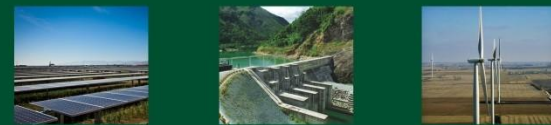




CUSTOMER SERVICE



EMPLOYEE COMMITMENT



ENVIRONMENTAL RESPECT



OPERATIONAL EXCELLENCE



**BERKSHIRE
FINANCIAL STRENGTH
OWNERSHIP**

Renewable Energy Project Impacts on Rural Economies

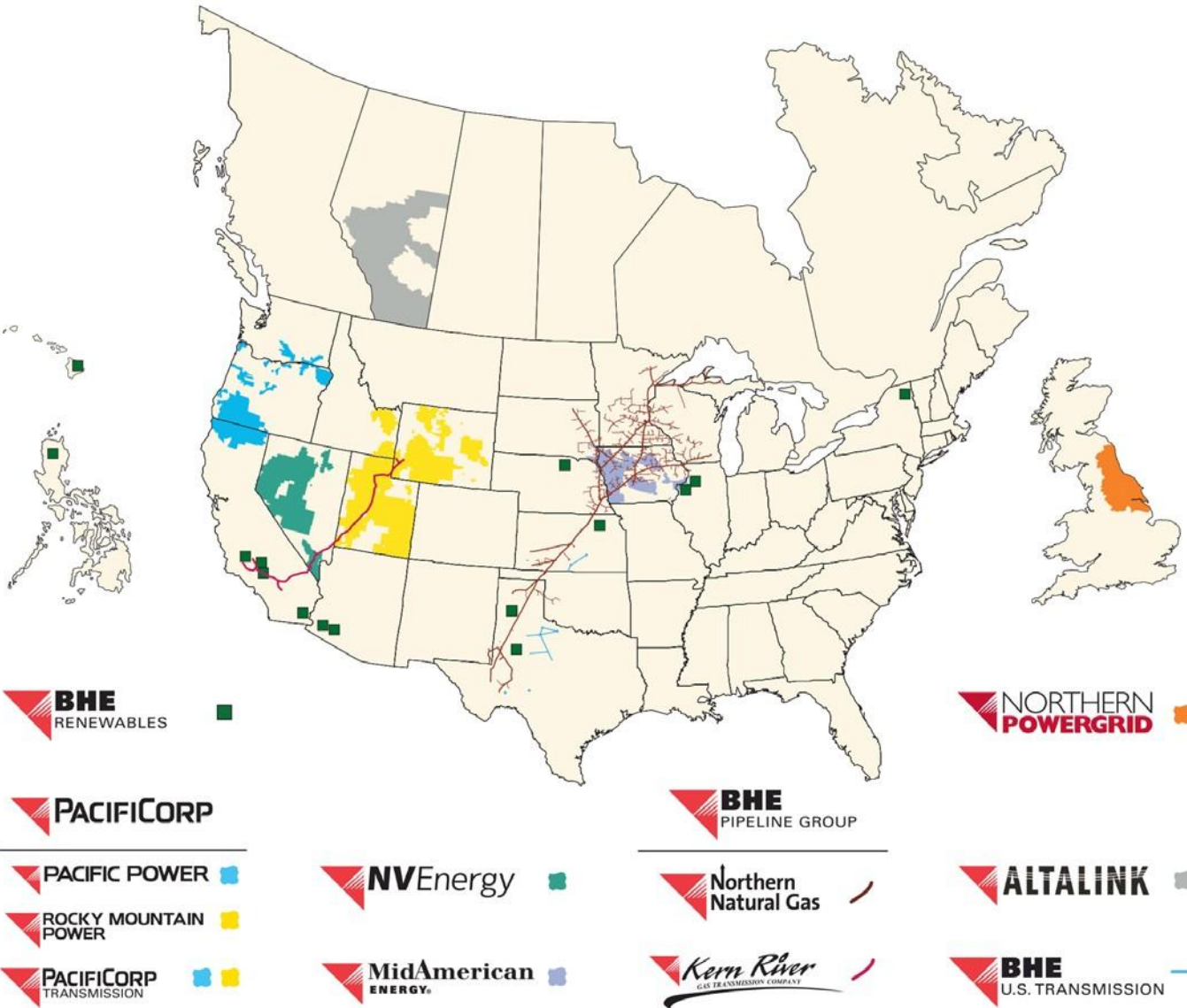


Agenda



- Review of BHE Renewables and BHE Wind
- Importance of accurately estimating local impacts
- Methods to estimate economic impacts
- Grande Prairie 400 megawatt project impacts

Berkshire Hathaway Energy



- 11.5 million customers worldwide
- Top service provider in the industry
- 21,000 employees worldwide
- Top percentile in safety; 0.62 incident rate
- \$85.0 billion in assets
- \$18.3 billion in revenue
- 32,600 miles of transmission lines
- 16,400 miles of natural gas pipeline
- More than 33,000 MW owned/contracted generation capacity; 34% is renewable or noncarbon

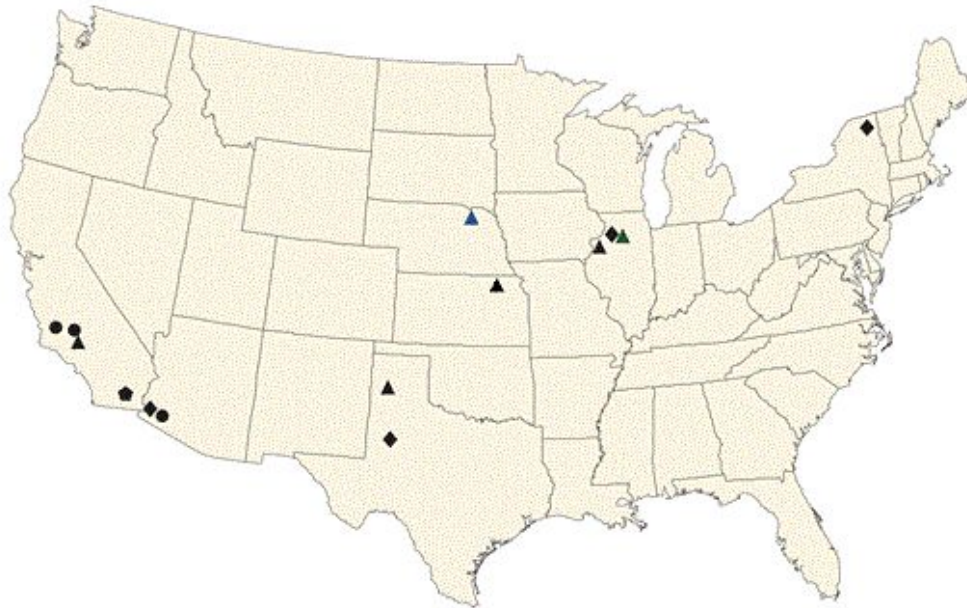
BHE Renewables / BHE Wind



Business Overview

- 3,942 MW – Total contract capacity, owned and under construction

Solar	1,271 megawatts
Wind	1,153 megawatts
Geothermal	327 megawatts
Hydro	138 megawatts
Natural Gas	1,053 megawatts



- ▲ Wind
- ▲ Wind Development
- ▲ Wind Under Construction
- Geothermal
- Solar
- Hydro
- ◆ Natural Gas

Importance of Estimating Local Economic Impacts



- As developers and owner/operators we continue to see local opposition to renewables projects
 - Projects may be opposed for many reasons including perceived nuisance, alleged health effects, environmental issues, subsidy policies, etc.
- While renewables developers have great arguments against the above opposition points, it is key that the industry accurately projects and effectively communicates the local impacts to rural economies
- Rural renewable energy development has a great story to tell and it is key to promote ourselves as value added agriculture

Estimating Economic Impact



- The National Renewable Energy Laboratory (NREL) has created the Jobs and Economic Development Impact (JEDI) Model for estimating the economic benefits of wind based power plants in the United States
- <http://www.nrel.gov/analysis/jedi/>
- The JEDI model is a user-friendly tool, but the user needs to dig into the detail of the economic impacts calculations and not just look at the general overview

JEDI Model Inputs



Project Descriptive Data

Project Location	TEXAS
Year of Construction	2015
Total Project Size - Nameplate Capacity (MW)	100
Number of Projects (included in Total Project Size)	1
Turbine Size (kW)	2,300
Number of Turbines	44
Installed Project Cost (\$/kW)	\$1,690
Operations and Maintenance Cost (\$/kW)	\$24.00
Money Value (Dollar Year)	2015

Utilize *Project Cost Data* default values in analysis?

Choose "Y" to accept default values below or "N" to over-ride default values and utilize new user defined values as entered below. See *FAQ for related topics*.

If desired, default values (in cells below - based on *Project Descriptive Data* entered above) may be restored by pressing the 'Restore Default Values' button. *Note: it is not necessary to restore defaults to incorporate default Project Cost Data in system analysis - simply choose "Y" in cell B24 above.*

Modify Project Cost Data (change data below)

Go To Summary Impacts

Restore Default Values

JEDI Model Inputs



Project Cost Data	Cost	Cost Per kW	Percent of Total Cost	Local Share
Construction Costs				
Equipment Costs				
Turbines (excluding blades and towers)	\$74,998,998	\$750	41.6%	0%
Blades	\$17,558,294	\$176	9.7%	0%
Towers	\$19,439,540	\$194	10.8%	0%
Transportation	\$13,419,553	\$134	7.5%	0%
Equipment Total	\$125,416,384	\$1,254	69.6%	
Balance of Plant				
Materials				
Construction (concrete, rebar, equip, roads and site prep)	\$18,122,668	\$181	10.1%	90%
Transformer	\$2,050,049	\$21	1.1%	0%
Electrical (drop cable, wire,)	\$2,160,891	\$22	1.2%	100%
HV line extension	\$3,947,226	\$39	2.2%	70%
Materials Subtotal	\$26,280,834	\$263	14.6%	
Labor				
Foundation	\$1,357,331	\$14	0.8%	95%
Erection	\$1,537,369	\$15	0.9%	75%
Electrical	\$2,240,410	\$22	1.2%	70%
Management/Supervision	\$1,162,553	\$12	0.6%	0%
Misc.	\$6,422,000	\$64	3.6%	50%
Labor Subtotal	\$12,719,663	\$127	7.1%	
Development/Other Costs				
HV Sub/Interconnection				
Materials	\$1,245,502	\$12	0.7%	90%
Labor	\$381,522	\$4	0.2%	10%
Engineering	\$1,694,816	\$17	0.9%	0%
Legal Services	\$923,675	\$9	0.5%	100%
Land Easements	\$0	\$0	0.0%	100%
Site Certificate/Permitting	\$432,178	\$4	0.2%	100%
Development/Other Subtotal	\$4,677,692	\$47	2.6%	
Balance of Plant Total	\$43,678,190	\$437	24.3%	
Subtotal (all cost without taxes)	\$169,094,574	\$1,691	93.9%	
Sales Tax (Material and Equipment Purchases)	\$10,993,074	\$110	6.1%	100%
Total	\$180,087,649	\$1,801	100.0%	

JEDI Model Inputs



Wind Farm Annual Operating and Maintenance Costs

	Cost	Cost Per kW	Percent of Total Cost	Local Share
Labor				
Personnel				
Field Salaries	\$306,810	\$3.07	12.2%	100%
Administrative Management	\$49,090	\$0.49	2.0%	100%
	\$122,724	\$1.23	4.9%	100%
Labor/Personnel Subtotal	\$478,624	\$4.79	19.1%	
Materials and Services				
Vehicles	\$54,889	\$0.55	2.2%	100%
Site Maint/Misc. Services	\$21,407	\$0.21	0.9%	80%
Fees, Permits, Licenses	\$10,703	\$0.11	0.4%	100%
Utilities	\$42,813	\$0.43	1.7%	100%
Insurance	\$411,665	\$4.12	16.4%	0%
Fuel (motor vehicle gasoline)	\$21,407	\$0.21	0.9%	100%
Consumables/Tools and Misc. Supplies	\$139,143	\$1.39	5.5%	100%
Replacement Parts/Equipment/ Spare Parts Inventory	\$1,219,351	\$12.19	48.5%	2%
Materials and Services Subtotal	\$1,921,376	\$19.21	76.5%	
Sales Tax (Materials & Equipment Purchases)	\$112,364	\$1.12	4.5%	100%
Other Taxes/Payments	\$0	\$0.00	0.0%	100%
Total O&M Cost	\$2,512,364	\$25.12	100.0%	

JEDI Model Inputs



Other Parameters		Local Share
Financial Parameters		
Debt Financing		
Percentage financed	80%	0%
Years financed (term)	10	
Interest rate	6%	
Equity Financing/Repayment		
Percentage equity	20%	
Individual Investors (percent of total equity)	0%	100%
Corporate Investors (percent of total equity)	100%	0%
Return on equity (annual interest rate)	12%	
Repayment term (years)	10	
Tax Parameters		
Local Property/Other Tax Rate (percent of taxable value)	na	
Assessed value (percent of construction cost)	na	
Taxable Value (percent of assessed value)	na	
Taxable Value	na	
Taxes Per MW	\$10,986	
Local Taxes	\$1,098,600	100%
Local Sales Tax Rate	7.95%	100%
Land Lease Parameters		
Land Lease Cost (per turbine)	\$6,900	
Number of Turbines	44	
Land Lease (total cost)	\$303,600	
Lease Payment recipient (F = farmer/household, O = Other)	F	100%
Payroll Parameters		
Construction Labor		Employer Payroll Overhead
Foundation	Wage per hour: \$19.64	37.6%
Erection	Wage per hour: \$22.24	37.6%
Electrical	Wage per hour: \$29.47	37.6%
Management/Supervision	Wage per hour: \$40.06	37.6%
O&M Labor		Employer Payroll Overhead
Field Salaries (technicians, other)	Wage per hour: \$26.80	37.6%
Administrative	Wage per hour: \$17.15	37.6%
Management/Supervision	Wage per hour: \$42.88	37.6%

Go To
Summary Impacts

Return To Top
Project Description and Cost
Data

Summary Output From JEDI Model



Wind Farm — Project Data Summary Based on User Modifications to Default Values

Project Location	Colorado
Year of Construction	2015
Total Project Size - Nameplate Capacity (MW)	100
Number of Projects (included in total)	1
Turbine Size (kW)	2,000
Number of Turbines	50
Installed Project Cost (\$/kW)	\$1,796
Annual Direct O&M Cost (\$/kW)	\$25.92
Money Value (Dollar Year)	2015
Installed Project Cost	\$179,570,415
Local Spending	\$39,454,433
Total Annual Operational Expenses	\$29,612,853
Direct Operating and Maintenance Costs	\$2,592,386
Local Spending	\$759,545
Other Annual Costs	\$27,020,467
Local Spending	\$959,976
Debt and Equity Payments	\$0
Property Taxes	\$567,590
Land Lease	\$300,000

Local Economic Impacts — Summary Results

During construction period (Project Development and Onsite Labor Impacts)	Jobs	Earnings (in millions for 2015)	Output (in millions for 2015)	Value Added (GDP)
Construction and Interconnection Labor	60	\$3.60		
Construction-Related Services	6	\$0.60		
Total	65	\$4.20	\$4.60	\$4.30
Turbine and Supply Chain Impacts	227	\$14.50	\$38.80	\$18.80
Induced Impacts	119	\$6.90	\$19.10	\$12.10
Total Impacts	412	\$25.60	\$62.50	\$35.20
During operating years (annual)				
Onsite Labor Impacts	6	\$0.40	\$0.40	\$0.40
Local Revenue and Supply Chain Impacts	7	\$0.40	\$1.90	\$1.50
Induced Impacts	5	\$0.30	\$0.90	\$0.60
Total Impacts	18	\$1.10	\$3.20	\$2.40

Notes: Construction and operating jobs are full-time equivalent (FTE) for a period of 1 year (1 FTE = 2,080 hours). Wind farm workers include field technicians, administration, and management. Economic impacts "During operating years" represent impacts that occur from wind farm operations/expenditures. The analysis does not include impacts associated with spending of wind farm "profits" and assumes no tax abatement unless noted. Totals may not add up due to independent rounding.

JEDI Comparison to Grande Prairie Project



Grande Prairie Wind Project Local Economic Impact		
	JEDI Estimate	Actual
Construction		
Local Demand Spend	\$7.3m	\$7.7m
Construction Jobs	194	347
Operations		
On-Site Jobs Created	18	25
Property Taxes	\$1.6m	\$1.8m-\$2.2m
Payments to Landowners	\$1.2m	\$2.5m

Summary



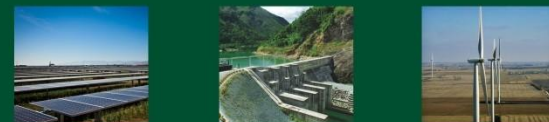
- In times of increasing project opposition, it is critical to communicate the local economic benefits created by renewable project development
- There are few (if any) other industries that can create such an immediate and direct impact to Nebraska's rural economies



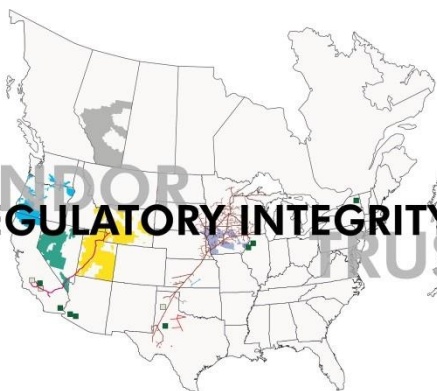
CUSTOMER SERVICE



EMPLOYEE COMMITMENT



ENVIRONMENTAL RESPECT



REGULATORY INTEGRITY



OPERATIONAL EXCELLENCE



**BERKSHIRE
FINANCIAL STRENGTH
OWNERSHIP**



BHE

RENEWABLES

A Berkshire Hathaway Energy Business