

Colorado Springs and the New Energy Market



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The Path to Prosperity in Colorado Springs

Grasp current energy market realities:

Cheaper to build new wind, solar and storage facilities, than to operate, fuel and maintain existing coal plants

- Rates reduced
- Long term rates low, stable and predictable

“Total Cost” analysis has long favored renewables over coal: costs of health, environment and climate damage...

Today, the “Rates Only” argument also shifts to renewables

What has Changed

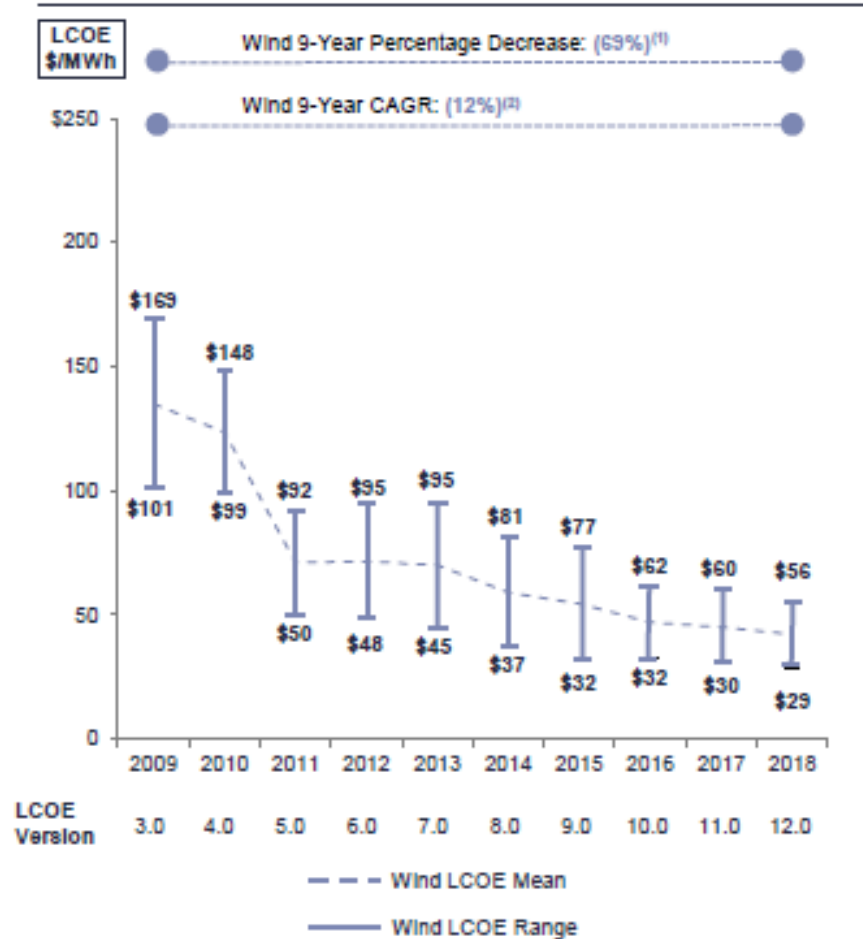
- Unsubsidized cost of wind energy has **dropped 69%** in nine years¹
- Unsubsidized cost of utility scale solar energy has **dropped 88%** in nine years¹

Bloomberg *New Energy Outlook 2017*: “Solar is already at least as cheap as coal in...the U.S..... The levelized cost of electricity from solar is set to drop another 66% by 2040.”

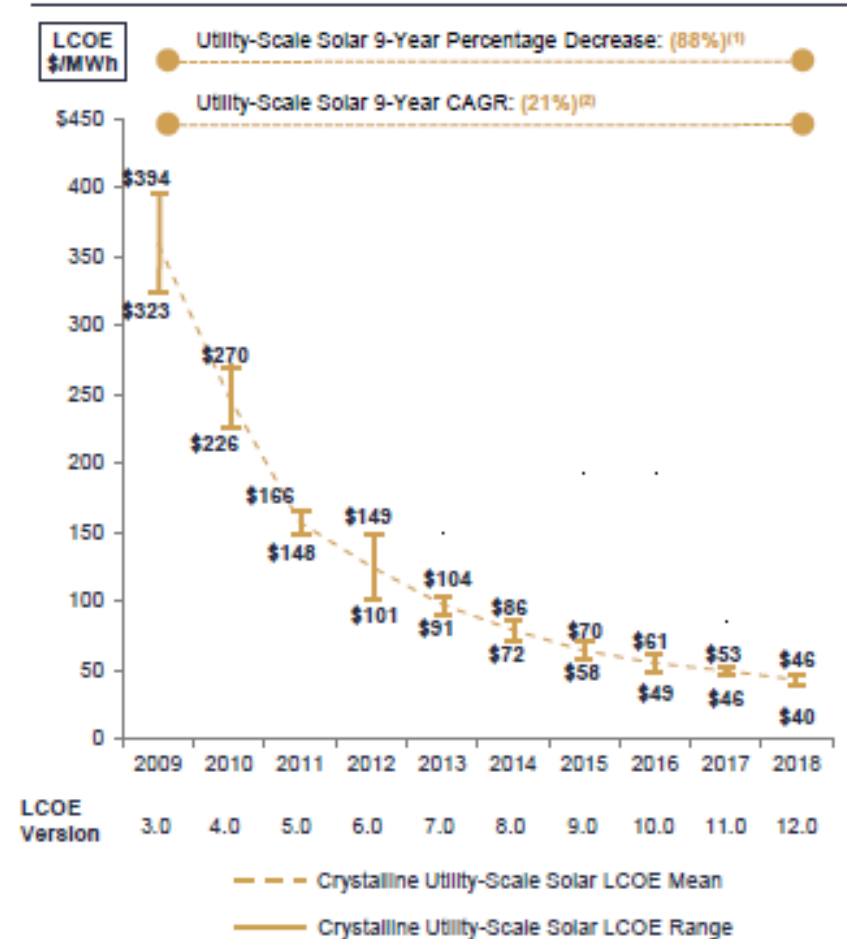
¹ “Lazard's Levelized Cost of Energy Analysis Analysis- Version 12.0” November 2018

Declining Cost of Wind and Solar

Unsubsidized Wind LCOE

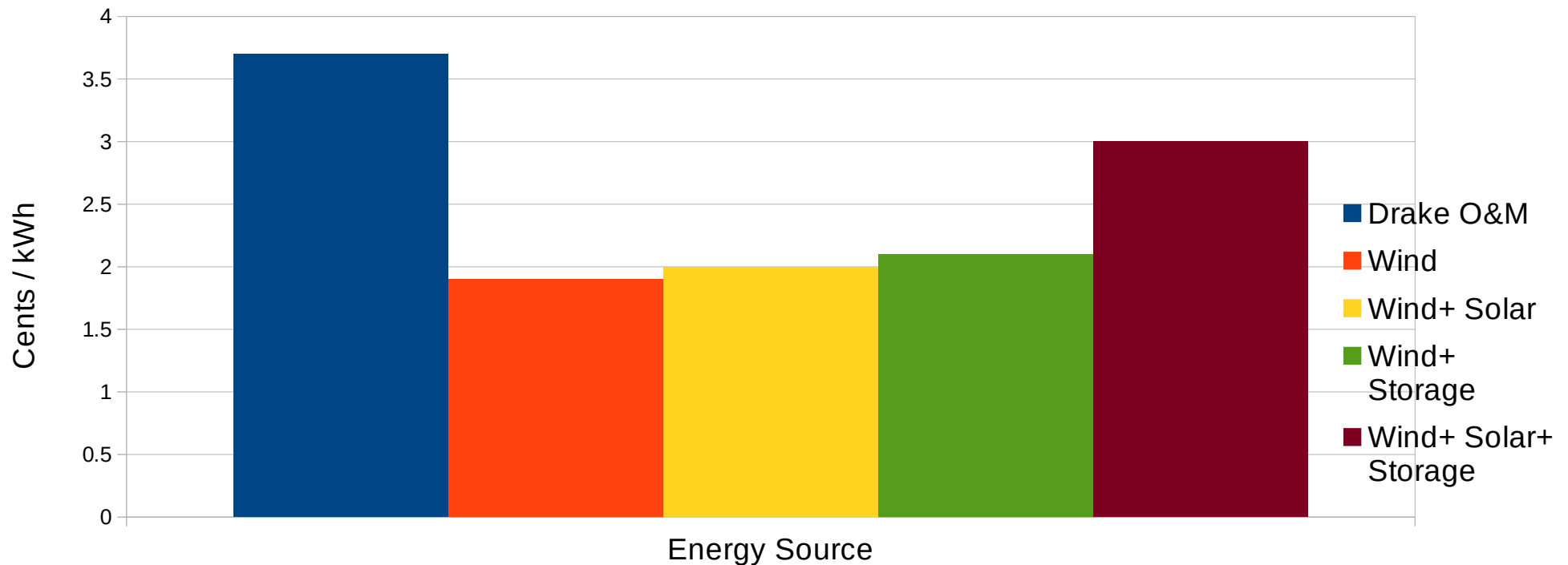


Unsubsidized Solar PV LCOE



Today's Local Market Realities

- Xcel 2017 Solicitation: Cost of new wind and solar energy, with storage, is cheaper than just operating Martin Drake



Sources: - March 2018 Update to "2016 Electric Resource Plan, 2017 All-Source Solicitation 30-Day Report (Public Version)," Xcel Energy

- CSU reporting to US Energy Information Agency, and CS Utilities Board

Xcel Profiting from New Energy Market

- Accelerating closure of coal-fired power plants
- Investing in wind, solar and battery storage
- 29% of electric energy from renewables today...55% by 2026
- 80% Carbon Free by 2030, 100% by 2050
- No rate increase

Xcel CEO, Ben Fowke:

“Because of the strong wind resources in our service territories, we have a unique opportunity to invest in renewable generation in which **the capital costs can be offset by fuel savings.**”

Actual Utility Cost Comparison: Does Renewable Energy Make Electricity Unaffordable?

- Residential Case: 800 kWh per month
- Small Commercial Case: 1000 kWh per month
- Monthly calculation to account for seasonal rates
- Three Utilities: CSU, Xcel-Colorado, MidAmerican Energy (Iowa)

Rates and Tariffs

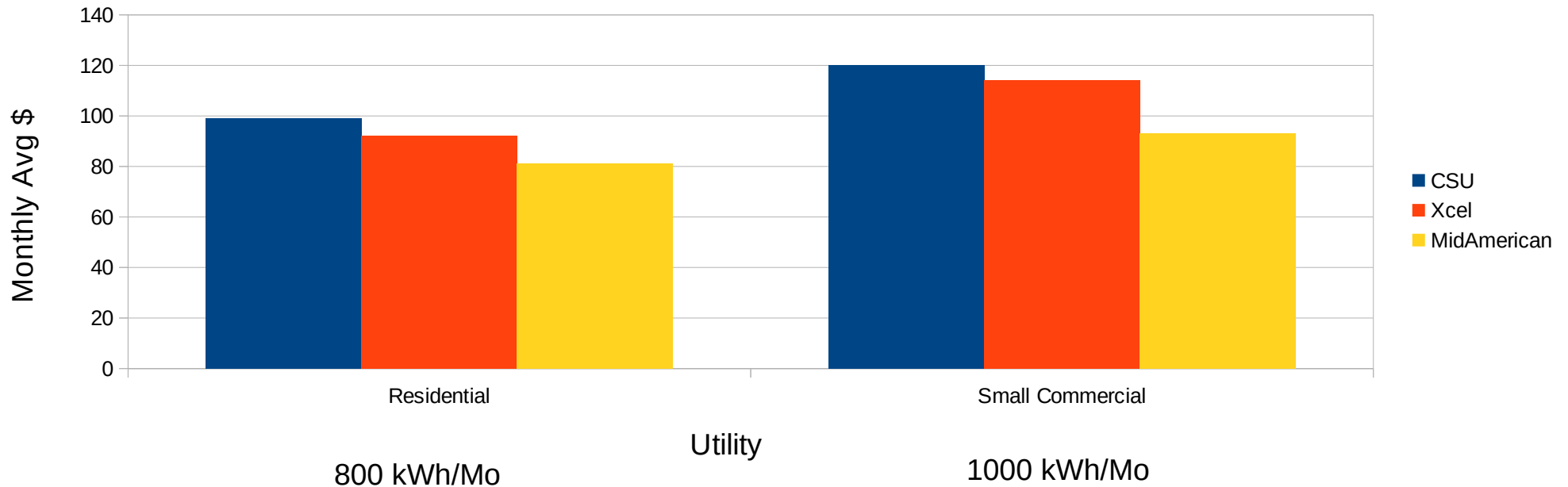
- Access Charge
- Energy Cost
- Demand Cost

Adjustments

- Elec Cost Adjustment
- Elec Capacity Charge
- Purchased Capacity Cost Adj
- Earnings Sharing Adj
- Demand Side Mngmt Cost Adj
- Transmission Cost Adj
- Clean Air Cost Adj
- Renewable energy Standard Adjustment
- Energy Efficiency Cost Recovery

Myth: Replacing Coal with Renewables Makes Energy Unaffordable

Monthly Electric Costs: Home and Small Business



CSU: 11% Renewable Energy
Xcel: 29% Renewable Energy
MidAmerican (Iowa): 51% Renewable Energy (100% by 2020)

Greater Renewable Energy Creating Lower Electricity Costs

Rate Stability Attracts Business

- After initial capital investment in wind and solar, fuel is free and maintenance is low

MidAmerican Energy: 51% Renewable Energy “Both Gov. Terry Branstad and Lt. Gov. Kim Reynolds have championed wind as an integral component of Iowa’s energy future and a competitive advantage in attracting major tech companies, such as Google, Microsoft and Facebook, to build facilities in the state.”
berkshirehathawayenergyco.com

Georgetown, TX: 100% Renewable Energy
Received “calls from businesses as far away as California and Maryland wanting to know: what does it cost to move over here?” *TexasMonthly.com*

Clean Energy is Creating Job Growth

- **57,591** clean energy jobs in Colorado
 - 17,254 jobs in renewable energy
- Colorado Springs metro area: **5,559** renewable energy & energy efficiency jobs

Source: E2 and Energy Efficiency Business Coalition “Clean Jobs- Colorado,” June 2018. www.e2.org/cleanjobsco/

Hurdles for CSU

- Smaller customer base-- No economies of scale
 - Xcel: 350 renewable energy bids; CSU: 28 bids
- CSU does not own transmission lines in eastern Colorado
- Transmission hub capital improvement needs

Options exist to overcome these issues

Way Ahead: Spark Long Term Growth with Low, Stable Electric Rates

With little action, CSU rates rise while Xcel rates stabilize then decline

- Partner with Xcel (and NextEra)- Now!
 - Rush Creek, Calhan wind farms, battery storage and other renewable projects
- Close Drake 6 by 2020, Drake 7 by 2023...Add large scale wind/solar/storage...Remaining base load initially handled by Front Range excess capacity
 - Free fuel allows accelerated retirement of Drake debt
 - Avoided cost of new Coal Combustion Residue landfill as Clear Spring Ranch approaches capacity
 - Save approx 772 million gallons total water annually
- Large scale wind (power purchase or ownership) can expand immediately & simultaneously with transmission upgrade

Embracing the New Energy Market... Reduces and stabilizes rates; attracts business; creates jobs.