

The Economic Benefits of Renewable Energy

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Josh Moenning, *Mayor of Norfolk*

Cale Giese, *Mayor of Wayne*

Moderator: John Hansen, *Nebraska Wind & Solar Conference*



Nebraska
Wind & Solar
CONFERENCE & EXHIBITION

Utility Scale Wind Project- School, Community and Economic Benefit

- Rattlesnake Wind Project – Allen NE
- 320 MW Project- Constructed in 2018

About the Project

- 318.5 MW Project
- Built in 2018
- 101 - 3.15 MW Turbines.
- 57 Turbines located in the Allen NE School District

Benefits

- Revenue to Landowners – through leases: \$2.5 million/ year
- Property taxes paid: \$1.7 million per year.
- Jobs: 15 long term high wage positions
- Boost to spending at local businesses both during construction and during long term operations.
- Project Owner contributes resources to the community

Property Taxes- Paid by the Project Total of \$1.7 Million per Year.

- Reference: prior to construction – total of all property taxes collected in Dixon County was \$16 million/year. (over 10% increase)
- Nameplate Capacity Tax: (in lieu of personal property taxes)
 - \$3,518 per MW
 - $101 \text{ Turbines} \times 3.15 \text{ MW/Turbine} \times \$3,518 = \$1,119,252$ per year
 - Above ground property
- Real Estate Taxes
 - Paid on Foundations – approximately \$600,000 per year total
 - Below ground property.
 - Foundation Valuation about \$420,000 each and has remained the same for 5 years.

Allen School District: Substantially Lower General Fund Levy- Host to 57 of 101 Turbines

ALLEN SCHOOL DISTRICT	2023	2022	2021	2020	2019	2018	2017
VALUATION	\$ 387,496,096	\$ 331,630,657	\$ 319,385,503	\$ 314,223,603	\$ 338,866,772	\$ 300,873,979	\$ 318,358,652
TAX REQUEST GENERAL	\$ 2,626,263	\$ 2,667,374	\$ 2,549,974	\$ 2,474,747	\$ 2,828,584	\$ 2,929,103	\$ 2,865,184
TAX RATE	0.6472	0.7646	0.7593	0.7493	0.8350	0.9203	0.85

Allen School District Receives about \$600,000 from Wind Farm Taxes annually. Total School Operating Budget \$3.5 million

Nebraska Taxes Online

Tax Statement

Served by WEBSERVER-2

Search

Dixon County

0 Step 4 of 8

Perm ID
0001215700

Name
CARD FARM,LLC
86647 584 AVE
ALLEN NE 68710

Legal
TL 2 SEC. 20-28-5 76.53 ACRES
76.530 ACRES



[Levy Graph](#)
[Value Graph](#)
[Tax Graph](#)

Year	Statement	Value	Tax	Exemption	Net Tax	Balance Due
2022	002606	\$ 316,895	\$ 3,926.24	- \$ 405.28	\$ 3,520.96	\$ 0.00
2021	002605	\$ 302,360	\$ 3,772.52	- \$ 390.20	\$ 3,382.32	\$ 0.00
2020	002591	\$ 294,175	\$ 3,732.88	- \$ 360.78	\$ 3,372.10	\$ 0.00
2019	002590	\$ 326,065	\$ 4,680.06	- \$ 407.52	\$ 4,272.54	\$ 0.00
2018	002575	\$ 326,065	\$ 5,017.12	- \$ 338.50	\$ 4,678.62	\$ 0.00
2017	002567	\$ 331,810	\$ 4,666.26	- \$ 350.26	\$ 4,316.00	\$ 0.00
2016	002561	\$ 352,650	\$ 4,788.32	- \$ 315.88	\$ 4,472.44	\$ 0.00
2015	002553	\$ 344,770	\$ 4,681.30	- \$ 324.40	\$ 4,356.90	\$ 0.00
2014	002548	\$ 270,990	\$ 4,003.98	- \$ 193.88	\$ 3,810.10	\$ 0.00
2013	002544	\$ 194,760	\$ 3,222.64	- \$ 128.48	\$ 3,094.16	\$ 0.00
2012	002554	\$ 165,065	\$ 2,895.14	- \$ 118.02	\$ 2,777.12	\$ 0.00
2011	002559	\$ 151,155	\$ 2,697.32	- \$ 113.84	\$ 2,583.48	\$ 0.00
2010	002836	\$ 131,720	\$ 2,477.76	- \$ 103.94	\$ 2,373.82	\$ 0.00
2009	002822	\$ 114,510	\$ 2,140.99	- \$ 94.15	\$ 2,046.84	\$ 0.00
2008	002816	\$ 109,415	\$ 1,957.82	- \$ 94.24	\$ 1,863.58	\$ 0.00
2007	002815	\$ 88,435	\$ 1,686.40	- \$ 73.60	\$ 1,612.80	\$ 0.00
2006	002800	\$ 78,785	\$ 1,529.80	\$ 0.00	\$ 1,529.80	\$ 0.00
2005	002785	\$ 67,520	\$ 1,371.40	\$ 0.00	\$ 1,371.40	\$ 0.00
2004	002772	\$ 62,780	\$ 1,240.38	\$ 0.00	\$ 1,240.38	\$ 0.00
2003	002750	\$ 59,885	\$ 1,171.98	\$ 0.00	\$ 1,171.98	\$ 0.00
2002	002747	\$ 62,800	\$ 1,069.90	\$ 0.00	\$ 1,069.90	\$ 0.00
2001	002735	\$ 60,540	\$ 1,049.14	\$ 0.00	\$ 1,049.14	\$ 0.00
2000	002725	\$ 57,370	\$ 1,033.42	- \$ 17.52	\$ 1,015.90	\$ 0.00
1999	002707	\$ 38,570	\$ 717.38	\$ 0.00	\$ 717.38	\$ 0.00
1998	002682	\$ 38,570	\$ 675.82	\$ 0.00	\$ 675.82	\$ 0.00
1997	002681	\$ 37,965	\$ 733.78	\$ 0.00	\$ 733.78	\$ 0.00

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Other Benefits to Area Businesses

- C – Store –
 - During construction – Extended Hours resulted in 50% Increase in sales
 - Long Term: sales to Enel and to their vendors that stop for fuel, food etc.
- Hardware Store
 - During Construction: 50% increase in sales
 - Long Term: expanded sales through account with Wind Project Owner
- Restaurant:
 - During construction: several catered safety meetings with 100 meals. Significant increase in sales.
- Genesis Enterprises
 - Specialty tents and tarps during construction and long-term sales for other projects nationally. Sales of \$62,000 during construction and subsequent sales.

Community Benefits

- Senior Center: direct financial assistance for capital improvements and operations.
- School: financial assistance for solar system – electric vehicle project.
- Housing: match funding that enabled a substantial Rural Workforce Housing Grant.

By:

Kevin Connot

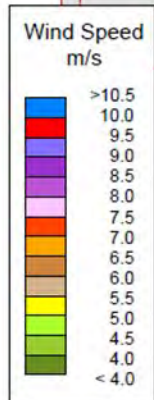
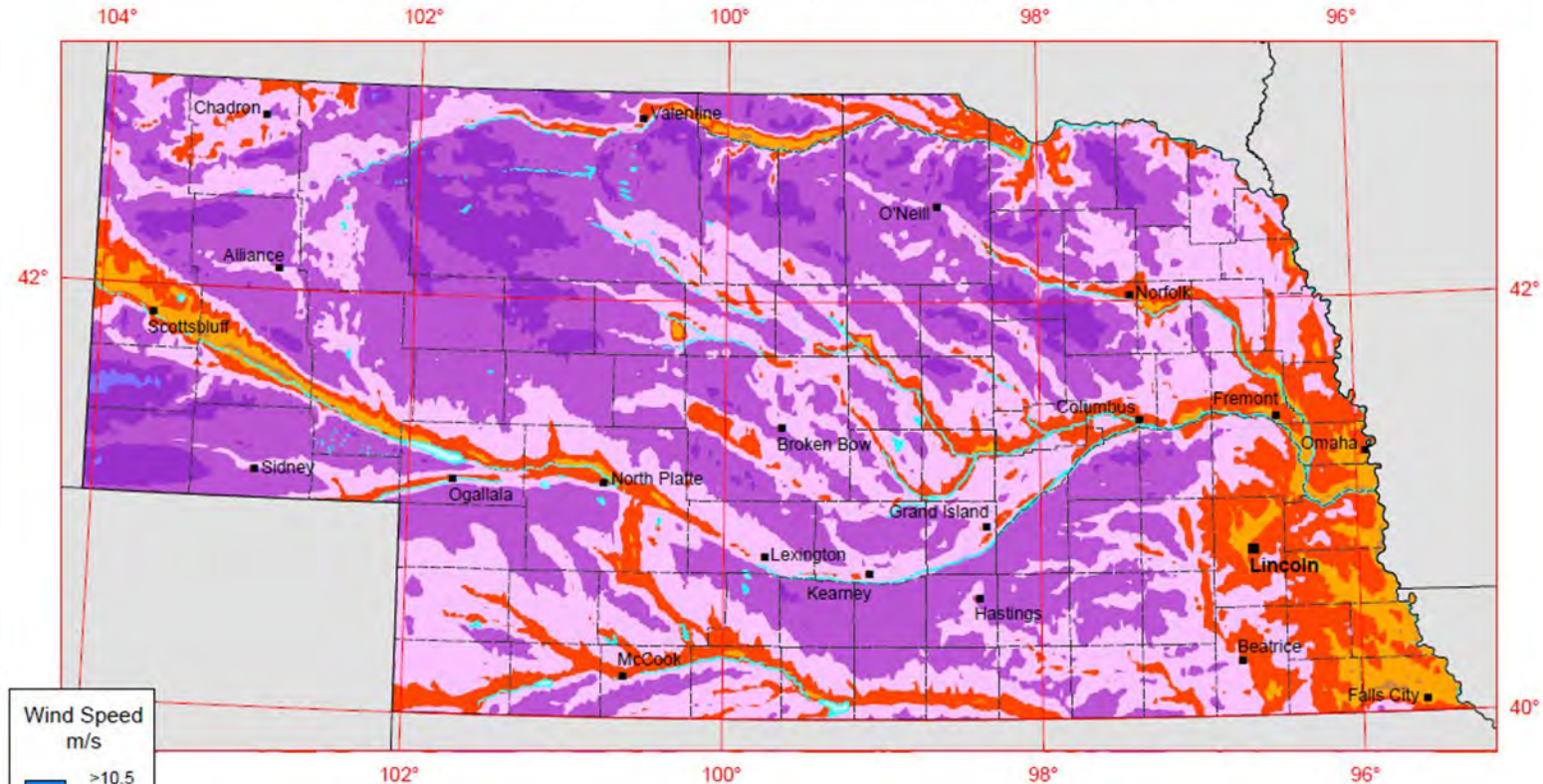
Area Resident, Former School Board Member and Local Business
Owner.



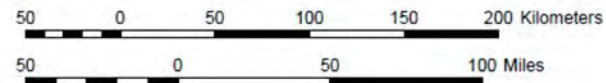
Maximizing Nebraska's Natural Resources

Josh Moenning
Mayor, City of Norfolk
Executive Director, New Power Nebraska

Nebraska - Annual Average Wind Speed at 80 m



Source: Wind resource estimates developed by AWS Truepower, LLC for windNavigator®. Web: <http://www.windnavigator.com> | <http://www.awstruepower.com>. Spatial resolution of wind resource data: 2.5 km. Projection: UTM Zone 14 WGS84.



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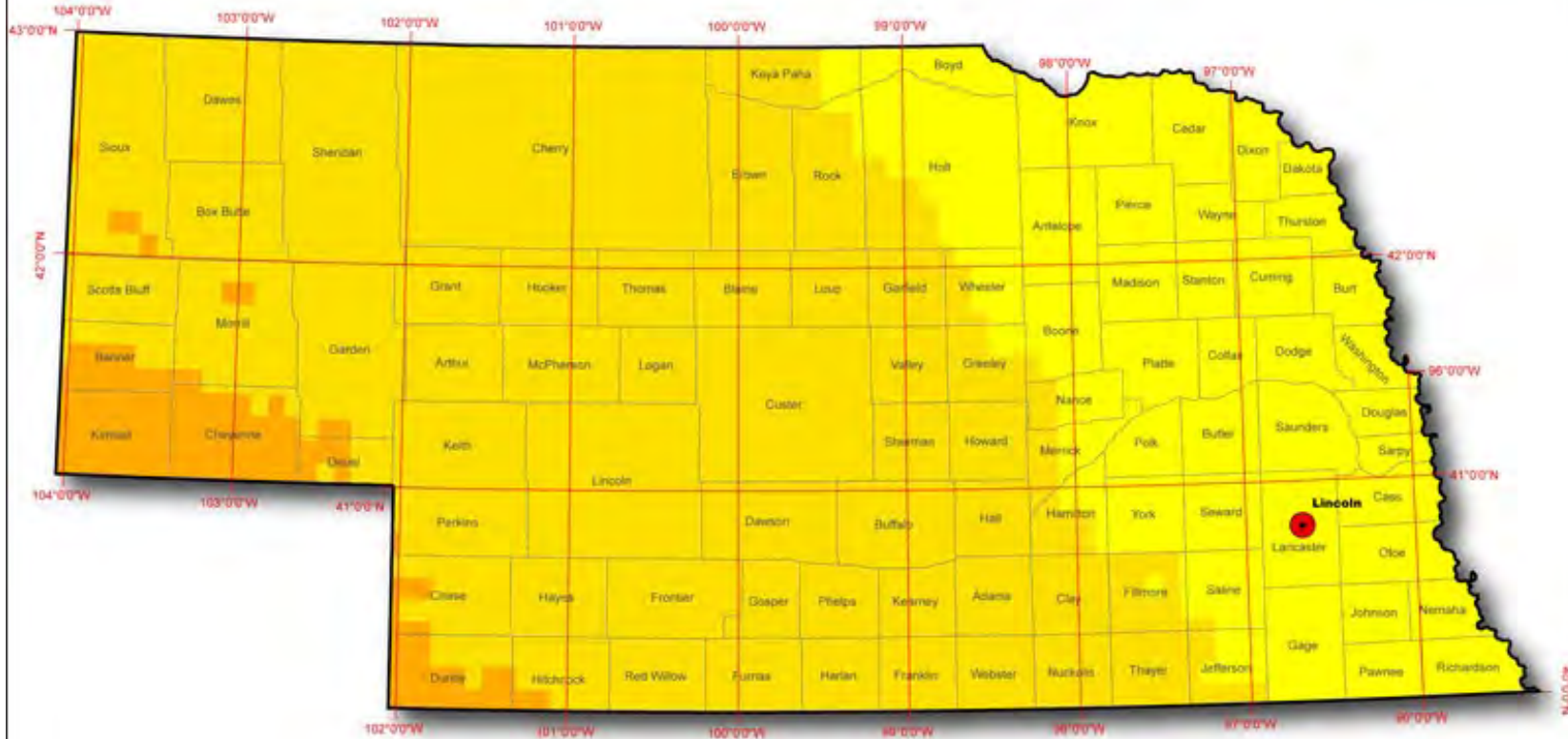


30-SEP-2010 1.1.1

WIND:
Ranked 3rd
in the
nation for
potential

Global Solar Radiation at Latitude Tilt - Annual

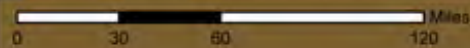
Nebraska



SOLAR:
Ranked 13th
in the nation
for potential

Model estimates of monthly average daily total radiation, averaged from hourly estimates of direct normal irradiance over 8 years (1998-2005). The model inputs are hourly visible irradiance from the GOES geostationary satellites, and monthly average aerosol optical depth, precipitable water vapor, and ozone sampled at a 10km resolution.

kWh/m²/Day

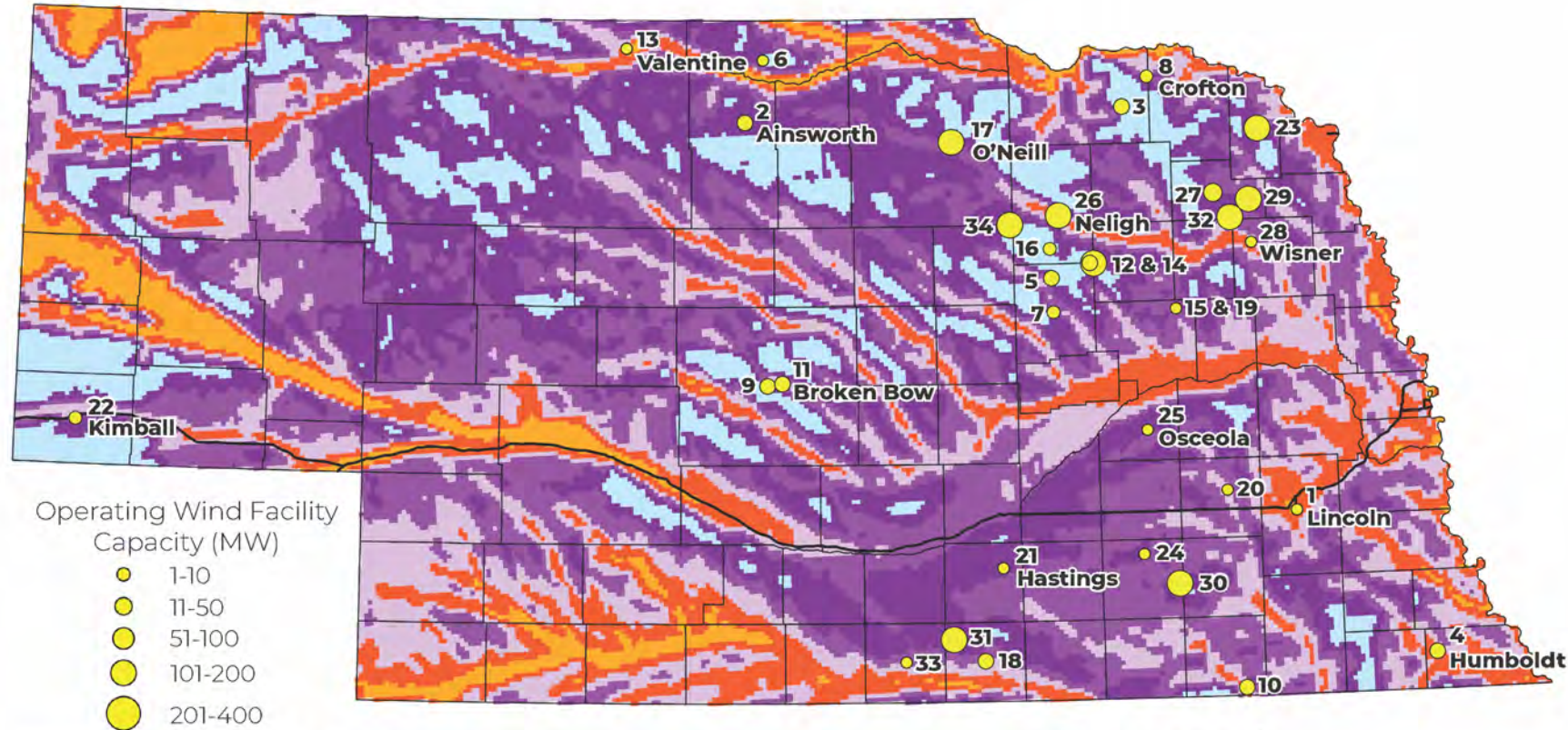


This map was produced by the National Renewable Energy Laboratory for the U.S. Department of Energy, September 25, 2007



Wind Development in Nebraska

Operating Facilities



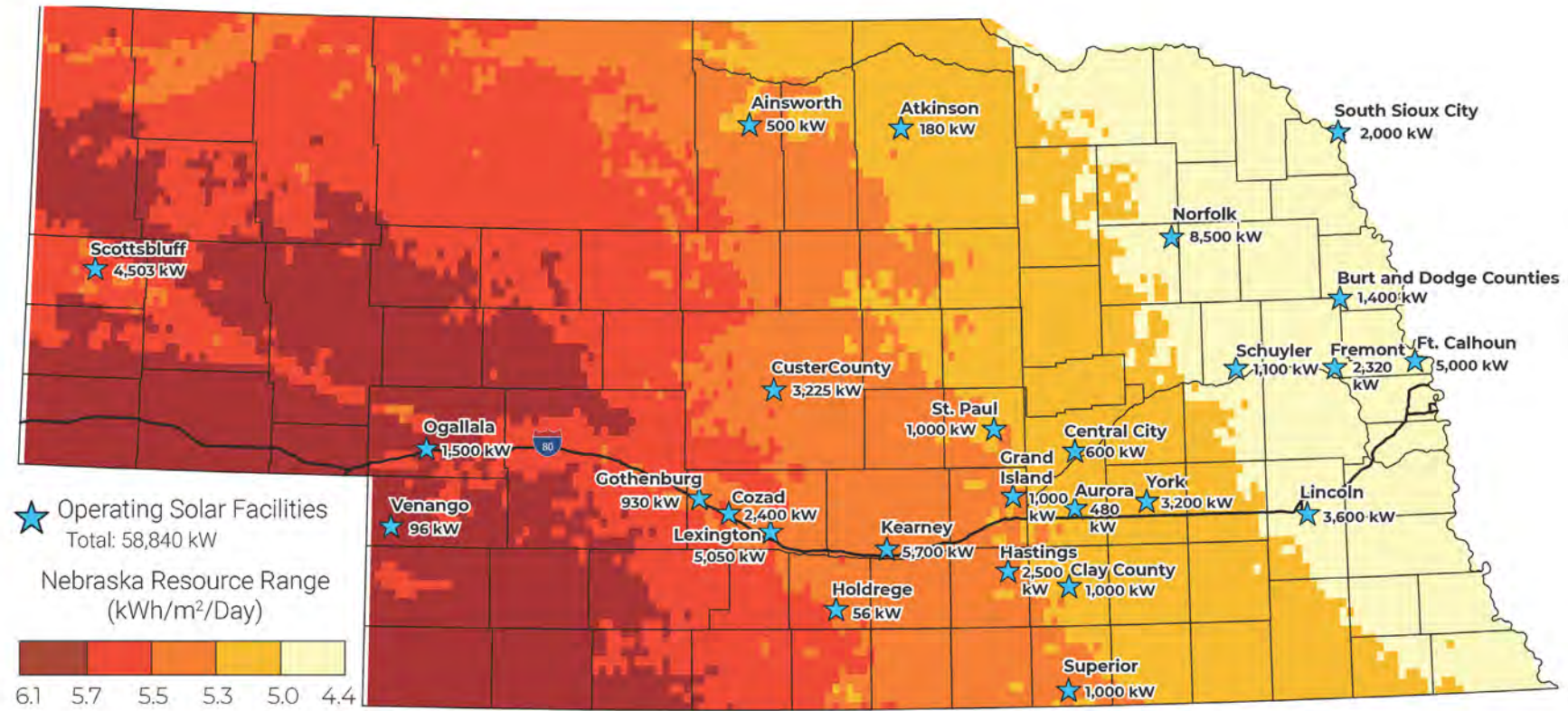
Total operational MW: 3,476.9

Numbers on the map correspond with the table on the back.
Wind facilities as of September 2023.
Map shows 80-meter wind overlay.

For questions or comments on this map, contact neo.energy@nebraska.gov.
For more information, visit: <https://neo.ne.gov/programs/stats/inf/89.htm>

Sources: Base map provided by National Renewable Energy Laboratory for U.S. Department of Energy (2017).
Facility locations provided by the Nebraska Department of Environment and Energy (2023).

Nebraska Community Solar Power Generation



Solar facilities as of September 2023.
 All solar facilities are in AC power.

For questions or comments on this map, contact neo.energy@nebraska.gov.
 For more information, visit: <https://neo.ne.gov/programs/stats/inf/198.htm>



Sources: Base map provided by National Renewable Energy Laboratory for U.S. Department of Energy (2017).
 Facility locations provided by the Nebraska Department of Environment and Energy (2023).



Norfolk Community Solar Project

City of Norfolk, NE

City of Norfolk and NPPD team up for solar project



- NE's **largest** operational solar project – 8.5 MW
- **Partnered** with NPPD
- Tied to a first-of-its-kind **battery energy storage system (BESS)**
- Project went online Summer 2022

Cost savings



- Solar shares available for purchase to residents, businesses
- Project estimated savings: **15% - 20%**
- Business case/cost-competitiveness/economic development

Clean Energy Generation Strengthens/Diversifies Local Economy

- New jobs: Northeast Community College Tech Training Program
- New farm income: Lease Income = Part-Time Jobs for Farmers
- New tax revenues: School Districts, County Governments Benefit

Economic Recruitment Potential

- Facebook Data Center example (Rural/Urban Connections)



Why Renewables, Why Now?

Affordability

- Cost of Solar Energy has **Decreased 86% since 2009**
- Cost of Wind Energy had **Decreased 69% since 2009**
- Norfolk Project helps lower participants' energy bills
 - Cost Savings Made Project Politically Viable, Justifiable

Abundance of Resource

- **13th in Solar, 3rd in Wind**
- **Provides NE Unique Opportunity to be an Energy Producer**

Norfolk's Focus on a Greener Quality of Life

- Tree Planting Initiatives
- Corridor Beautification
- Braasch Avenue
- Benjamin Avenue
- Downtown Revitalization
- Parks & Rec Enhancements
- North Fork River Restoration

Tree Board



Current Tree Board Members

- Lonn Atwood
- Trentee Bush
- Linda Hammond
- Erin Kucera
- Teresa Roche
- Todd Stewart
- Kathy Wiegert

Arbor Day in Norfolk, Engaging Youth



Norfolk Tree Planting Initiatives: Partnerships, Grants, Re-Tree Programs, Reimbursement Programs for Street Trees, Citizen Recognition for Landscaping



TREE BUD PROGRAM

City of Norfolk utility customers opt to give an additional \$2 on their bill to purchase, plant, and care for trees.

\$565 IN 2020 | \$744 IN 2021



GREENLEAF AWARD

Award for exceptional landscaping and the incorporation of trees.

CITY OF NORFOLK TREE ADVISORY BOARD



250 FREE TREES

in 2020 to prepare for Emerald Ash Borer recovery

COLLABORATIVE PROGRAM OF THE PETER KIEWIT FOUNDATION AND THE ARBOR DAY FOUNDATION



2020 IN 2020

Successful tree planting initiative.

PARTNERSHIP WITH THE LOWER ELKHORN NATURAL RESOURCES DISTRICT, ARBOR DAY FOUNDATION, NEBRASKA FORESTRY SERVICE, AND AREA SCHOOLS AND BUSINESSES.



Buy local to plant local



WE ARE DONATING
\$1 FOR EVERY
DIVOTS BEER SOLD
DURING THE
MONTH OF
JULY!!!

ALL THROUGH JULY

**2nd Annual
NORFOLK TREE BUD PROGRAM
MONTH**

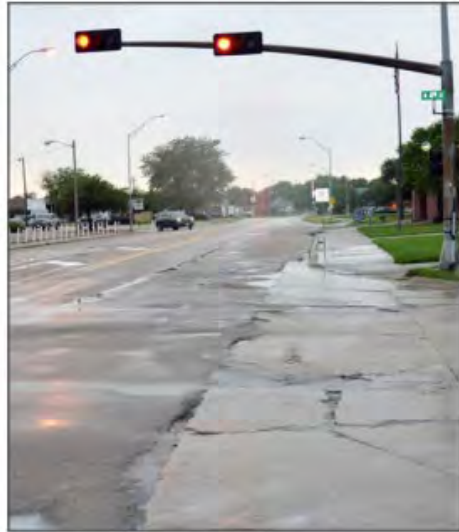


Downtown Norfolk Tree Canopy



Braasch Avenue

Reconstruction



The existing conditions of Braasch Ave. make the street difficult for both drivers and pedestrians to use.



Benjamin Avenue Landscape Plan



Hwy 81 & 275 Corridor Beautification Project



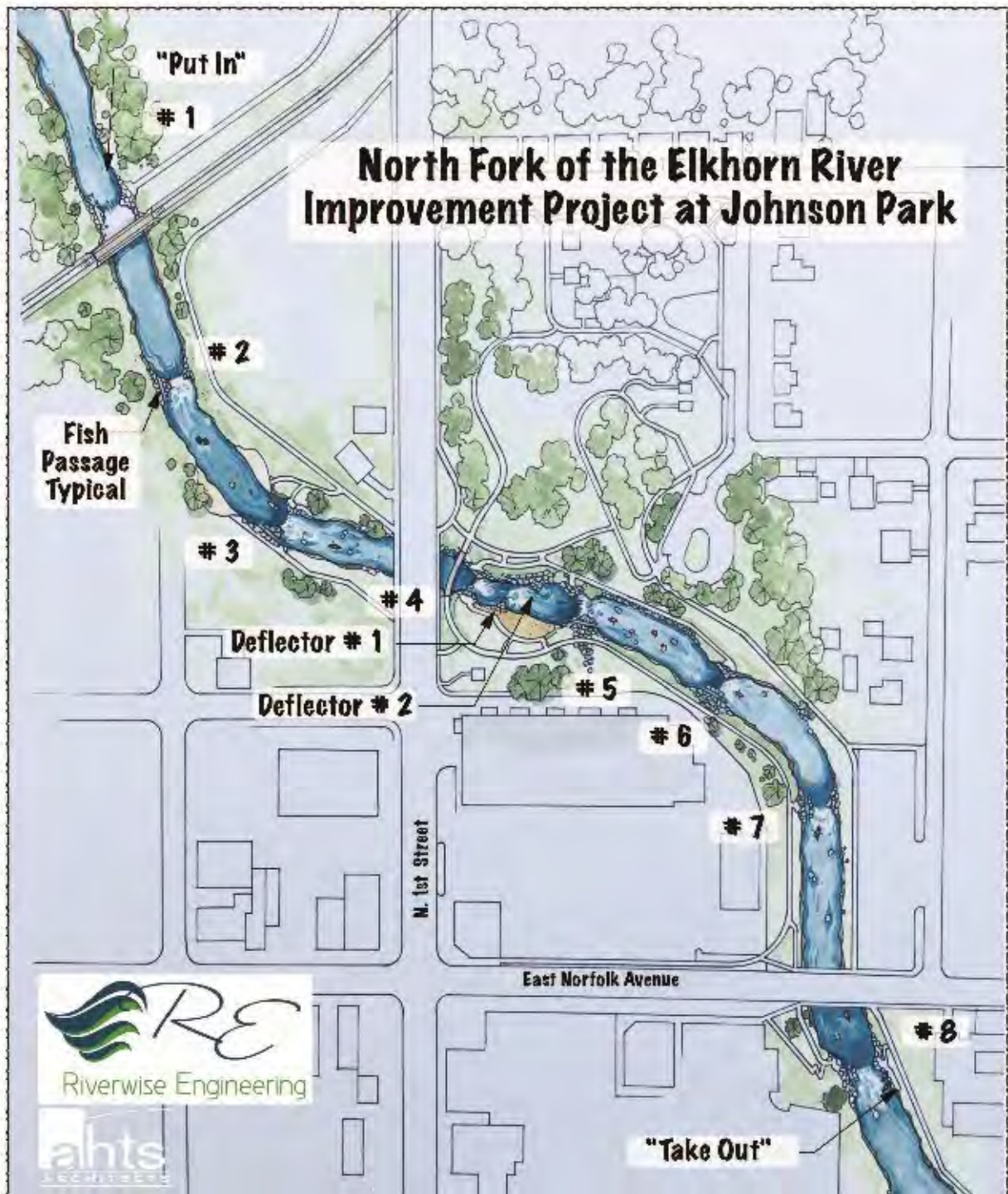
North Fork River Restoration Project

Rediscovering Our Natural Resources

Reconnecting people to the river
Reconnecting the river to the park
Reconnecting the city to its namesake



- Removing spillway under First Street bridge
- Replacing it with eight drop structures
- Creating a whitewater park in downtown Norfolk



Planning for Natural Resource Recreation



North Fork River Restoration





Why does it matter?

1 | **Natural Amenity** –
based community
development, centered on
revitalizing natural
resources

3 | **High stakes place-
making, building cultural
identity on
environmental assets**

2 | **Prompts private
redevelopment** which
reactivates underutilized space

4 | **Retention of youth** and
attraction of newcomers

Johnson Park

Historical Look



Johnson Park Redevelopment Project

Potential components

- Amphitheater
- Walking trails
- Improved parking
- Beautification & landscaping



Johnson Park Future



River Point Square

