

Double Bind: Gas-Electric Scarcity Pricing

California Public Utilities Commission
En Banc Proceeding

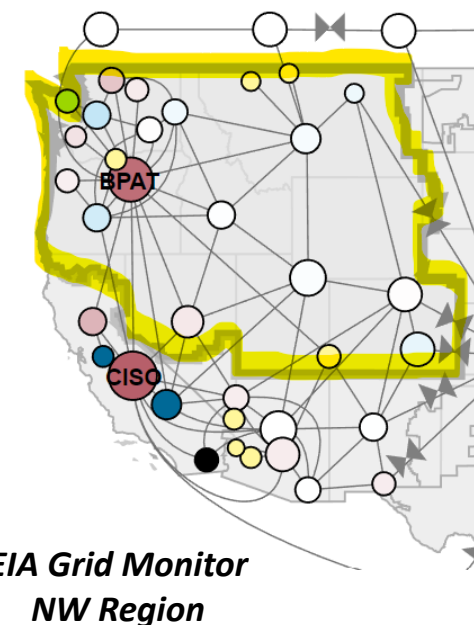
February 7, 2023

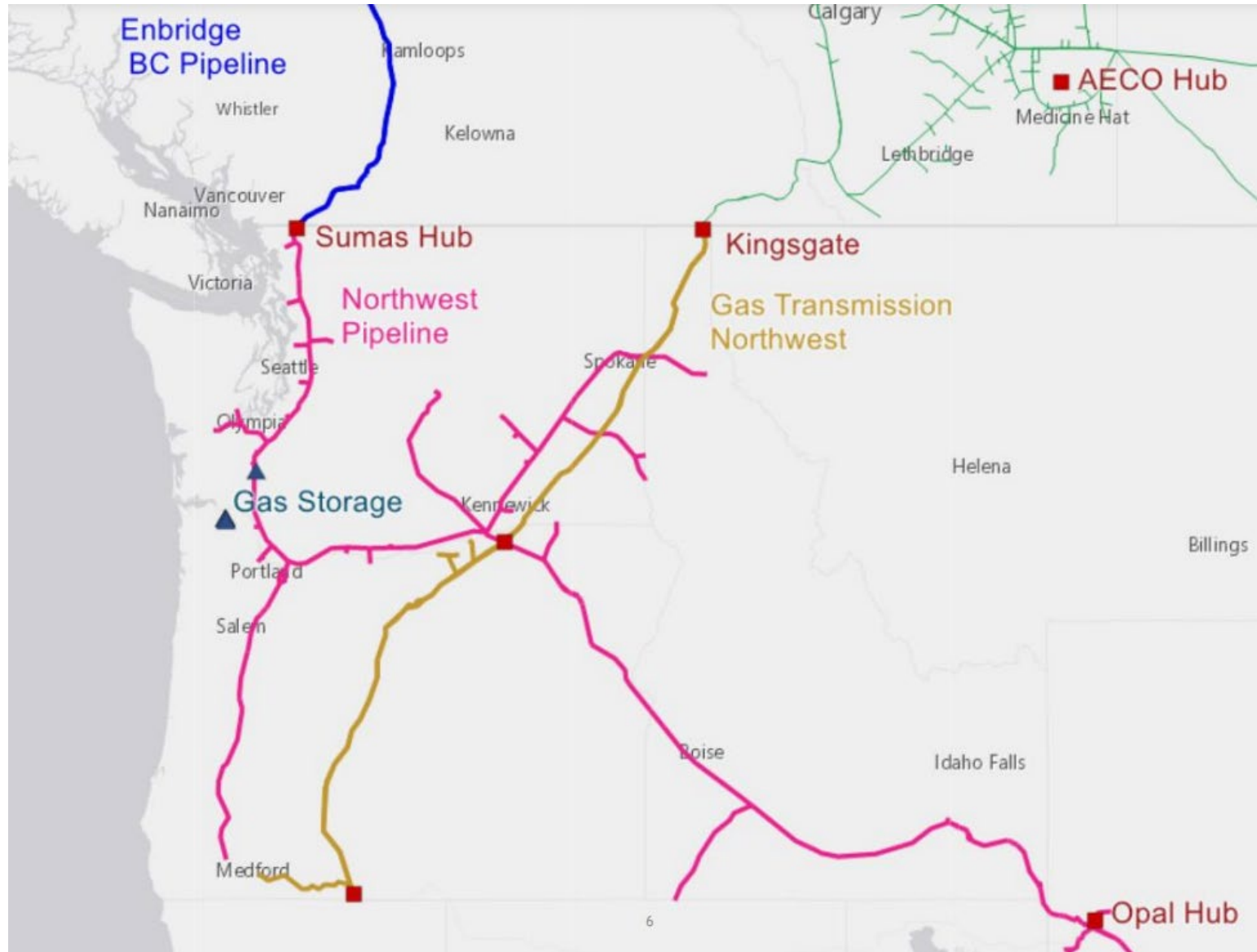
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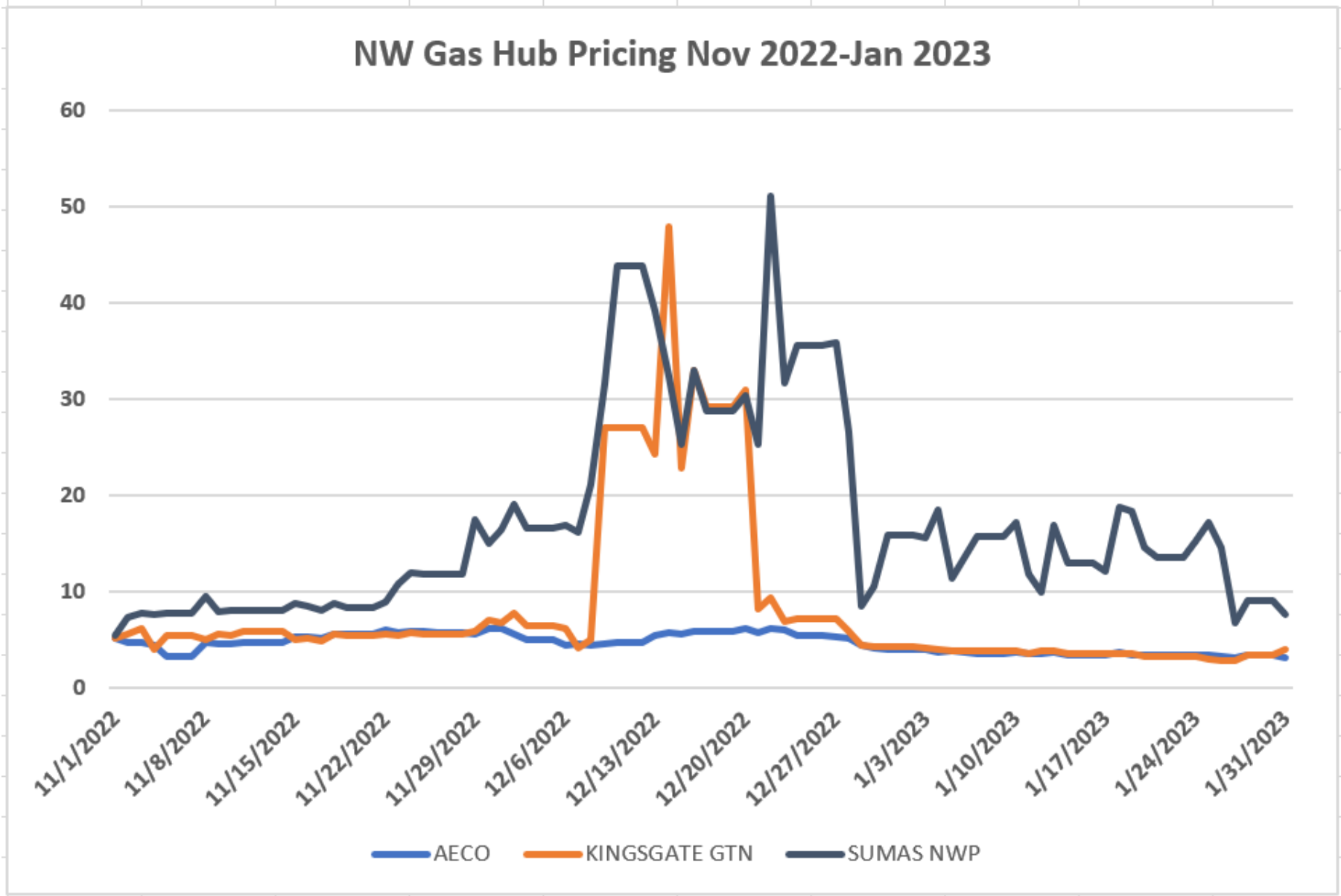
		2019-20	2020-21	2021-22	Avg 2019-22	2022-23	+/-	%
Portland temp <i>daily avg F</i>	Nov	46.8	46.4	50.4	47.9	43.7	-4.2	
	Dec	43.0	43.9	41.3	42.7	39.0	-3.8	
	Jan	45.8	44.8	41.8	44.1	43.3	-0.8	
Spokane temp <i>daily avg F</i>	Nov	35.6	37.1	40.2	37.6	28.3	-9.3	
	Dec	33.4	31.8	29.4	31.5	23.9	-7.7	
	Jan	34.1	33.5	29.0	32.2	31.2	-1.0	
Sumas \$/mmBtu	Nov	4.09	3.21	2.64	3.31	9.29	5.97	280%
	Dec	3.20	3.18	4.96	3.78	27.77	23.99	735%
	Jan	2.30	2.64	5.79	3.58	13.72	10.14	383%
NW demand (aMW) <i>EIA Grid Monitor</i>	Nov	39,799	34,841	38,039	37,560	42,405	4,846	113%
	Dec	42,152	37,844	43,048	41,015	45,714	4,699	111%
	Jan	38,183	40,471	43,447	40,700	43,865	3,165	108%
NW hydro (aMW) <i>EIA Grid Monitor</i>	Nov	13,211	14,823	13,337	13,790	13,094	-696	95%
	Dec	13,341	15,264	17,842	15,482	13,557	-1,925	88%
	Jan	15,916	17,825	18,914	17,551	13,461	-4,090	77%
NW gas gen (aMW) <i>EIA Grid Monitor</i>	Nov	8,966	7,455	7,974	8,132	8,850	718	109%
	Dec	10,281	9,564	8,601	9,482	10,475	993	110%
	Jan	9,346	8,621	8,714	8,893	10,376	1,482	117%
AC+DC Intertie (aMW) <i>net N>S flow</i>	Nov	2,349	3,800	3,671	3,273	1,374	-1,900	42%
	Dec	2,775	4,053	4,431	3,753	843	-2,910	22%
	Jan	3,770	4,646	4,663	4,360	1,557	-2,803	36%
<i>Data sources: NWS, CAISO OASIS, EIA Grid Monitor, BPA results are provisional</i>								

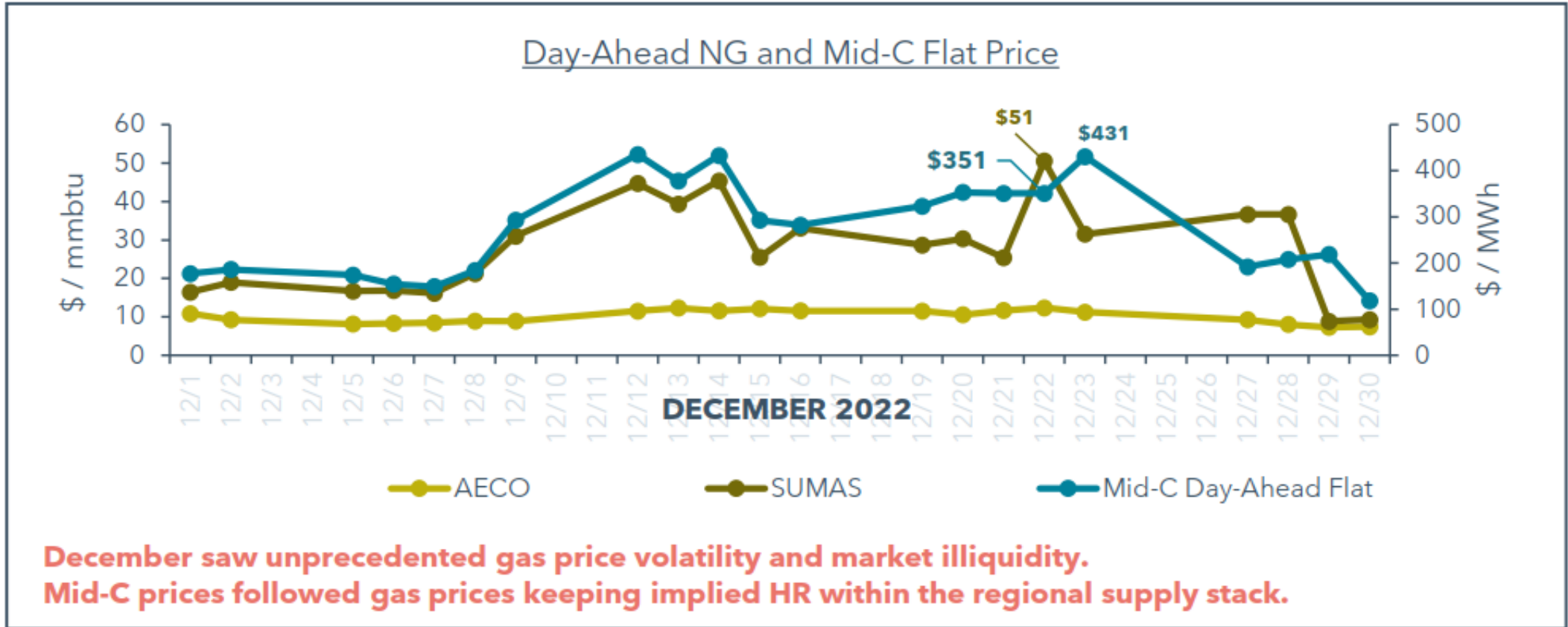




Northwest Power and Conservation Council

NW Gas Hub Pricing Nov 2022-Jan 2023





*Portland General Electric, presentation to Oregon Public Utility Commission
 January 31, 2023*

Winter 2022-23 Gas-Electric Scarcity Pricing Bubble

1. Convergence of multiple factors: weather, economic trends, gas delivery and storage constraints, reduced electric resource margins, rapid changes in the US gas sector (especially LNG exports), market "sentiment"
2. Harsh consequences for customers – hundreds of millions of dollars of unanticipated costs in gas and electric fuel cost adjustments
3. Not unprecedented – warning signs from previous scarcity pricing episodes, including February-March 2019
4. Elevated risk of price surge recurrence
5. The cost of not doing enough fast enough is increasing rapidly

Futures: Buy the Rumor, Sell the Refill



BY NGI STAFF REPORTS

June 10, 1999

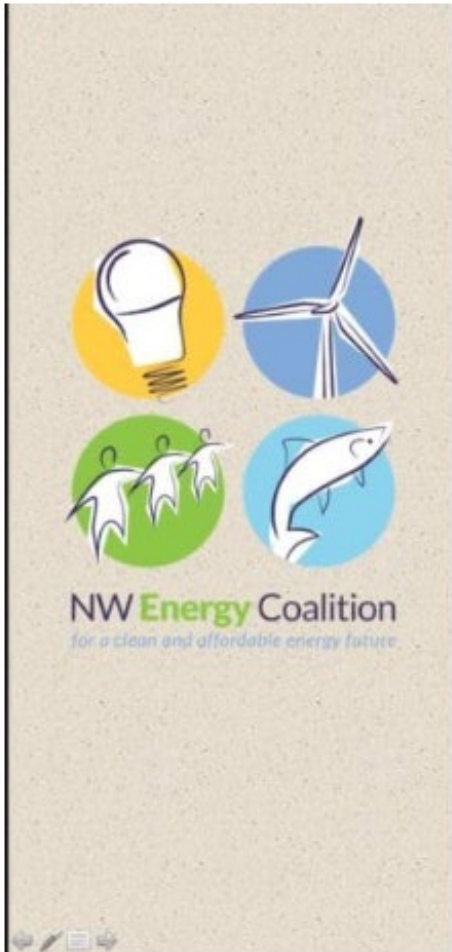
Gas-Electric Double Bind

1. Most of the time, power markets are price-takers from gas markets.
2. Electric prices are regional, gas prices are continental and increasingly prone to global market forces (via LNG exports) and eventual shale gas peak and decline.
3. Gas market transparency is very limited.
4. Scarcity pricing is enhanced by constraints: critical line pressure (gas) and reliability requirements (electric), but the gas constraint is “harder.”
5. Electric power pricing and reliability depends on peaking units that do not have firm gas and compete with non-core customers during supply crunches.
6. Longstanding misalignment between gas nomination cycle and electric commitment-dispatch creates capital misallocation and arbitrage.

Search for Solutions: Cooperation and Resource Diversity

Highly disruptive and long-duration scarcity pricing in the gas and electric markets is sounding the alarm to move much faster on regulatory cooperation, event readiness, and expanding resource diversity among the Pacific and Western states:

- Enhanced customer protections (shutoffs, bill payment assistance)
- Event analysis, situational awareness and readiness, including advanced met/climate data
- Reforming fuel cost adjustments and hedging programs
- Accelerated gas and electric load management
- Expanding power markets to access load and resource diversity
- Structural changes to the gas-electric interface (gas nominations, electric unit commitment/dispatch)
- Expanding gas market transparency
- Price and supply backstops
- Windfall profits recapture



Double Squeeze

How the Arctic Express and natural gas constraints are turning the West Coast gas and power markets upside down

Fred Heutte
NW Energy Coalition
March 6, 2019

Work in progress – updates and refinements will be incorporated.

March 2019

<https://nwenergy.org/featured/double-squeeze-arctic-express-system-constraints-skyrocket-nw-wholesale-energy-prices/>



Topics ▾ Resources ▾

Customer-side resources can reduce risks from volatile energy prices

By [Chris Connolly](#) | February 1, 2023

Winter is here. It's barely February and we've already witnessed the value of a diversified energy system and the risks that come from fossil fuels. Volatile fossil fuel prices are causing concern for customers that end up footing the bill when their utility purchases fossil-fueled power. By accelerating our investments in customer-side resources, we can better manage loads and reduce our exposure to spiking energy prices while also making communities more resilient.

February 2023

<https://nwenergy.org/featured/customer-side-resources-can-reduce-risks-from-volatile-energy-prices/>