

Wind Energy Credits with Benefits



Nebraska Public Power District

"Always there when you need us"

David D. Rich

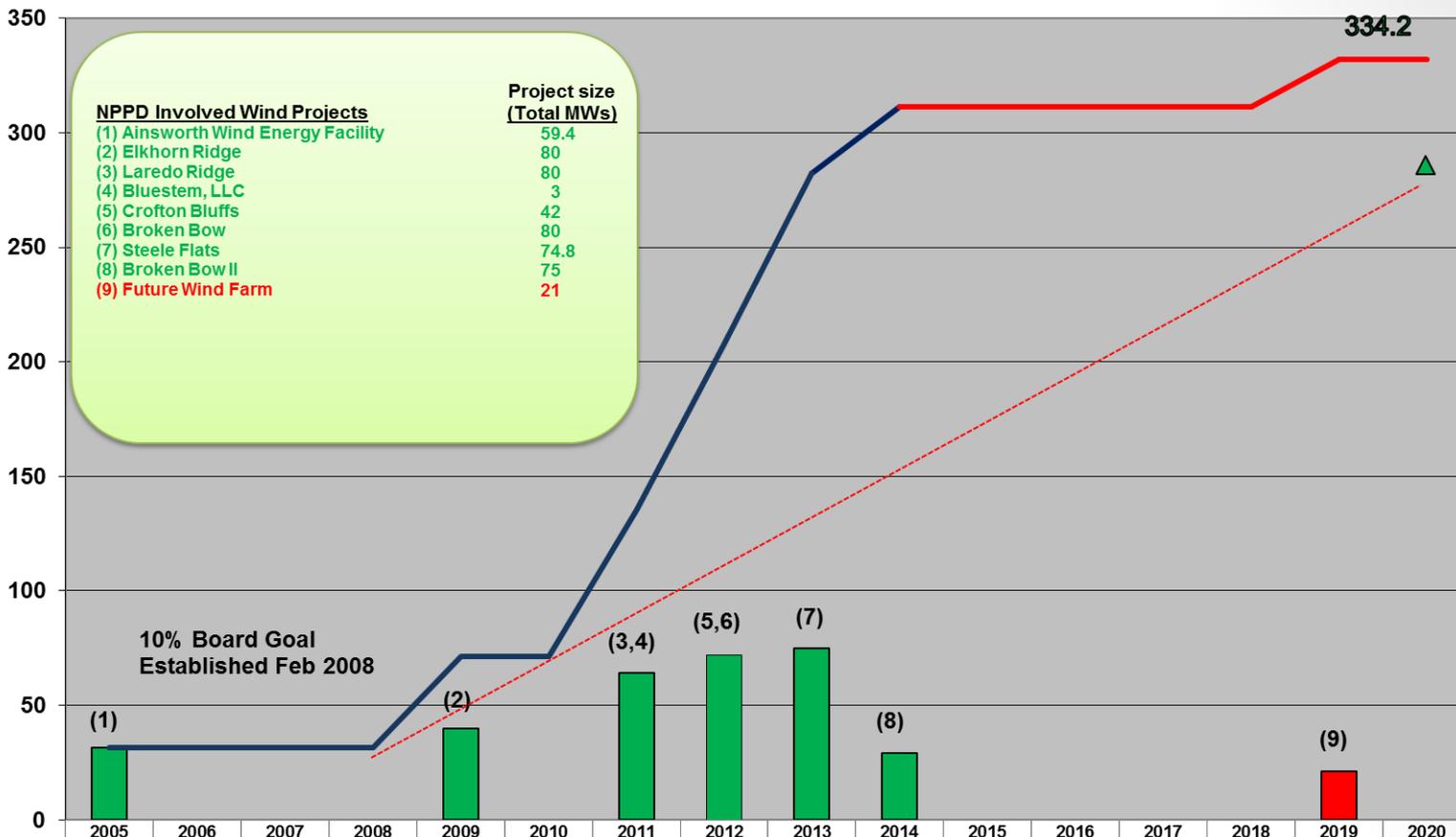
Sustainable Energy Manager

7th Annual Nebraska Wind & Solar Conference

La Vista, NE

October 29, 2014

NEBRASKA PUBLIC POWER DISTRICT Wind Generation Addition Plan to Meet 10% New Renewable Goal by 2020



NPPD Involved Wind Projects

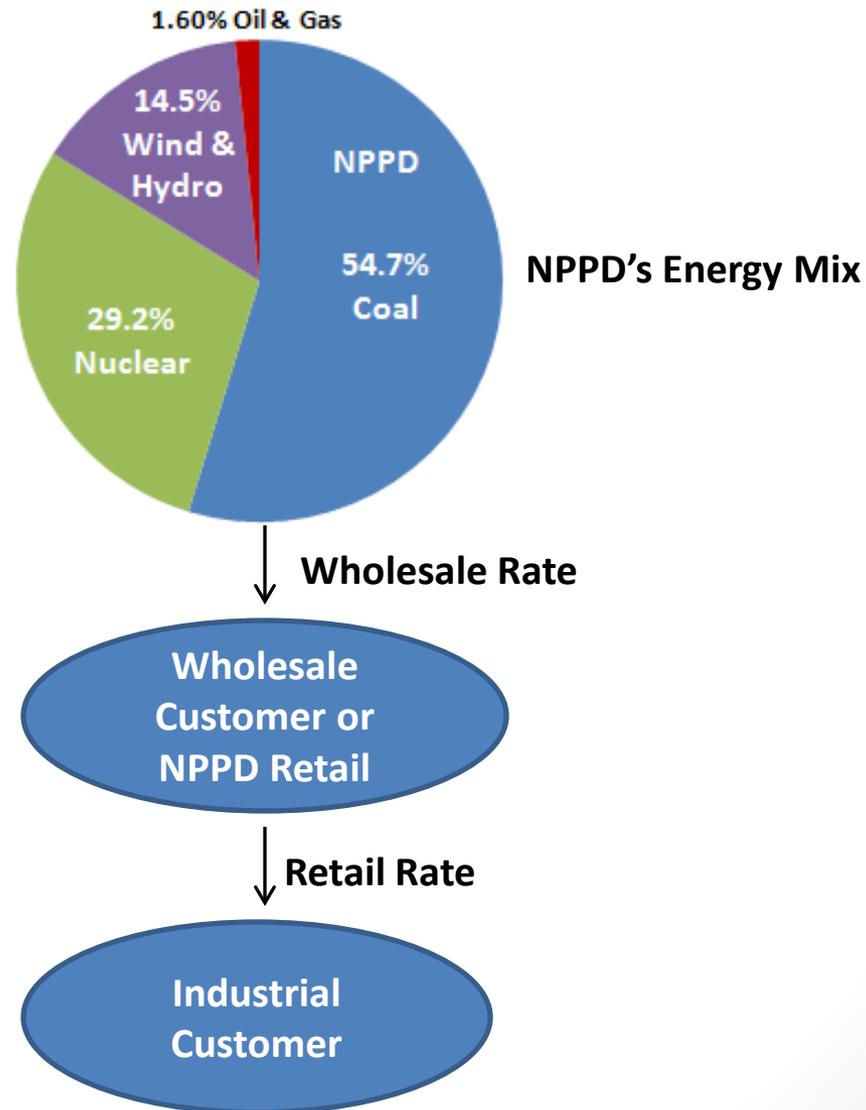
(1) Ainsworth Wind Energy Facility	59.4
(2) Elkhorn Ridge	80
(3) Laredo Ridge	80
(4) Bluestem, LLC	3
(5) Crofton Bluffs	42
(6) Broken Bow	80
(7) Steele Flats	74.8
(8) Broken Bow II	75
(9) Future Wind Farm	21

**Project size
(Total MWs)**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NPPD Share MW's	31.4	0.0	0.0	0.0	40.0	0.0	64.0	72.0	74.8	29.0	0.0	0.0	0.0	0.0	21.0	0.0
NPPD Accumulated MW's	31.4	31.4	31.4	31.4	71.4	71.4	135.4	207.4	282.2	311.2	311.2	311.2	311.2	311.2	332.2	332.2
% toward Board goal	9%	9%	9%	9%	21%	21%	41%	62%	85%	94%	94%	94%	94%	94%	100%	100%

*Updated 10/17/2014

NPPD's Current Generation Mix and Delivery



Renewable Energy Credits

- Green tags, or Tradable Renewable Certificates, utilize environmentally friendly green power to generate electricity. The credits can be traded and sold on the open market, providing an incentive to companies which produce “green” power. Citizens and companies trying to support green power and reduce their carbon footprint can take advantage of them, regardless of the source of their power.
- Sources of green power include solar, wind, geothermal, biomass, biodiesel, some fuel cells, and low impact hydropower. One Renewable Energy Credit for a set amount of energy produced; 1,000 kilowatt hours or 1 megawatt hour.

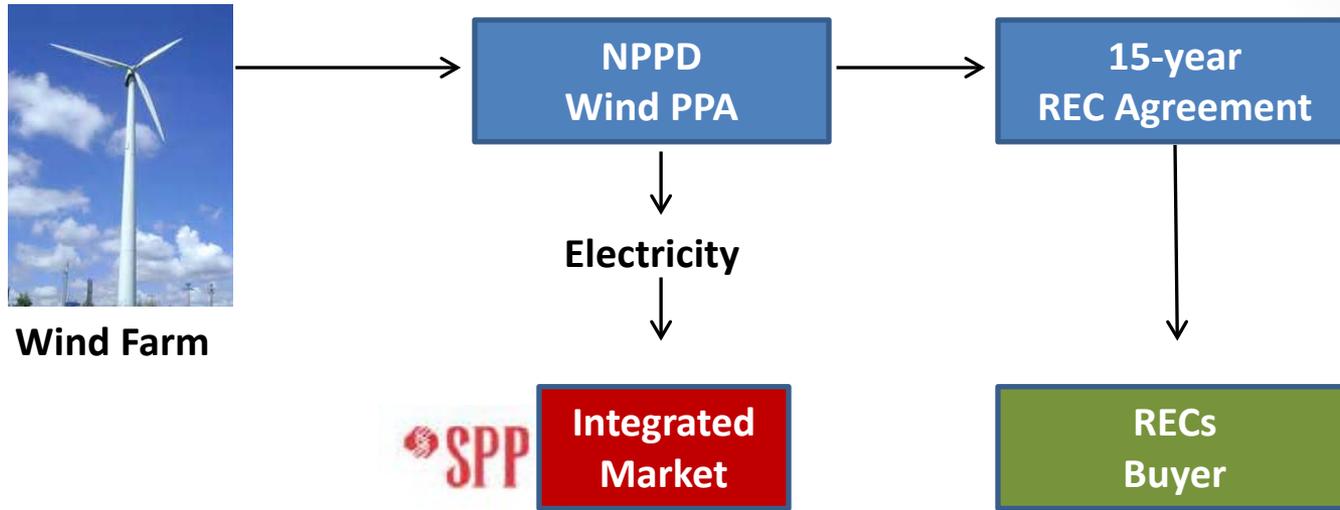
Benefits of a REC Agreement

1. Long-term – 15 years.
2. Financial benefits if SPP Market prices exceed 2% per year.
3. “Additionality” - A wind farm was built because of this purchase of long-term RECs.
4. Simple for buyer; NPPD responsible for all SPP marketing and PPA requirements.
5. No transmission required for buyer.

History

1. Becton Dickinson has a corporate goal of 25% renewable energy by 2015.
2. Existing Wholesale Power Contract provisions, defined retail service areas, limited transmission availability, potential private use of transmission, and BD's desire not to be involved in electric utility / SPP operations, all led to the development of the REC financial agreement.
3. *“Nebraska law made it necessary to establish a new way of purchasing the renewable attributes of the energy, without specifically signing a long-term contract for the electricity. Thankfully, we were able to do this.” explains Greg Butler.*

PPA and REC Sale to Customer



**Price is for example only*

Financial View

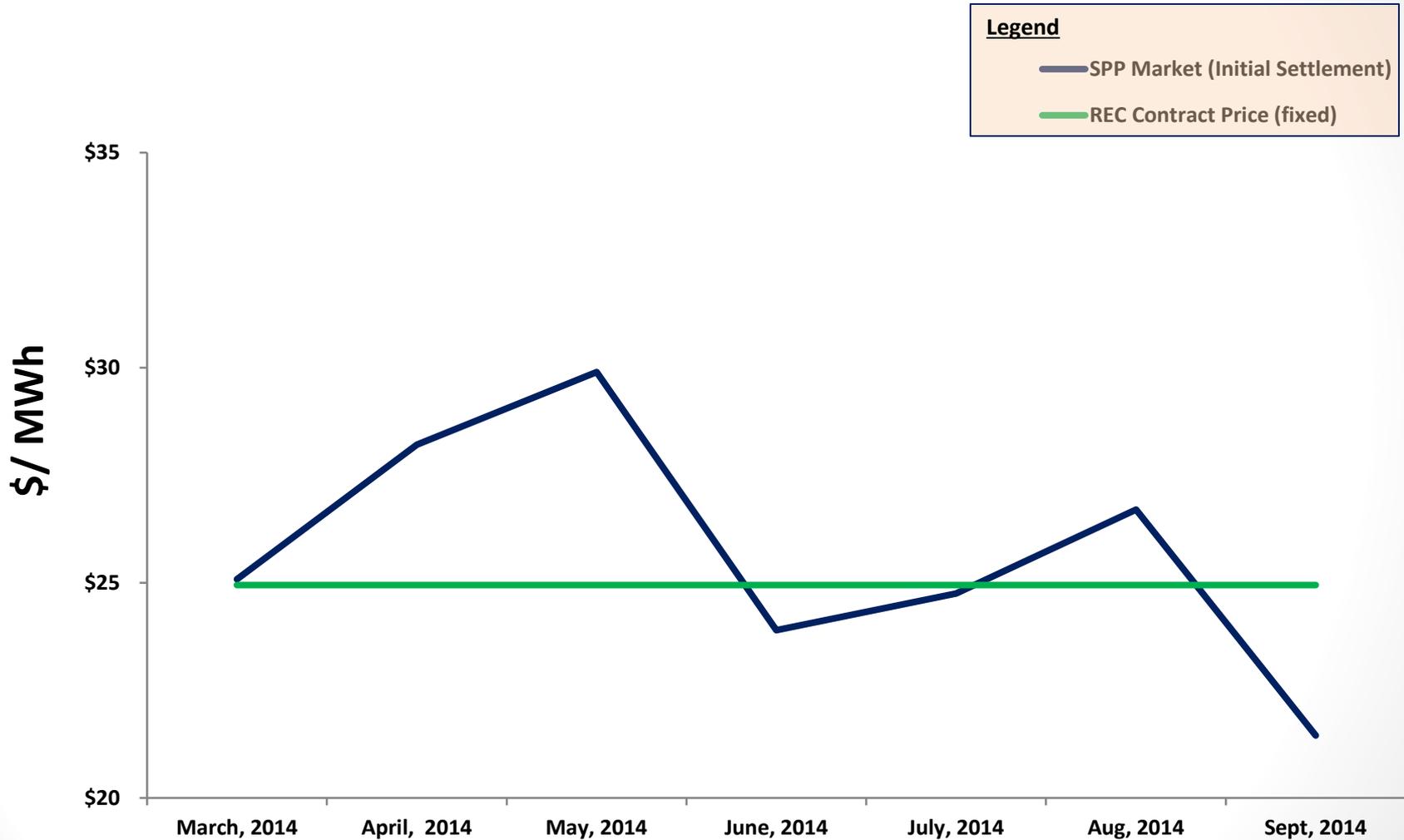
Example 1st & Last month

		<u>Year 1 Month 1</u>	<u>Year 15 Month 12</u>
	REC Purchase Price	\$25.00	\$32.99
less	Monthly SPP Integrated Clearing Price	\$23.89*	\$36.37*
less	PPA Curtailments, if any	\$ 0.00	\$ 0.00
	Net Cost of REC	\$1.11 / REC	(\$3.38 / REC)

Industrial / Commercial / Wholesale Customer REC Sale

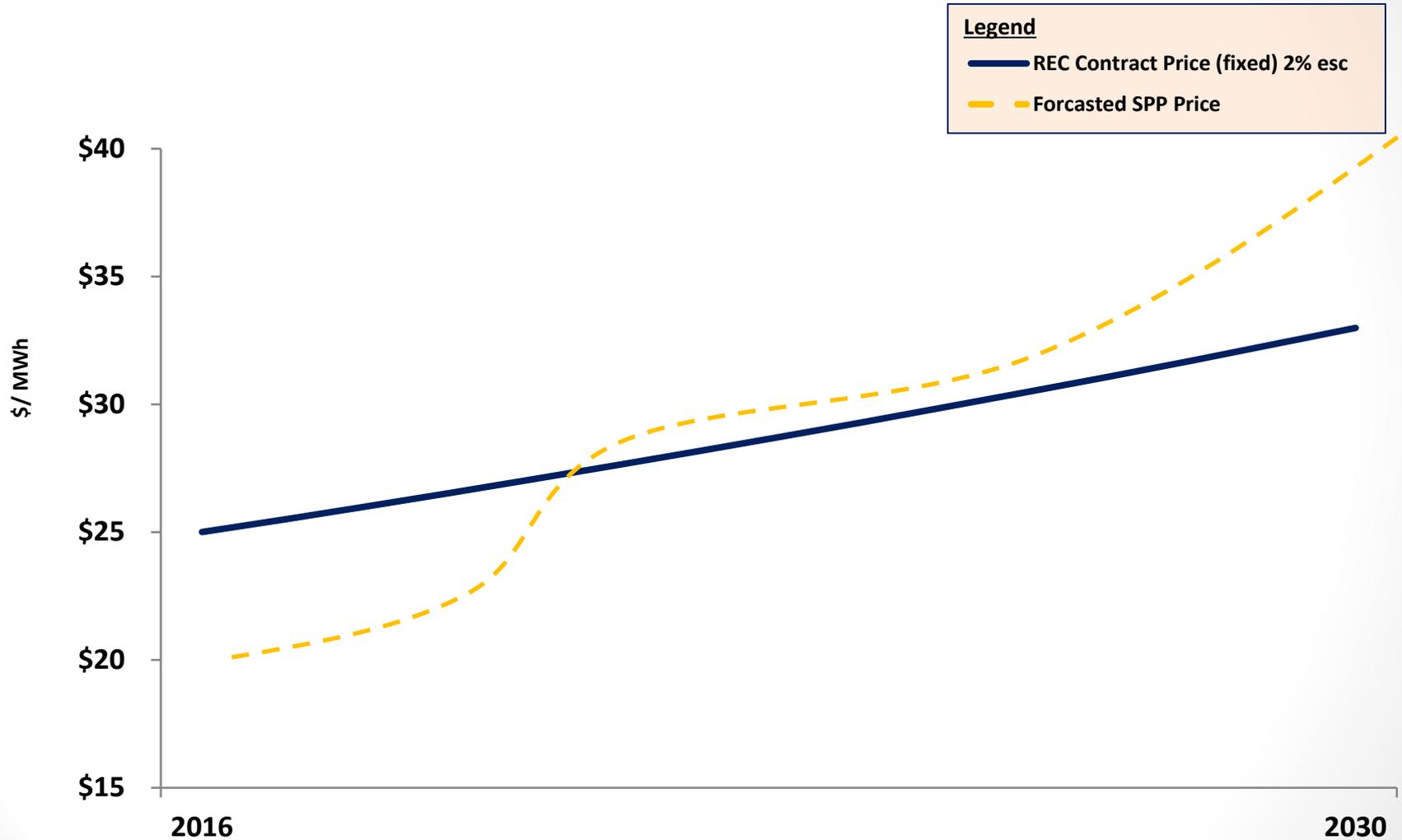
7-Month Historic View

Actual SPP Market (Initial Settlement) v. REC Contract Price (fixed)



Industrial / Commercial / Wholesale Customer REC Sale

15-Year CONCEPT ONLY



Questions?

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