

Biomass Power R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	30.000	100.000	200.000	250.000	350.000	550.000	700.000	800.000	950.000	1,050.000
Direct Electricity Displaced (Billion Kilowatthours)	0.350	0.950	1.250	1.750	2.450	5.950	10.500	12.000	15.000	18.000
Direct Natural Gas Displaced (Billion Cubic Feet)	0.900	2.500	4.500	7.000	11.500	24.500	32.500	33.000	40.000	50.000
Direct Petroleum Displaced (Million Barrels)	0.070	0.150	0.100	0.150	0.200	0.100	0.200	0.300	0.350	0.400
Direct Coal Displaced (Million Short Tons)	1.510	5.100	8.750	12.500	16.000	26.000	31.500	38.000	44.000	49.500
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	(50.000)	(100.000)	(200.000)	(300.000)	(400.000)	(700.000)	(850.000)	(1,000.000)	(1,150.000)	(1,300.000)
Non-Energy Savings or Costs (Millions of 1999 \$'s)	5.000	20.000	40.000	55.000	70.000	100.000	100.000	150.000	150.000	150.000
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	(100.000)	(300.000)	(400.000)	(400.000)	(400.000)	(350.000)	(50.000)	(100.000)	(100.000)	(100.000)
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	(0.050)	(0.050)	(0.050)	(0.100)	(0.100)	(0.100)	(0.100)
Carbon Equivalent Emissions Displaced (MMTce)	0.800	2.750	4.700	6.650	8.600	14.000	17.000	20.500	23.500	27.000
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0.015	0.050	0.085	0.100	0.150	0.250	0.300	0.350	0.450	0.500
NOX Displaced (MMTons)	0.015	0.050	0.090	0.150	0.150	0.250	0.300	0.400	0.450	0.500
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	(0.005)	(0.005)	(0.005)	(0.010)	(0.010)	(0.015)	(0.015)	(0.015)
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Biomass Power R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	(0.005)	(0.010)	(0.010)	(0.015)	(0.025)	(0.025)	(0.035)	(0.040)	(0.040)

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	(100.000)	(450.000)	(900.000)	(1,350.00 0)	(1,950.00 0)	(3,050.00 0)	(2,950.00 0)	(3,350.00 0)	(4,000.00 0)	(4,650.00 0)
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Biomass Power R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Biomass Power R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Competitive Solicitation (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Direct Electricity Displaced (Billion Kilowatthours)	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
Direct Natural Gas Displaced (Billion Cubic Feet)	1.250	1.250	1.150	1.050	0.950	1.000	1.200	1.250	1.250	1.250
Direct Petroleum Displaced (Million Barrels)	0.195	0.185	0.175	0.175	0.150	0.150	0.150	0.150	0.150	0.150
Direct Coal Displaced (Million Short Tons)	0.025	0.025	0.035	0.040	0.045	0.045	0.035	0.035	0.035	0.035
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0.055	0.055	0.055	0.060	0.060	0.060	0.060	0.060	0.060	0.060
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank
NOX Displaced (MMTons)	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Competitive Solicitation (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Competitive Solicitation (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Competitive Solicitation (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Concentrating Solar Power (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	0.500	1.000	1.500	2.000	3.000	13.000	40.000	100.000	150.000	250.000
Direct Electricity Displaced (Billion Kilowatthours)	0.050	0.100	0.150	0.200	0.300	1.400	4.850	14.000	21.500	29.000
Direct Natural Gas Displaced (Billion Cubic Feet)	0.250	0.750	0.950	1.150	1.500	6.550	23.500	67.500	106.000	140.000
Direct Petroleum Displaced (Million Barrels)	0.010	0.020	0.020	0.020	0.030	0.030	0.100	0.300	0.500	0.650
Direct Coal Displaced (Million Short Tons)	0.010	0.020	0.030	0.040	0.080	0.300	0.750	1.850	2.900	3.900
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	5.000	5.000	5.000	5.000	25.000	100.000	300.000	500.000	700.000
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	(5.000)	(20.000)	(35.000)	(45.000)
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	50.000	0	0	50.000	100.000	200.000	450.000	450.000	400.000
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0.050	0.050	0.050	0.250	0.800	2.100	3.300	4.450
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0.010	0.030	0.050	0.060
NOX Displaced (MMTons)	0	0	0	0	0	0	0.010	0.020	0.030	0.040
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Concentrating Solar Power (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	50.000	50.000	100.000	100.000	450.000	1,400.000	3,700.000	5,850.000	7,800.000
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Concentrating Solar Power (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Concentrating Solar Power (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Distributed Energy Resources (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	100.000	200.000	300.000	350.000	400.000	400.000	450.000	550.000	650.000	800.000
Direct Electricity Displaced (Billion Kilowatthours)	11.000	19.000	26.500	33.500	40.000	42.000	52.000	67.500	83.500	100.000
Direct Natural Gas Displaced (Billion Cubic Feet)	76.000	125.000	160.000	180.000	190.000	195.000	255.000	330.000	410.000	485.000
Direct Petroleum Displaced (Million Barrels)	2.150	2.950	2.350	2.900	3.000	0.700	0.900	1.550	1.900	2.250
Direct Coal Displaced (Million Short Tons)	1.400	2.750	4.900	6.550	9.400	8.650	8.050	9.150	11.500	13.500
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	600.000	950.000	1,250.00 0	1,550.00 0	1,750.00 0	2,050.00 0	2,600.00 0	3,500.00 0	4,200.00 0	4,850.00 0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	(5.000)	(10.000)	(20.000)	(30.000)	(50.000)	(40.000)	(15.000)	(70.000)	100.000	200.000
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	650.000	400.000	300.000	250.000	150.000	100.000	100.000	50.000	0	(50.000)
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	2.050	3.750	5.650	7.250	9.250	10.500	11.500	14.000	17.000	20.000
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0.020	0.050	0.090	0.150	0.200	0.250	0.300	0.350	0.400	0.450
NOX Displaced (MMTons)	0.015	0.030	0.050	0.065	0.085	0.100	0.100	0.150	0.150	0.200
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Distributed Energy Resources (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0.005	0.005	0.005	0.005	0.010	0.010

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	650.000	950.000	1,000.000	1,050.000	850.000	700.000	1,100.000	1,250.000	100.000	(1,500.000)
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Distributed Energy Resources (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Distributed Energy Resources (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Geothermal Energy R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	85.000	150.000	250.000	400.000	500.000	650.000	900.000	1,150.000
Direct Electricity Displaced (Billion Kilowatthours)	0	0	8.250	15.500	25.500	41.500	62.500	84.000	115.000	145.000
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	50.500	84.000	120.000	190.000	305.000	410.000	560.000	705.000
Direct Petroleum Displaced (Million Barrels)	0	0	0.750	1.350	1.950	0.700	1.050	1.900	2.600	3.250
Direct Coal Displaced (Million Short Tons)	0	0	1.550	3.000	6.050	8.600	9.700	11.500	15.500	19.500
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	200.000	350.000	550.000	800.000	1,250.000	1,800.000	2,600.000	3,500.000
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	(35.000)	(70.000)	(100.000)	(150.000)	(200.000)	(200.000)	(250.000)	(250.000)
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	550.000	450.000	600.000	250.000	250.000	200.000	300.000	250.000
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0	0	1.650	3.000	5.250	7.700	10.500	13.000	17.500	22.000
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0.020	0.040	0.080	0.100	0.150	0.150	0.250	0.300
NOX Displaced (MMTons)	0	0	0.015	0.025	0.045	0.070	0.090	0.100	0.150	0.200
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Geothermal Energy R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0.005	0.005	0.005	0.005	0.005

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	550.000	1,000.000	1,500.000	4,750.000	4,250.000	7,300.000	7,800.000	10,600.000
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Geothermal Energy R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Geothermal Energy R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

High Temperature Superconductivity (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	5.000	50.000	50.000	100.000	300.000	350.000	400.000	450.000
Direct Electricity Displaced (Billion Kilowatthours)	0.100	0.200	0.550	2.600	4.600	10.500	35.500	43.000	51.000	58.500
Direct Natural Gas Displaced (Billion Cubic Feet)	0.750	1.500	3.450	14.000	21.500	49.000	175.000	210.000	250.000	285.000
Direct Petroleum Displaced (Million Barrels)	0.020	0.035	0.050	0.225	0.350	0.200	0.600	0.950	1.150	1.300
Direct Coal Displaced (Million Short Tons)	0.015	0.035	0.100	0.500	1.100	2.200	5.500	5.800	6.850	7.900
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	50.000	100.000	200.000	700.000	900.000	1,150.000	1,450.000
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0.050	0.100	0.500	0.950	1.950	5.800	6.600	7.800	8.950
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0.005	0.015	0.030	0.085	0.090	0.100	0.100
NOX Displaced (MMTons)	0	0	0	0.005	0.010	0.020	0.050	0.060	0.070	0.080
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

High Temperature Superconductivity (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0.005

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

High Temperature Superconductivity (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

High Temperature Superconductivity (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Hydrogen (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	5.000	10.000	50.000	250.000	500.000	750.000	1,000.000
Direct Electricity Displaced (Billion Kilowatthours)	0.060	0.150	0.200	0.550	1.150	4.700	28.000	61.000	93.500	127.000
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	55.000	110.000	165.000	230.000
Direct Petroleum Displaced (Million Barrels)	0.100	0.200	0.350	0.900	1.850	6.750	22.000	48.500	75.000	101.500
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	1.750	3.050	4.500	6.500
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	(45.000)	(95.000)	200.000	1,550.000	3,850.000	6,100.000	8,400.000
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	5.000	25.000	50.000	90.000
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	(50.000)
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0.050	0.050	0.100	0.250	0.550	2.000	8.650	18.000	27.500	37.500
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0.060	0.100	0.150	0.200
NOX Displaced (MMTons)	0	0	0	0.005	0.010	0.030	0.100	0.200	0.300	0.450
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Hydrogen (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0.005	0.005

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	250.000	400.000	50.000	(700.000)
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Hydrogen (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Hydrogen (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Hydropower (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Hydropower (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Hydropower (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Hydropower (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Photovoltaic Systems R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	0	5.000	5.000	5.000	10.000	20.000	50.000	100.000	100.000	150.000
Direct Electricity Displaced (Billion Kilowatthours)	0.100	0.250	0.400	0.650	0.850	2.300	6.250	10.500	14.500	19.000
Direct Natural Gas Displaced (Billion Cubic Feet)	0.800	1.700	2.550	3.450	4.100	10.500	30.500	51.500	71.500	92.000
Direct Petroleum Displaced (Million Barrels)	0.025	0.040	0.035	0.055	0.065	0.040	0.100	0.250	0.350	0.400
Direct Coal Displaced (Million Short Tons)	0.015	0.035	0.080	0.100	0.200	0.450	0.950	1.400	1.950	2.550
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	5.000	5.000	10.000	15.000	20.000	50.000	100.000	200.000	350.000	450.000
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	5.000	5.000	5.000	15.000	50.000	85.000	100.000	150.000
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	300.000	300.000	300.000	400.000	400.000	550.000	700.000	500.000	300.000	200.000
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0	0.050	0.100	0.100	0.200	0.400	1.050	1.600	2.250	2.900
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0.001	0.001	0.002	0.003	0.005	0.015	0.020	0.030	0.050
NOX Displaced (MMTons)	0	0.001	0.001	0.001	0.002	0.005	0.010	0.015	0.020	0.025
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Photovoltaic Systems R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	300.000	550.000	800.000	1,150.000	1,400.000	2,700.000	5,350.000	6,000.000	5,750.000	4,050.000
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Photovoltaic Systems R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Photovoltaic Systems R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

REPI (OPT) GPRA2003 Metric Data

Metric

2003

2004

2005

2006

2007

2010

2015

2020

2025

2030

Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	35.000	35.000	35.000	35.000	35.000	30.000	30.000	25.000	25.000	25.000
Direct Electricity Displaced (Billion Kilowatthours)	3.400	3.400	3.400	3.400	3.400	3.400	3.400	3.400	3.400	3.400
Direct Natural Gas Displaced (Billion Cubic Feet)	23.000	22.500	21.000	18.500	16.000	15.500	16.500	16.500	16.500	16.500
Direct Petroleum Displaced (Million Barrels)	0.660	0.530	0.305	0.295	0.250	0.050	0.050	0.100	0.100	0.100
Direct Coal Displaced (Million Short Tons)	0.450	0.500	0.650	0.650	0.800	0.700	0.550	0.450	0.450	0.450
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	100.000	100.000	100.000	100.000	50.000	50.000	50.000	50.000	50.000	50.000
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	14.300	14.400	14.750	14.500	15.000	13.500	12.000	11.500	11.500	11.500
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank
NOX Displaced (MMTons)	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank	Blank
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

REPI (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

REPI (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

REPI (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Solar Buildings (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	5.000	10.000	15.000	20.000	25.000	45.000	85.000	150.000	250.000	350.000
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	4.150	8.550	13.000	18.000	23.000	40.000	74.000	115.000	175.000	245.000
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	30.000	65.000	95.000	150.000	150.000	300.000	550.000	1,000.00 0	1,650.00 0	2,450.00 0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0.050	0.150	0.200	0.300	0.400	0.650	1.250	2.200	3.600	5.350
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0.001	0.002	0.004	0.005	0.010	0.015	0.025	0.040	0.060	0.090
NOX Displaced (MMTons)	0.001	0.002	0.003	0.004	0.005	0.010	0.015	0.025	0.040	0.060
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Solar Buildings (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Solar Buildings (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Solar Buildings (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Solar International (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTce)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Solar International (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Solar International (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Solar International (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Wind Energy R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
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Energy Metrics

Total Primary Energy Displaced (Trillion Btu)	20.000	40.000	50.000	100.000	200.000	550.000	1,100.000	1,700.000	1,950.000	2,100.000
Direct Electricity Displaced (Billion Kilowatthours)	1.700	3.600	5.450	10.500	20.000	62.500	135.000	215.000	250.000	270.000
Direct Natural Gas Displaced (Billion Cubic Feet)	11.500	24.000	33.500	56.500	95.000	285.000	650.000	1,045.000	1,215.000	1,310.000
Direct Petroleum Displaced (Million Barrels)	0.350	0.550	0.500	0.900	1.500	1.050	2.300	4.850	5.600	6.050
Direct Coal Displaced (Million Short Tons)	0.200	0.500	1.000	2.050	4.700	13.000	20.500	29.000	33.500	36.000
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	50.000	100.000	150.000	250.000	400.000	1,200.000	2,650.000	4,550.000	5,650.000	6,500.000
Non-Energy Savings or Costs (Millions of 1999 \$'s)	5.000	10.000	10.000	20.000	40.000	100.000	300.000	500.000	550.000	600.000
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	150.000	100.000	100.000	150.000	150.000	50.000	200.000	300.000	150.000	50.000
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0.300	0.700	1.100	2.050	4.100	11.500	22.000	33.000	38.000	41.000
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0.005	0.010	0.015	0.030	0.050	0.200	0.300	0.450	0.500	0.550
NOX Displaced (MMTons)	0.005	0.005	0.010	0.020	0.035	0.100	0.200	0.300	0.350	0.350
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Wind Energy R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0.005	0.005	0.010	0.010	0.015

Energy-Cumulative Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Cumulative Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	150.000	200.000	250.000	350.000	350.000	250.000	1,950.000	4,200.000	4,050.000	3,450.000
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Cumulative Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Wind Energy R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Energy-Lifecycle Metrics

Total Primary Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Electricity Displaced (Billion Kilowatthours)	0	0	0	0	0	0	0	0	0	0
Direct Natural Gas Displaced (Billion Cubic Feet)	0	0	0	0	0	0	0	0	0	0
Direct Petroleum Displaced (Million Barrels)	0	0	0	0	0	0	0	0	0	0
Direct Coal Displaced (Million Short Tons)	0	0	0	0	0	0	0	0	0	0
Direct Biomass Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Feedstocks (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Direct Energy Displaced From Wastes (Trillion Btu)	0	0	0	0	0	0	0	0	0	0
Other Direct Energy Displaced (Trillion Btu)	0	0	0	0	0	0	0	0	0	0

Financial-Lifecycle Metrics

Energy Costs or Savings (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Non-Energy Savings or Costs (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
EERE Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Other Government Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Consumer Investment (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0
Private Sector Expenditures (Millions of 1999 \$'s)	0	0	0	0	0	0	0	0	0	0

Environmental-Lifecycle Metrics

CO Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Carbon Equivalent Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
Other Greenhouse Emissions Displaced (MMTCe)	0	0	0	0	0	0	0	0	0	0
SO2 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0

Wind Energy R&D (OPT) GPRA2003 Metric Data

Metric	2003	2004	2005	2006	2007	2010	2015	2020	2025	2030
NOX Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Particulates Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
VOCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
HCs Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0
Other Environmental Benefits (MMTons)	0	0	0	0	0	0	0	0	0	0
PM10 Displaced (MMTons)	0	0	0	0	0	0	0	0	0	0