

# Program Update

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# SF<sub>6</sub> Emission Reduction Partnership for Electric Power Systems

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- ▶ Since 1999, members of the U.S. electric power industry and the U.S. Environmental Protection Agency (EPA) have been working together to identify and implement opportunities to reduce SF<sub>6</sub> emissions.
  - ▶ SF<sub>6</sub> classified as the highest GWP gas (GWP of 22,800 IPCC Fourth Assessment Report).
  - ▶ Extremely long atmospheric lifetime of 3,200 years causes it to accumulate in the earth's atmosphere for centuries.
- ▶ **84** partner companies
  - ▶ 53 of these partners (64%) report through the GHGRP.
- ▶ Partners are leaders in their industry in efforts to reduce SF<sub>6</sub> emissions
  - ▶ Share information

# Partners

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**American Electric Power (AEP)**  
**Arizona Public Service Company (APS)**  
**Athens Electric Department**  
**Austin Energy**  
**Bangor Hydro-Electric Company**  
**Big Rivers Electric Corporation**  
**Bonneville Power Administration**  
**CenterPoint Energy**  
**Central Maine Power Company**  
**Central Vermont Public Service Corporation**  
**City of Palo Alto**  
**Consolidated Edison Company of New York, Inc.**  
**CPS Energy (formerly San Antonio City Public Service Board)**  
**Duquesne Light Company**  
**Edison International**  
**El Paso Electric Company**  
**Energy Corporation**  
**Eugene Water and Electric Board**  
**Exelon Energy Delivery (EED)**  
**ComEd Energy Delivery**  
**PECO Energy Delivery**

**FirstEnergy Corporation**  
**Allegheny Power**  
**Fort Pierce Utilities Authority**  
**Grand Island Utilities Department**  
**Hastings Utilities**  
**ITC Transmission**  
**Kings River Conservation District**  
**Louisville Gas and Electric Company (LG&E) and Kentucky Utilities Company (KU)**  
**Lower Colorado River Authority (LCRA)**  
**Maine Public Service Company**  
**Manitowoc Public Utilities**  
**Memphis Light, Gas & Water Division**  
**Menasha Utilities**  
**MidAmerican Energy**  
**Montana-Dakota Utilities**  
**Muscatine Power & Water**  
**Nashville Electric Service (NES)**  
**National Grid**  
**Granite State Electric**  
**Massachusetts Electric**

# Partners (continued)

## **National Grid (cont.)**

**Nantucket Electric**  
**Narragansett Electric**  
**New England Electric Transmission Corporation**  
**New England Hydro-Transmissions Company Inc.**  
**New England Power Company**  
**Niagara Mohawk Power Corporation**

## **Nebraska Public Power District**

**New Hampshire Transmission- Seabrook Station**

**New York Power Authority**

**New York State Electric and Gas**

**Northeast Utilities Services Company**

**Connecticut Light and Power Company**  
**Public Service Company of New Hampshire**  
**Western Massachusetts Electric Company**

**Northern Indiana Public Service Company (NIPSCO)**

**NSTAR Electric and Gas**  
**Boston Edison Company**  
**Commonwealth Electric Company**

**Oglethorpe Power**

**Oklahoma Gas and Electric Corporation (OG&E)**

**Oncor (formerly TXU)**

**Otter Tail Power Company**

**Pacificorp**

**Pacific Power**

**Rocky Mountain Power**

**Pacific Gas and Electric Corporation (PG&E)**

**PNM Resources**

**Public Utility District No. 1 of Pend Oreille County**

**Rochester Gas and Electric Corporation**

**Salt River Project**

**San Diego Gas & Electric**

**Seattle City Light**

**Silicon Valley Power**

**South Carolina Electric & Gas Company**

**Southern Company**

**State of California – Department of Water Resources**

**Tennessee Valley Authority (TVA)**

**Texas Municipal Power Agency**

**VT Transco LLC**

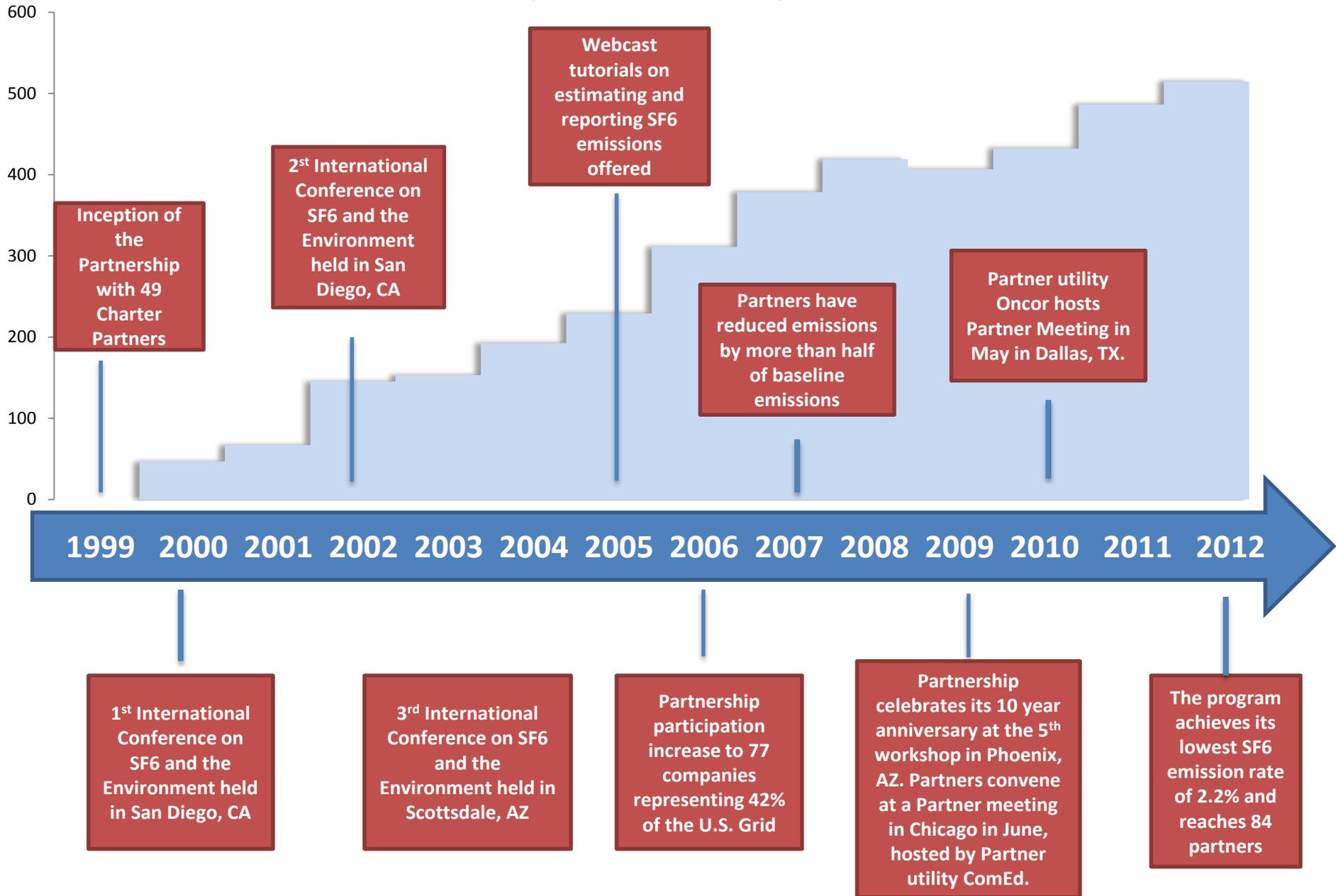
**Wallingford Electric Division**

**We Energies**

**Westar Energy**

# SF6 Partnership Timeline and Annual SF6 Reductions from 1999

## Baseline (thousand lbs SF6)



# Partnership Accomplishments

- ▶ 75 percent decrease in SF<sub>6</sub> emissions since 1999
- ▶ Cumulative reductions of 3.8 million lbs of SF<sub>6</sub>
  - ▶ Equivalent to removing 8.5 million passenger cars of the roads for one year
- ▶ 85 percent decrease in emissions rate since inception

**TABLE 2: Summary of Absolute Partnership SF<sub>6</sub> Emission Reductions**

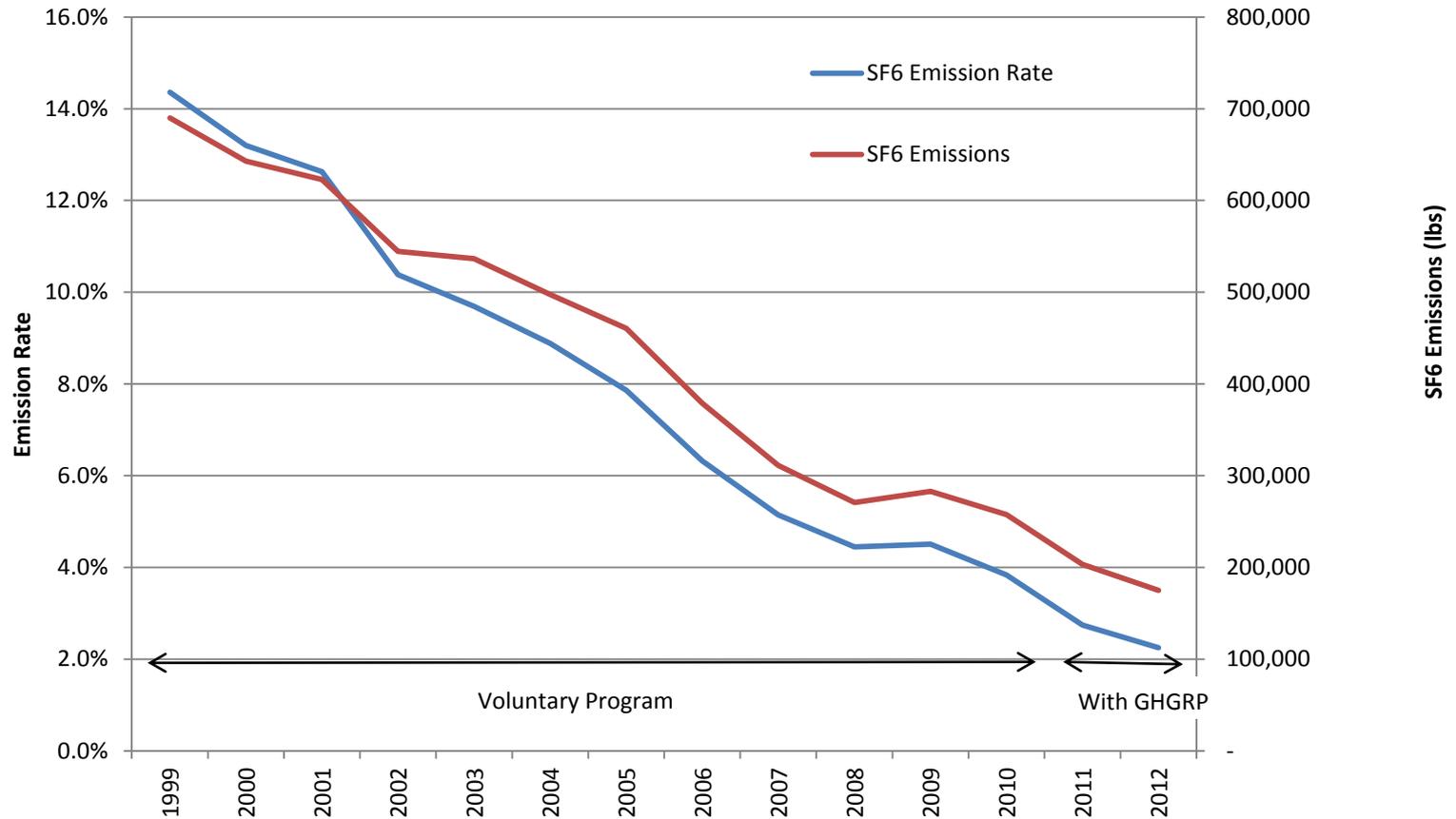
	1999 <sup>a</sup>	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total Partner-Reported SF <sub>6</sub> Emissions (lbs)	689,829	642,993	622,735	544,587	536,565	497,314	460,664	578,845	311,157	270,734	283,005	257,611	203,345	175,020
Total Partner-Reported SF <sub>6</sub> Emissions (MMTCO <sub>2</sub> e)	7.48	6.97	6.75	5.90	5.82	5.39	4.99	4.11	3.37	2.93	3.07	2.79	2.20	1.90
Reduction from Baseline (lbs)		46,835	67,094	145,242	153,264	192,515	229,165	310,984	378,672	419,095	406,824	432,218	486,484	514,809
Reduction from Baseline (MMTCO <sub>2</sub> e)		0.51	0.73	1.57	1.66	2.09	2.48	3.37	4.10	4.54	4.41	4.68	5.27	5.58
Percent Reduction from Baseline		6.8%	9.7%	21.1%	22.2%	27.9%	33.2%	45.1%	54.9%	60.8%	59.0%	62.7%	70.5%	74.6%

Note: Historical estimates have been updated based on the estimation methodology used by EPA and data made available by Partners.

<sup>a</sup> Baseline year.

# Partner Accomplishments

## SF<sub>6</sub> Emissions and Emission Rate



# Partnership SF<sub>6</sub> Emission Rates, 2012

