

# Monitoring Report SD-7: Environmental Stewardship

Public Information Committee Report  
July 13, 2017



## SD-7: Environmental Stewardship

The Board is committed to operate OPPD in an environmentally sensitive manner.

Therefore:

- The Board establishes that a long-term goal of at least 30% of retail energy sales shall be supplied from renewable energy resources.
- OPPD shall conduct its business in a manner that meets all environmental regulatory standards and enhances natural resource conservation and stewardship.
- OPPD shall participate and provide leadership in the development of national, state, and regional environmental policies and initiatives that support OPPD's mission.



## SD-7: Environmental Stewardship (continued)

- OPPD shall promote efficient use of energy as a Company and by its customer-owners.
- OPPD shall, at the pace of value or in response to actual or anticipated environmental regulatory requirements, incorporate renewable generation into its generation portfolio.
- OPPD shall proactively engage its customer-owners and other stakeholders in meeting this directive.

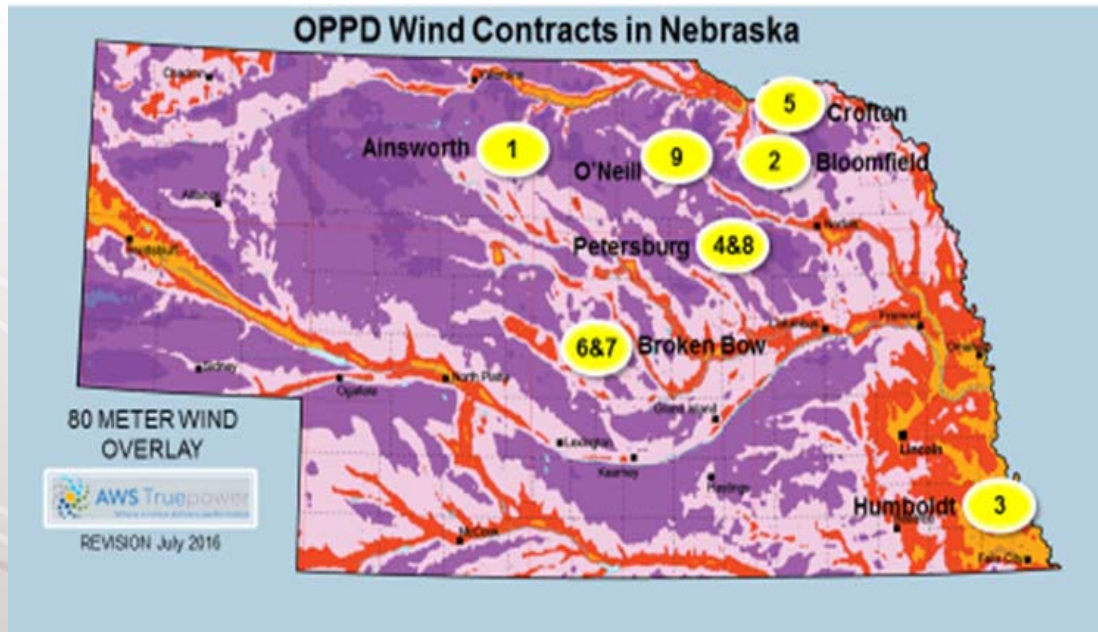
# The Board establishes that a long-term goal of at least 30% of retail energy sales shall be supplied from renewable energy resources.

- Actual 2016 was 19.6% of retail sales
- Projected for 2017 is 34% of retail sales
- Projected for 2020 is 51% of retail sales
- Prior to 2015 OPPD's goal was 10% renewables by 2020
- 2017 IRP projected incremental wind additions
  - 2018 160 MW
  - 2020 266 MW

*Renewable resources include generation from hydroelectric resources, landfill gas and wind.*



The Board establishes that a long-term goal of at least 30% of retail energy sales shall be supplied from renewable energy resources.



Facility	MW
1 Ainsworth	10.0
2 Elkhorn Ridge	25.0
3 Flat Water	60.0
4 Petersburg	40.5
5 Crofton Bluffs	13.7
6 Broken Bow 1	18.0
7 Broken Bow 2	43.9
8 Prairie Breeze	200.6
9 Grand Prairie	400.0
10 Elk City Landfill Gas	6.3
11 WAPA Hydro	82.0
<b>Total</b>	<b>900.0</b>



# OPPD shall conduct its business in a manner that meets all environmental regulatory standards and enhances natural resource conservation and stewardship.

- No violations of environmental permits that resulted in enforcement action or fines
- Published updates to the Avian Protection Plan and posted the plan on the OPPD.com website
- Provided grant to Douglas County Health Department to support installation of a new SO<sub>2</sub> ambient air monitor near North Omaha Station
- Sponsored a Missouri River Stream Gauge through the USGS and Corps of Engineers to improve accuracy of predictability of floods



# OPPD shall conduct its business in a manner that meets all environmental regulatory standards and enhances natural resource conservation and stewardship.

## Overall Emissions Reductions from 2015 - 2016

### North Omaha Station Air Emission Reductions\*

- 40% decrease in Barium
- 54.4% decrease in Hydrogen Fluoride
- 77% decrease in Mercury
- 42.5% decrease in Vanadium

### Nebraska City Station Emission Reductions\*

- 61% decrease in Mercury
- 49.4% decrease in Hydrogen Chloride

\*As reported to EPA 2016 Toxic Release Inventory

### Fleet Wide Reductions\*\*

- 27% decrease in SO<sub>2</sub>
- 23% decrease in NO<sub>x</sub>
- 10% decrease in CO<sub>2</sub>

\*\*As collected from Monthly Emission Tracking Report



# OPPD shall conduct its business in a manner that meets all environmental regulatory standards and enhances natural resource conservation and stewardship.

Fossil fuel ash continues to be recycled and utilized for beneficial uses:

Station/Unit	Fly Ash (tons)	Bottom Ash (tons)	Total (tons)
North Omaha Station	38,802	14	38,816
Nebraska City Station Unit 1	14,086	1,420	15,506
Nebraska City Station Unit 2	0	0	0
<b>TOTAL</b>	<b>52,888</b>	<b>1,434</b>	<b>54,322</b>





# OPPD shall conduct its business in a manner that meets all environmental regulatory standards and enhances natural resource conservation and stewardship.

Item	Quantity	Timeframe
Recycle Batteries	772 lbs.	YTD 2017
Recycle Scrap Metal	1,017,613 lbs.	YTD 2017
Recycle Used Oil	3,331 gal.	YTD 2017
Recycle PCB Oil	5,684 gal.	YTD 2017
Recycle Wooden poles	100	YTD 2017
Recycle Paper	12,255 lbs.	YTD 2017
Conserve Electricity	120 kW	Fort Calhoun Decommissioning-Annual
Oil recovery	14,000 gal.	Fort Calhoun Decommissioning-One time
Conserve Water	2,980,000 gal.	Fort Calhoun Decommissioning-Per Month



# OPPD shall conduct its business in a manner that meets all environmental regulatory standards and enhances natural resource conservation and stewardship.

- Encourage customers to utilize paperless billing and approximately 62,855 (17%) of customers are utilizing this option
- Support the Arboretum which helps educate visitors about proper tree planting

# OPPD shall participate and provide leadership in the development of national, state, and regional environmental policies and initiatives that support OPPD's mission.

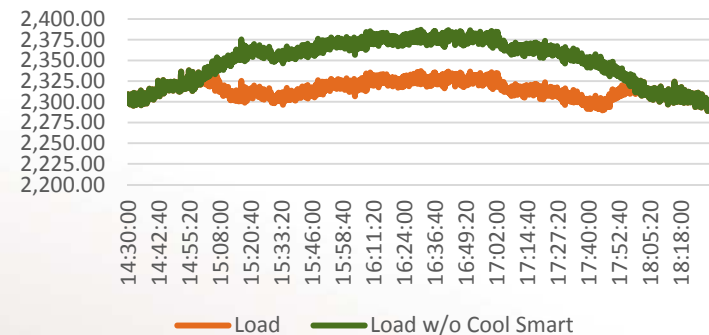
## Membership and Participation

American Public Power Association – Executive and Govt. Affairs	Governor's Carbon Sequestration Advisory Committee - Environmental and Regulatory Affairs
Large Public Power Council – Executive and Govt. Affairs	Keep Omaha Beautiful - Environmental and Regulatory Affairs
American Wind Energy Association – Renewables	Nebraska Solar Electric Partners-Renewables
Smart Electric Power Alliance-Renewables	Nebraska Department of Environmental Quality – Environmental and Regulatory Affairs
Utilities Solid Waste Activities Group – Environmental and Regulatory Affairs	Tree Line USA – Forestry
Nebraska Wind and Solar Conference – Renewables	Nebraska Energy Efficiency Partnership-Demand Side Management
Nebraska Industrial Council on Environment – Environmental and Regulatory Affairs	UNO Academy of Environments and Renewable Resources-Corporate Marketing and Communication
City of Omaha Storm Water Project – Environmental and Regulatory Affairs and Building Services	Nebraska Power Association – Corporate Marketing and Communication and Governmental Affairs

# OPPD shall promote efficient use of energy as a Company and by its customer-owners.

- Achieve 300 MW of cumulative reduction in demand by 2023
  - Mix of Demand Response and Energy Efficiency
  - Aligns with Integrated Resource Plan
  - Demand side management savings for 2015-2016 = 124.9 MW
- Continuously evaluate and offer environmentally sensitive solutions that are cost effective, desired by customers and produce verifiable savings
- Communicate with customers about energy saving ideas (Outlets, The Wire, Electric Service Designers, Account Executives, etc.)

Estimated Cool Smart Impact  
(sample summer day--peak hours)



# DSM Portfolio Status

Category	DSM Program	2016 Actuals (Cumulative ) (2015&2016)	2017 Plan (Cumulative)	2023 (Cumulative)
<b>Demand Response</b>	Cool Smart—AC load Control	57.8 MW	85.1 MW	137.3 MW
	Peak Choice Partner- Interruptible/Curtailable	52.6 MW	59.6 MW	97.3 MW
<b>Energy Efficiency</b>	HVAC Smart—Rebates	5.8 MW	7.3 MW	24.2 MW
	Smart Steps to Saving Energy—Income Qualified	0.005 MW	0.405 MW	2.2 MW
	Energy Efficiency Partner— Prescriptive Rebates	4.5 MW	8.9 MW	25.8 MW
	Energy Efficiency Partner— Custom Rebates	4.2 MW	6.1 MW	18.1 MW
<b>Total</b>		<b>124.905 MW</b>	<b>167.405 MW</b>	<b>304.900 MW</b>

Note: 2016 IRP identified approximately 46 MW of future demand response that was uneconomic relative to other sources of capacity. DSM target remains 300 MW, other programs or augmented existing programs will be utilized to replace 46MW.



# OPPD shall, at the pace of value or in response to actual or anticipated environmental regulatory requirements, incorporate renewable generation into its generation portfolio.

- Integrated Resource Plan evaluation included solar and additional wind resources
- Solar stakeholder evaluation is underway
  - Community Solar
  - Education (i.e. Creighton)
  - Commercial
  - Residential Rooftop
- Integrated Energy Marketplace Strategic Initiative evaluating:
  - Distributed Energy Resources
  - Battery Storage
  - Electric Vehicles

# OPPD shall proactively engage its customer-owners and other stakeholders in meeting this directive.

- Recent Stakeholder Processes
  - Elkhorn River Valley Transmission Project
  - Midwest Transmission Project
  - Sarpy County Transmission Project
  - 2016 Integrated Resource Plan
  - 2017 Community Solar
  - Holland Meadowlark Amphitheater
- Internet and Social Media
  - 24/7 availability to provide input and comments
  - OPPDListens.com
  - Power Panel
  - Twitter
  - Facebook
  - The Wire
  - LinkedIn



# Transmission Stakeholder Process

Throughout the routing process, the following criteria are used to determine the most appropriate and responsible power line route:

Airports and Airstrips	Businesses	Cemeteries	Churches
<b>Conservation Areas</b>	Constructability	Cost	Existing/Planned Utilities
Federal and State Lands	<b>Floodplains</b>	Highways	Historic and Archaeological Sites
Irrigation Systems/Center Pivots	New and Platted Developments	Railroads	Residences/Homes
Schools	Structures - Other	<b>Threatened and Endangered Species</b>	<b>Wetlands/ Waterways</b>
<b>Wooded Areas</b>	Visibility of the Line		



# Holland Meadowlark Amphitheater

*“For the safety of the birds, the Omaha Public Power District covered nearby power lines with protective yellow coils as visual indicators; birds often don’t see power lines until it’s too late.”*

**Mandi Krebs, Zoo Interactive Animal Programs Manager**

Omaha World Herald article June 18, 2017  
[http://www.omaha.com/living/zoo/omaha-zoo-visitors-can-get-up-close-and-personal-with/article\\_c533d0d8-51f0-11e7-b10f-6b38b6a9100b.html](http://www.omaha.com/living/zoo/omaha-zoo-visitors-can-get-up-close-and-personal-with/article_c533d0d8-51f0-11e7-b10f-6b38b6a9100b.html)



## Recommendation

- The Public Information Committee has reviewed and accepted this Monitoring Report for SD-7 and recommends that the Board find OPPD to be sufficiently in compliance with Board Policy SD-7