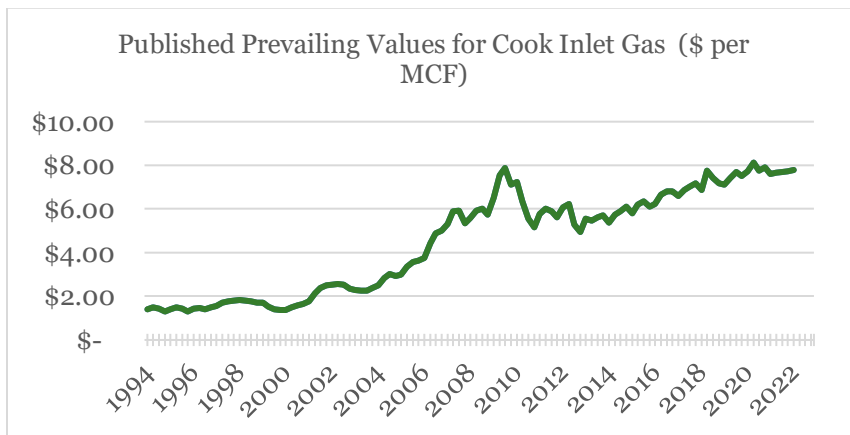


Support for a Railbelt Renewable Portfolio Standard (RPS)

Alaska Governor Mike Dunleavy has proposed Renewable Portfolio Standard legislation (HB 301 & SB 179) that would require the five utilities in the transmission-connected Railbelt portion of Alaska to increase the percentage of electricity they generate by renewable resources to 80% by the year 2040. Requiring the Railbelt utilities to diversify their generation portfolios is essential. Today, the Railbelt relies on high-priced natural gas for approximately 80% of its electric generation. This heavy dependence on Cook Inlet gas has come with significant cost for consumers. Railbelt utilities pay double what Lower 48 utilities pay for gas and utility rates continue to rise, despite significant state natural gas subsidies. Meanwhile, between 2009 and 2021 the price of utility-scale wind and solar technologies have dropped precipitously, with the solar down 90% and wind down 72%.¹ Similarly, lithium ion battery pack prices fell 89% between 2010 and 2020.² In 2020, 75% of all new power plants in the country were wind or solar. The legislature should require portfolio diversification that incentivizes the region to utilize its vast wind, solar, geothermal, hydro and tidal resources. These resources are all local, and not subject to price volatility. A shift toward renewable energy will create good-paying jobs and make Alaska more energy independent. This national lab [study](#) found five ways to reach 80% without impacts on reliability.

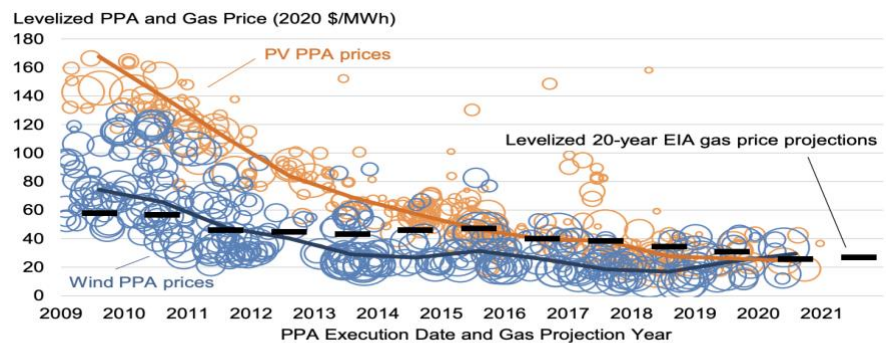
Graph 1: Cook Inlet Natural Gas Prices Continue to Rise³



Graph 1 shows the rising price of natural gas in Cook Inlet in dollars per one thousand cubic feet (MCF) from 1994 to 2022.

Graph 2: Declining Wind and Solar Prices Compared to Natural Gas⁴

Graph 2 shows wind and solar power purchase agreement (PPA) prices in the U.S. compared to both projected and actual natural gas prices between 2009 to 2021.



Note: Smallest bubble sizes reflect smallest-volume PPAs (<5 MW), whereas largest reflect largest-volume PPAs (400 MW)
Sources: Berkeley Lab, FERC, EIA

Figure 53. Levelized wind and solar PPA prices and levelized gas price projections

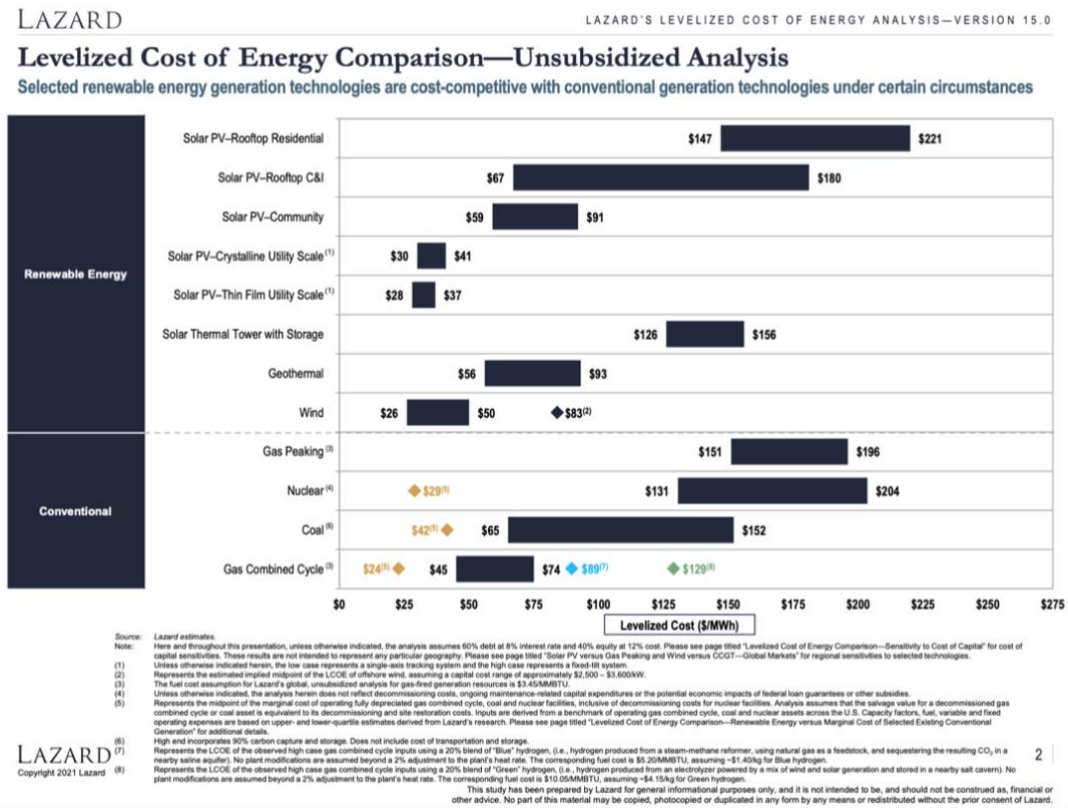
¹ “Lazard’s Levelized Cost of Energy Analysis – Version 15.0,” Lazard, 2021: <https://www.lazard.com/media/451905/lazards-levelized-cost-of-energy-version-150-vf.pdf>.

² McKerracher, Colin et al. “Electric Vehicle Outlook 2021.” *New Energy Finance*, BloombergNEF, about.newenergyfinance.com/electric-vehicle-outlook.

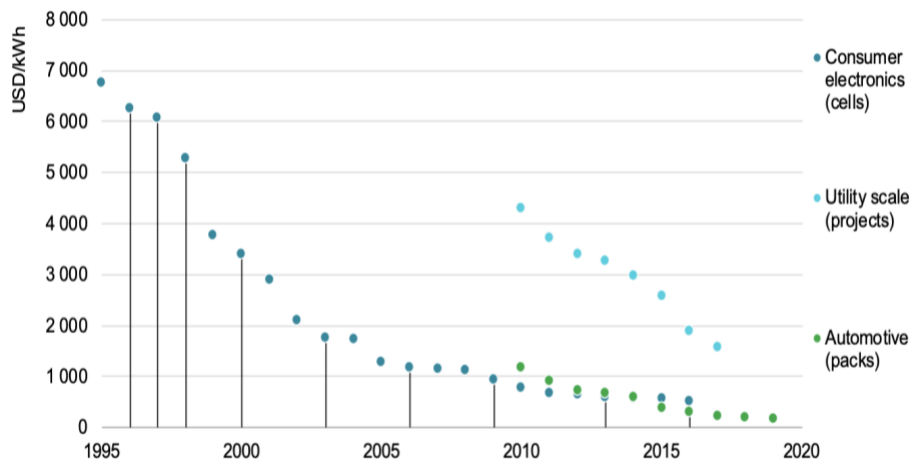
³ Alaska Department of Revenue - Tax Division. “Cook Inlet Prevailing Values.” *Alaska.Gov*, State of Alaska, www.tax.alaska.gov/programs/oil/prevailing/cook.aspx. Accessed 2 Feb. 2022.

⁴ “Land-Based Wind Market Report: 2021 Edition” *U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy*, page 50: https://www.energy.gov/sites/default/files/2021-08/Land-Based%20Wind%20Market%20Report%202021%20Edition_Full%20Report_FINAL.pdf

Graph 3: Levelized cost of energy comparison⁵



Graph 4: Declining Costs of Lithium Ion Batteries⁶



Graph 4 shows the sharp drop in cost for three types of lithium ion batteries since 1995.

⁵ "Lazard's Levelized Cost of Energy Analysis – Version 15.0," Lazard, 2021: <https://www.lazard.com/media/451905/lazards-levelized-cost-of-energy-version-15-0-vf.pdf>

⁶ "Energy Technology Perspectives 2020 – Special Report on Clean Energy Innovation: Accelerating Technology Progress for a Sustainable Future," International Energy Agency, page 81.