3,219.3	2,901.8
Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)	6,561.7	6,575.6	7,198.3	6,137.9
Total Obligations	10,115.7	10,056.8	10,417.6	9,039.7

Note: See Appendix A for more detail on sources.

Table 4-A.

	1971	1972	1973	1974
Nuclear Regulatory Commission				
Total Direct Obligations				313.9
Non-Federal receipts and reimbursements				74.7
Total NRC Obligations minus non-federal receipts and reimbursements				239.2
Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations	3,294.3	4,041.2	3,795.8	
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)	1,181.0	892.9	1,289.4	
Subtotal Civilian/Commercial Obligations	2,113.3	3,148.3	2,506.4	
Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)	6,027.2	5,181.2	5,692.5	
Total Obligations	8,140.5	8,329.5	8,198.9	

Note: See Appendix A for more detail on sources.

	1975	1976	1977	1978
Nuclear Regulatory Commission				
Total Direct Obligations	405.3	518.4	626.2	658.5
Non-Federal receipts and reimbursements	48.1	225.1	271.9	285.9
Total NRC Obligations minus non-federal receipts and reimbursements	357.3	293.3	354.3	372.6

Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations				
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)				
Subtotal Civilian/Commercial Obligations				
Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)				
Total Obligations				
Note: See Appendix A for more detail on sources.				

Table 4-A.

	1979	1980	1981	1982
Nuclear Regulatory Commission				
Total Direct Obligations	688.2	766.5	793.6	776.5
Non-Federal receipts and reimbursements	298.8	332.8	344.6	337.1
Total NRC Obligations minus non-federal receipts and reimbursements	389.4	433.7	449.0	439.4

Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations				
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)				
Subtotal Civilian/Commercial Obligations				

Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)				
Total Obligations				

Note: See Appendix A for more detail on sources.

	1983	1984	1985	1986
Nuclear Regulatory Commission				
Total Direct Obligations	748.4	726.9	662.7	597.0
Non-Federal receipts and reimbursements	325.0	315.6	287.7	259.2
Total NRC Obligations minus non-federal receipts and reimbursements	423.5	411.3	375.0	337.8

Atomic Energy Commission				
Civilian/Commercial				
Civilian/Commercial Obligations				
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)				
Subtotal Civilian/Commercial Obligations				

Defense/Military				
Defense/Military Obligations (excluding DOD reimbursable program)				
Total Obligations				

Note: See Appendix A for more detail on sources.

Table 4-A.

	1987	1988	1989	1990
Nuclear Regulatory Commission				
Total Direct Obligations	575.8	541.8	551.8	550.4
Non-Federal receipts and reimbursements	250.0	243.3	262.2	219.2
Total NRC Obligations minus non-federal receipts and reimbursements	325.8	298.5	289.6	331.2

Atomic Energy Commission
 Civilian/Commercial
 Civilian/Commercial Obligations
 Non-Federal receipts and reimbursements (excluding DOD program reimbursements)
 Subtotal Civilian/Commercial Obligations

Defense/Military
 Defense/Military Obligations (excluding DOD reimbursable program)

Total Obligations

Note: See Appendix A for more detail on sources.

	1991	1992	1993	1994
Nuclear Regulatory Commission				
Total Direct Obligations	560.2	598.3	602.8	604.2
Non-Federal receipts and reimbursements	534.2	569.6	588.6	585.3
Total NRC Obligations minus non-federal receipts and reimbursements	26.0	28.7	14.2	18.9

Atomic Energy Commission
 Civilian/Commercial
 Civilian/Commercial Obligations
 Non-Federal receipts and reimbursements (excluding DOD program reimbursements)
 Subtotal Civilian/Commercial Obligations

Defense/Military
 Defense/Military Obligations (excluding DOD reimbursable program)

Total Obligations

Note: See Appendix A for more detail on sources.

Table 4-A.

	1995	1996	1997	1998
Nuclear Regulatory Commission				
Total Direct Obligations	586.6	539.1	510.8	487.6
Non-Federal receipts and reimbursements	548.4	481.8	477.5	464.1
Total NRC Obligations minus non-federal receipts and reimbursements	38.2	57.3	33.3	23.5

Atomic Energy Commission
 Civilian/Commercial
 Civilian/Commercial Obligations
 Non-Federal receipts and reimbursements (excluding DOD program reimbursements)
 Subtotal Civilian/Commercial Obligations

Defense/Military
 Defense/Military Obligations (excluding DOD reimbursable program)

Total Obligations

Note: See Appendix A for more detail on sources.

	1999	Total
Nuclear Regulatory Commission		
Total Direct Obligations	465.0	15,456.6
Non-Federal receipts and reimbursements	465.0	9,095.7
Total NRC Obligations minus non-federal receipts and reimbursements	0.0	6,360.9

	1999	Total
Atomic Energy Commission		
Civilian/Commercial		
Civilian/Commercial Obligations		87,568.0
Non-Federal receipts and reimbursements (excluding DOD program reimbursements)		7,301.1
Subtotal Civilian/Commercial Obligations		80,266.9
Defense/Military		
Defense/Military Obligations (excluding DOD reimbursable program)		
Total Obligations		355,576.8

Note: See Appendix A for more detail on sources.

Table A-5. Price-Anderson Nuclear Subsidy

	1959	1960	1961	1962	1963	1964	1965
Operating Nuclear Units	1	2	2	3	3	3	3
Subsidy - Millions of Current Dollars/unit	13.32	13.32	13.32	13.32	13.32	13.32	13.32
Subsidy (Millions 1999\$)	19.8	39.6	39.6	59.5	59.5	59.5	59.5

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1966	1967	1968	1969	1970	1971	1972
Operating Nuclear Units	3	4	4	9	13	18	24
Subsidy - Millions of Current Dollars/unit	13.32	13.32	13.32	13.32	13.32	13.32	13.32
Subsidy (Millions 1999\$)	59.5	79.3	79.3	178.4	257.6	356.7	475.6

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1973	1974	1975	1976	1977	1978	1979
Operating Nuclear Units	42	55	57	63	67	70	69
Subsidy - Millions of Current Dollars/unit	13.32	13.32	13.32	13.32	13.32	13.32	13.32
Subsidy (Millions 1999\$)	832.3	1089.9	1129.6	1248.5	1327.7	1387.2	1367.4

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1980	1981	1982	1983	1984	1985	1986
Operating Nuclear Units	71	75	78	81	87	96	101
Subsidy - Millions of Current Dollars/unit	13.32	13.32	13.32	13.32	13.32	13.32	13.32
Subsidy (Millions 1999\$)	1407.0	1486.3	1545.7	1605.2	1724.1	1902.4	2001.5

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1987	1988	1989	1990	1991	1992	1993
Operating Nuclear Units	107	109	111	112	111	109	110
Subsidy - Millions of Current Dollars/ur	13.32	13.32	2.32	2.32	2.32	2.32	2.32
Subsidy (Millions 1999\$)	2120.4	2160.1	383.1	386.6	383.1	376.2	379.7

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

	1994	1995	1996	1997	1998	1999	Total
Operating Nuclear Units	109	109	109	109	104	104	
Subsidy - Millions of Current Dollars/ur	2.32	2.32	2.32	2.32	2.32	2.32	
Subsidy (Millions 1999\$)	376.2	376.2	376.2	376.2	359.0	359.0	\$30,290.2

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology and sources.

Table A-6. Renewable Energy Tax Credits and Incentive Payments (In Millions of 1999\$)

	1983	1984	1985	1986	1987	1988	1989
Technology Investment Tax Credits							
Solar Electric		3.53	3.77	3.88	3.77	3.63	3.52

Wind (1983 includes 1980-1983)

24.45 25.51 1.75 2.75

Renewable Technology Production Credit

Wind

Renewable Energy Production Incentive Payments

Solar Electric

Wind

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology.

	1990	1991	1992	1993	1994	1995	1996
Technology Investment Tax Credits							
Solar Electric	3.38	3.22	3.11	3.05	3.00	2.91	2.83
Wind (1983 includes 1980-1983)							
Renewable Technology Production Credit						6.37	6.56
Wind							
Renewable Energy Production Incentive Payments							
Solar Electric						0.01	0.02
Wind						0.10	0.22

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology.

	1997	1998	1999	Total
Technology Investment Tax Credits				
Solar Electric	2.77	2.72	2.67	51.78
Wind (1983 includes 1980-1983)				54.46
Renewable Technology Production Credit				
Wind	3.33	3.40	3.60	23.26
Renewable Energy Production Incentive Payments				
Solar Electric	0.03	0.03	0.09	0.18
Wind	0.23	0.13	0.03	0.71

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology.

Table A-6. Renewable Energy Tax Credits and Incentive Payments (In Millions of 1999\$)

	1983	1984	1985	1986	1987	1988	1989
Technology Investment Tax Credits							
Solar Electric		3.53	3.77	3.88	3.77	3.63	3.52

Wind (1983 includes 1980-1983)

24.45 25.51 1.75 2.75

Renewable Technology Production Credit

Wind

Renewable Energy Production Incentive Payments

Solar Electric

Wind

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology.

	1990	1991	1992	1993	1994	1995	1996
Technology Investment Tax Credits							
Solar Electric	3.38	3.22	3.11	3.05	3.00	2.91	2.83
Wind (1983 includes 1980-1983)							
Renewable Technology Production Credit						6.37	6.56
Wind							
Renewable Energy Production Incentive Payments							
Solar Electric						0.01	0.02
Wind						0.10	0.22

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology.

	1997	1998	1999	Total
Technology Investment Tax Credits				
Solar Electric	2.77	2.72	2.67	51.78
Wind (1983 includes 1980-1983)				54.46
Renewable Technology Production Credit				
Wind	3.33	3.40	3.60	23.26
Renewable Energy Production Incentive Payments				
Solar Electric	0.03	0.03	0.09	0.18
Wind	0.23	0.13	0.03	0.71

Note: Estimates are based on analysis by author. See Appendix A for more detail on methodology.

Table 7-A. Electric Industry Net Generation (Billions of KWH)

Nuclear

Solar

Photovoltaic

Solar Thermal

Solar/PV

Wind

Hydro

Note: See text of report for more detail on sources. Hydro data for 1909-1948 is Bureau of Reclamation electricity generation for that period, see <Http://borhps1.usbr.gov:8889/ows-bin/powsql.cgi>.

	1909-1948	1949	1950	1951	1952	1953	1954	1955	1956
Nuclear									
Solar									
Photovoltaic									
Solar Thermal									
Solar/PV									
Wind									
Hydro	1,924.005	89.748	95.938	99.751	105.102	105.233	107.069	112.975	122.029

Note: See text of report for more detail on sources. Hydro data for 1909-1948 is Bureau of Reclamation electricity generation for that period, see <Http://borhps1.usbr.gov:8889/ows-bin/powsql.cgi>.

	1957	1958	1959	1960	1961	1962	1963	1964	1965
Nuclear	0.010	0.165	0.188	0.518	1.692	2.270	3.212	3.343	3.657
Solar									
Photovoltaic									
Solar Thermal									
Solar/PV									
Wind									
Hydro	130.232	140.262	137.781	145.833	152.172	168.607	165.755	177.073	193.851

Note: See text of report for more detail on sources. Hydro data for 1909-1948 is Bureau of Reclamation electricity generation for that period, see <Http://borhps1.usbr.gov:8889/ows-bin/powsql.cgi>.

	1966	1967	1968	1969	1970	1971	1972	1973	1974
Nuclear	5.520	7.655	12.528	13.928	21.804	38.105	54.091	83.479	113.976

Solar
Photovoltaic
Solar Thermal
Solar/PV

Wind

Hydro	194.756	221.518	222.491	250.193	247.714	266.311	272.613	272.083	301.032
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Note: See text of report for more detail on sources. Hydro data for 1909-1948 is Bureau of Reclamation electricity generation for that period, see <Http://borhps1.usbr.gov:8889/ows-bin/powsql.cgi>.

	1975	1976	1977	1978	1979	1980	1981	1982	1983
Nuclear	172.505	191.104	250.883	276.403	255.155	251.116	272.674	282.773	293.677

Solar
Photovoltaic
Solar Thermal
Solar/PV

Wind

Hydro	300.047	283.707	220.475	280.419	279.783	276.021	260.684	309.213	332.130
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Note: See text of report for more detail on sources. Hydro data for 1909-1948 is Bureau of Reclamation electricity generation for that period, see <Http://borhps1.usbr.gov:8889/ows-bin/powsql.cgi>.

	1984	1985	1986	1987	1988	1989	1990	1991	1992
Nuclear	327.634	383.691	414.038	455.270	526.973	529.402	576.974	612.642	618.841

Solar
Photovoltaic
Solar Thermal
Solar/PV

Wind

Hydro	0.012	0.016	0.018	0.014	0.010	0.477	0.646	0.759	0.727
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Hydro	321.150	281.149	290.844	249.695	222.940	272.116	291.505	288.159	253.088
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Note: See text of report for more detail on sources. Hydro data for 1909-1948 is Bureau of Reclamation electricity generation for that period, see <Http://borhps1.usbr.gov:8889/ows-bin/powsql.cgi>.

	1993	1994	1995	1996	1997	1998	1999	Total
Nuclear	610.367	640.492	673.402	674.729	628.644	673.702	727.913	11,687.144
Solar								
Photovoltaic								
Solar Thermal								
Solar/PV	0.874	0.803	0.803	0.879	0.870	0.905	0.905	8.648
Wind	3.022	3.447	3.164	3.376	3.357	3.459	3.469	32.878
Hydro	280.494	260.166	311.004	347.448	358.949	328.581	307.951	13,629.842

Note: See text of report for more detail on sources. Hydro data for 1909-1948 is Bureau of Reclamation electricity generation for that period, see <Http://borhps1.usbr.gov:8889/ows-bin/powsql.cgi>.