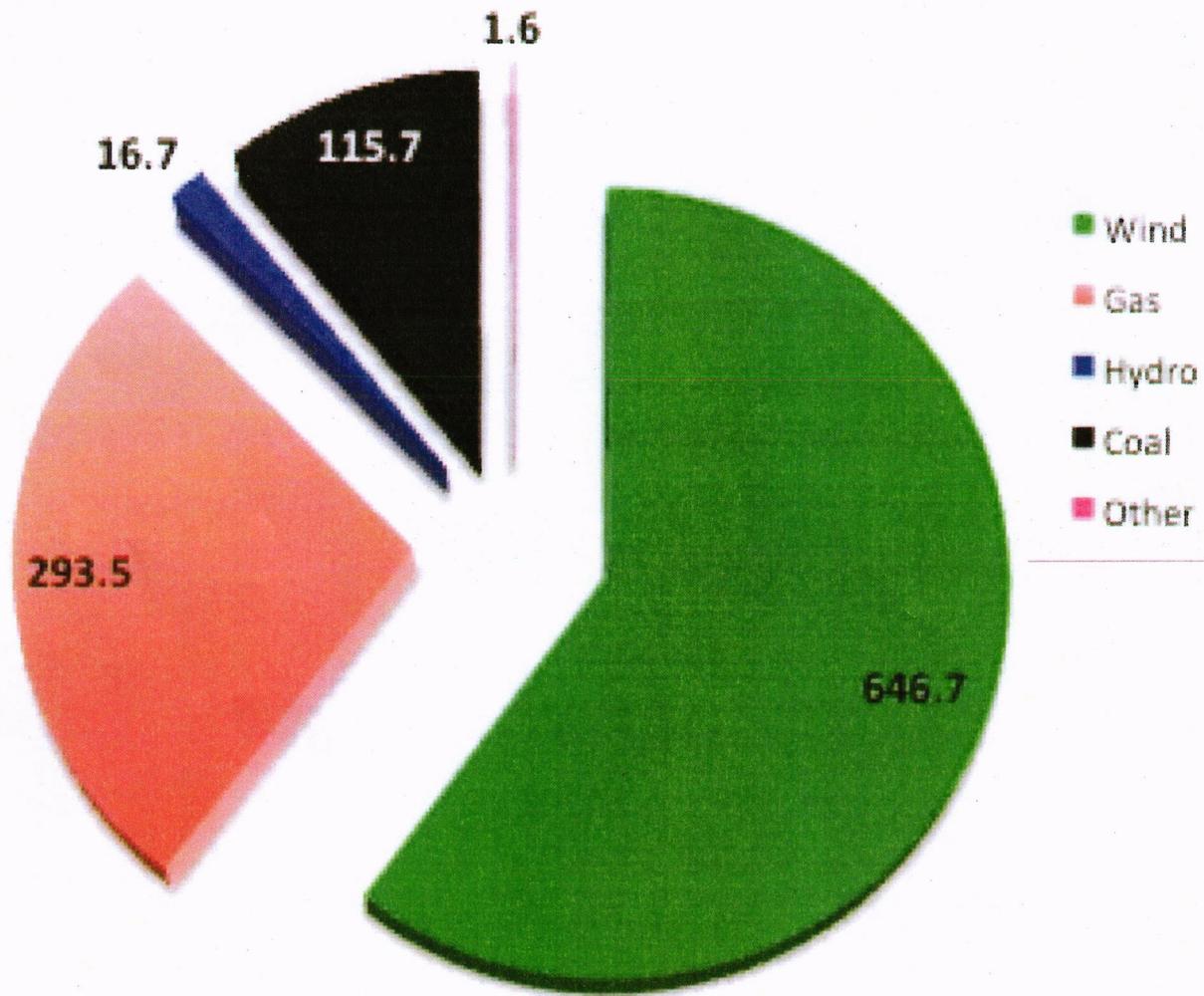
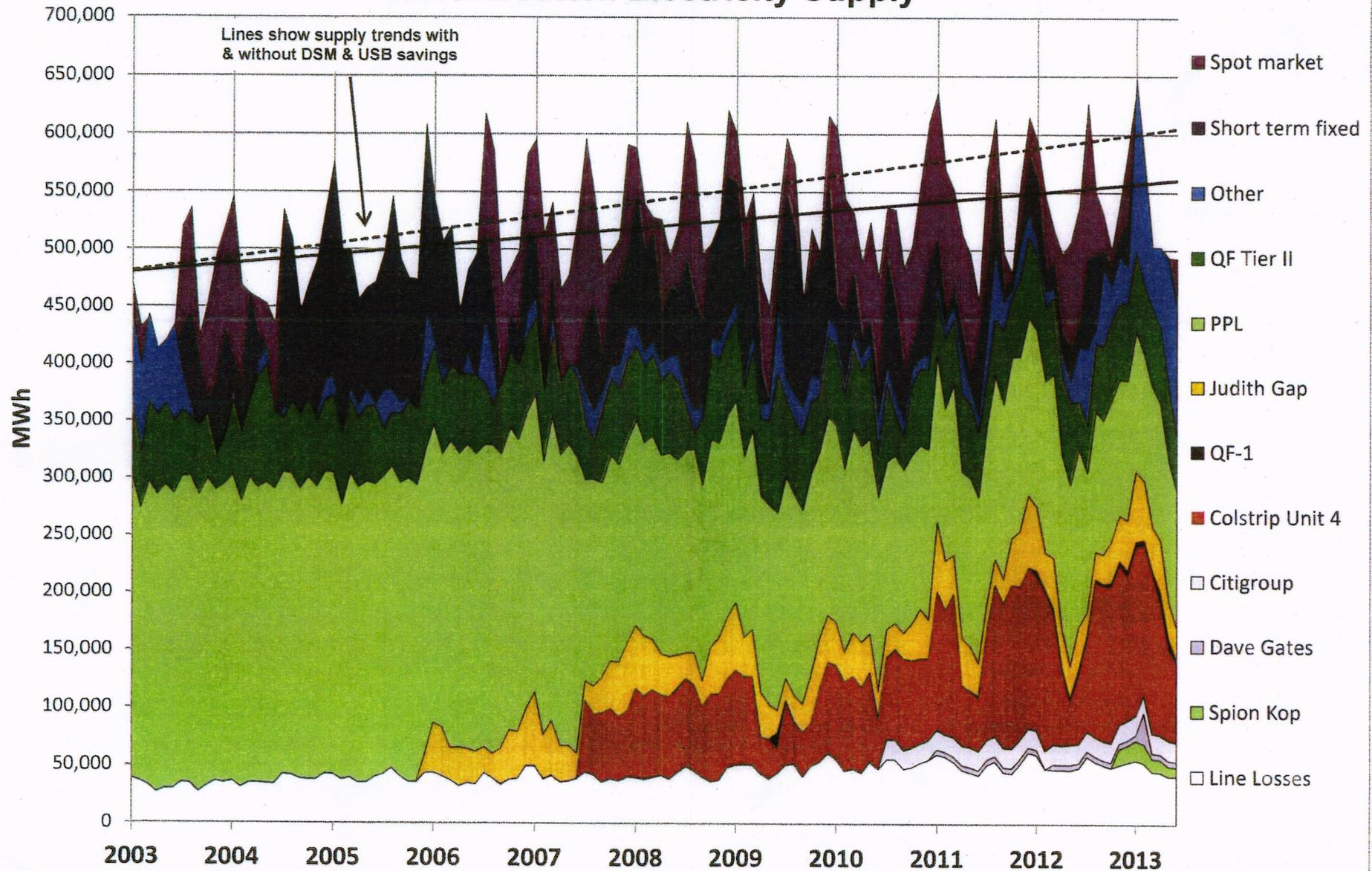


Montana New Electricity Generation Capacity (MW) 2005-2014



NorthWestern Electricity Supply



1 Lastly, an ownership benefit offered by Spion Kop is mitigation of the risk of
2 an energy or RPS shortfall at the end of its projected life in 25 years. By
3 owning Spion Kop rather than entering into a PPA (which will simply expire in
4 25 years and expose the supply portfolio to the risks associated with
5 replacing the contract, which could include market price risk, REC price and
6 availability risk, and contract renewal risk), NorthWestern will have the option
7 to continue running the project for the purpose of serving NorthWestern
8 customers if its condition is adequate to do so, recapitalize the project if its
9 condition is inadequate to serve customers, sell the project, or just sell the
10 energy and RECs. Ownership of the project will allow NorthWestern to
11 assess market conditions in 25 years and choose an option that best suits its
12 customers.

13
14 **Q. Has NorthWestern compared these non-price benefits and risk
15 mitigation characteristics to other resource types?**

16 **A.** Yes. The following table illustrates some risk areas that various types of
17 resources, both owned and contracted, hedge against. This is not
18 necessarily an all-inclusive list of risks or resource types, but it gives an
19 indication of the advantages different types of resources have relative to
20 various types of risk. It is evident that selecting energy resources of only one
21 or two types can leave a supply portfolio exposed to considerable risk, and
22 that an owned wind resource provides diversity from more traditional thermal
23 resources and market purchase contracts.

1

Risks Hedged by Various Energy Resource Types						
Resource Type	Potential Risk					
	Long-term Power Market Exposure	Short-term Power Market Exposure	Environmental Regulation	Fuel Price Volatility	Contract Renewal	Operating
Wind (owned)	X		X	X	X	X*
Wind (contract)	X		X	X		X
Thermal (owned)	X	X			X	
Thermal (contract)	X	X				X
Market (contract)		X		X		X

* Spion Kop has an effective 10-year hedge by virtue of the Full Service Agreement with General Electric.

2
3

4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

Long-term power market exposure arises when a supply portfolio relies too heavily on market purchase contracts rather than long-term assets, whether owned or contracted for. A portfolio is subjected to short-term power market exposure when its scheduled resources come up short of its load serving obligation. The variable nature of wind can expose a portfolio to short-term market volatility on both the buy and sell side, depending on how it has diverged from its schedule output. Environmental regulation includes GHG regulation as discussed previously, as well as SOx, NOx, and all other types of emitting regulations. Thermal plants are subject to volatility in the fuel markets such as coal and natural gas. Contract renewal risk is present when an existing contract expires and can include few or no counterparties to renew with, higher rates, or more stringent contract terms than the previous contract. Finally, operating risk concerns relate to all the costs associated with running and maintaining an owned asset. The addition of Spion Kop as an owned wind resource will provide a hedge from 1) long-term power

Wind as a Hedge Against Fossil Fuel Price Uncertainty

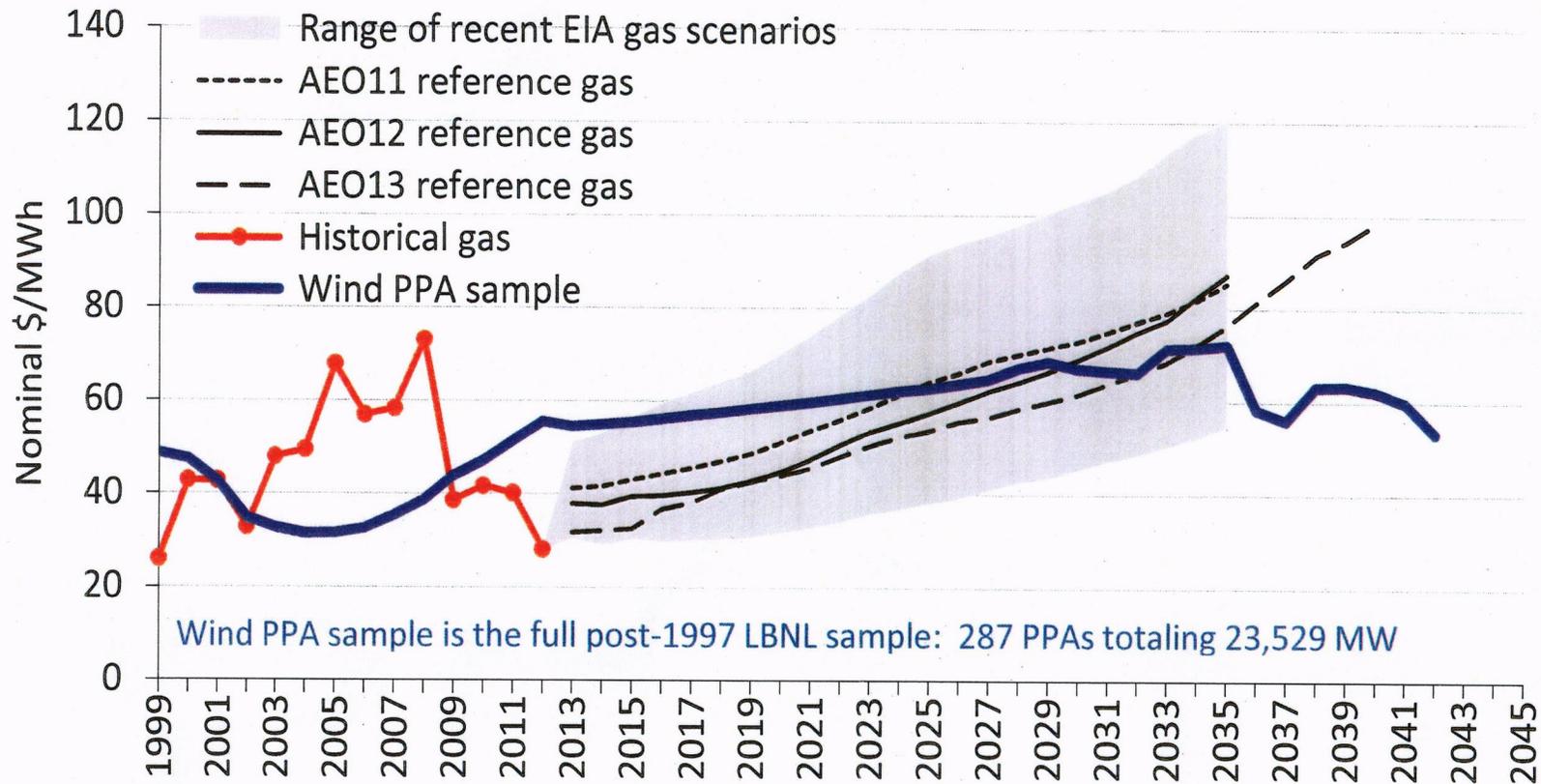
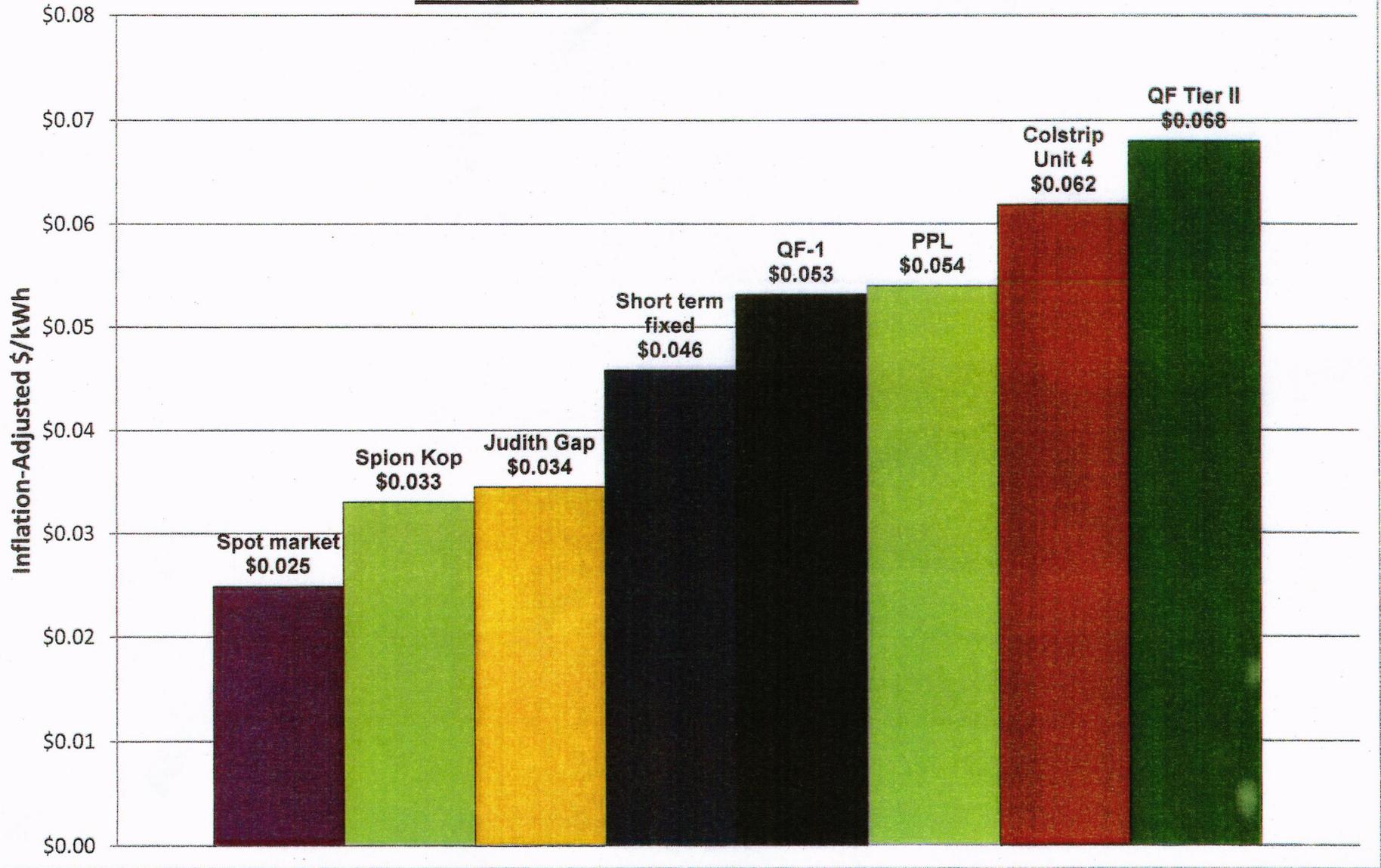


Figure 8. Comparison of Full Wind PPA Sample to Projected Range of Natural Gas Prices

Selected NorthWestern Electricity Supply Prices January 2009 to June 2013



Actual Emissions and Emissions Potentially Displaced by RPS Resources

Actual Emissions

<u>Resource</u>	<u>Carbon Dioxide</u>	<u>Sulfur Dioxide</u>	<u>Nitrogen Oxides</u>
Colstrip (2007) ¹⁹	18 million tons ²⁰	16,992 tons ²¹	31,584 tons
Colstrip (2011)	14 million tons	12,225 tons	15,838 tons
Overall in Montana (2010 -- All sources)	34.9 million tons	19,895 tons	21,723 tons

Emissions Displaced by RPS Resources (Natural Gas)²²

<u>Resource</u>	<u>Carbon Dioxide</u>	<u>Sulfur Dioxide</u>	<u>Nitrogen Oxides</u>
542 megawatts ²³	1.1 million tons	95 tons	1,615 tons
250 megawatts ²⁴	499,320 tons	43.8 tons	788 tons

Emissions Displaced by RPS Resources (Coal)

542 megawatts ²⁵	2.1 million tons	13,300 tons	5,700 tons
250 megawatts ²⁶	963,600 tons	6,132 tons	2,628 tons