

Renewable Energy as an Economic Development Tool

11th Annual Nebraska Wind
& Solar Conference



Nebraska Public Power District

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≡ Tools In Our EcoDevo Toolbox

- Renewable Energy Credits
 - Existing & New Customers
- Community Solar
 - Small to medium sized customers
- Market Based Rate
 - Large users

Renewable Energy Credits

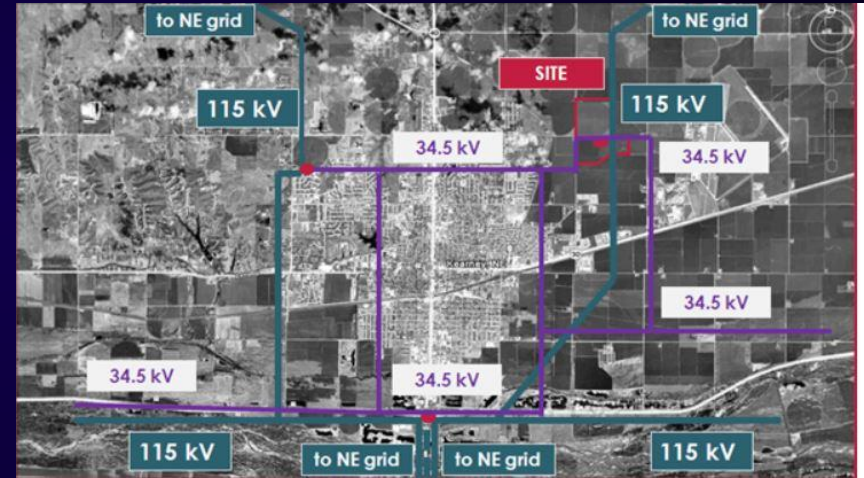
- Available to Commercial & Industrial customers in Nebraska
 - Customer required to make a significant commitment to buying all REC's
 - Over a 15, 20, or 25 year period
 - From a specific newly built wind farm in Nebraska
 - Purchase price be:
 - The difference between the Locational Market Price (LMP) and an indexed (fixed) REC price
 - Includes incremental transmission costs of tying new wind farm to grid

Renewable Energy Credits

- NPPD would sign the PPA with the wind developer
- “Additionality” (A new wind farm was built because of the C&I REC purchase)
- NPPD responsible for all SPP marketing and PPA requirements

Community Solar

- Kearney – Currently the largest solar installation in Nebraska at 5.8 MW.
- UNK, Central Community College, Xpanxion all purchased shares
- Approximately 2000 shares available for economic development prospects



Market-Based Rate

- Alternate rate structure
 - Demand charges set to recover all generation fixed costs
 - Typically a utility's rates include some fixed cost recovery in the energy charges
 - Energy charges are a pass-through of SPP hourly market prices charged to the utility
- When paired with a customer's off-site renewable generator, this can provide customer an energy price hedge
- Customer can utilize this structure with any level of renewable generation they wish
- The utility provides all services to the customer and assumes no risk for the customer's renewable generation project

≡ NPPD Market-Based Rate Schedules

- Wholesale
 - Large Customer Market-Based Rate Schedule
 - Available to wholesale customers taking service under the 2016 Wholesale Power Contract (and the NPPD Retail Division) for use with their qualifying end-use customers
- Retail
 - Market-Based Rate Rider Rate Schedule (MKT-Rider)
 - Passes through the provisions of the wholesale rate
 - Includes costs for subtransmission and distribution service (if applicable)

≡ Preliminary Market-Based Rate Structure

1. Customer Charge: \$1,300/mo.
2. Production Demand Charge: \$17.43/kW/mo.
 - Established at a level to minimize chance of shifting fixed costs to other customers
 - Charge applies to customer's highest hourly peak demand each month, subject to an 85% summer demand ratchet and a minimum demand of 20,000 kW
3. Energy Charges
 - Direct pass-through of charges from SPP for the customer's load
4. Transmission and Ancillary Service Charges
 - Billing provisions and unbundled rates the same as for all other General Firm Power Service (GFPS) customer load
5. Subtransmission and Distribution Charges (if applicable to an NPPD Retail customer)
 - Service Agreement required, with minimum term of one year

Market-Based Rate – Simplified Example

	Hour A	Hour B	Hour C
Customer's PPA Price (Expense)	\$25	\$25	\$25
SPP Market Price for load (expense)	\$20	\$30	\$50
SPP Market Price for generation (revenue)	(20)	(30)	(\$50)
Customer's net energy cost (=PPA price)*	\$25	\$25	\$25

***Assumes SPP market prices for load and generation are the same; Also assumes that the generation output and customer's load are equal in the hour.**

Summary of Benefits

- Qualifying end-use customer's perspective
 - Helps customer meet their renewable energy goals
 - New rate structure can provide a price hedge for their renewable energy purchases
- NPPD and other customers' perspective
 - Provides another tool that can be used for recruiting new load, and the accompanying economic development benefits
 - Fixed cost recovery consistent with standard rates

Questions?
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