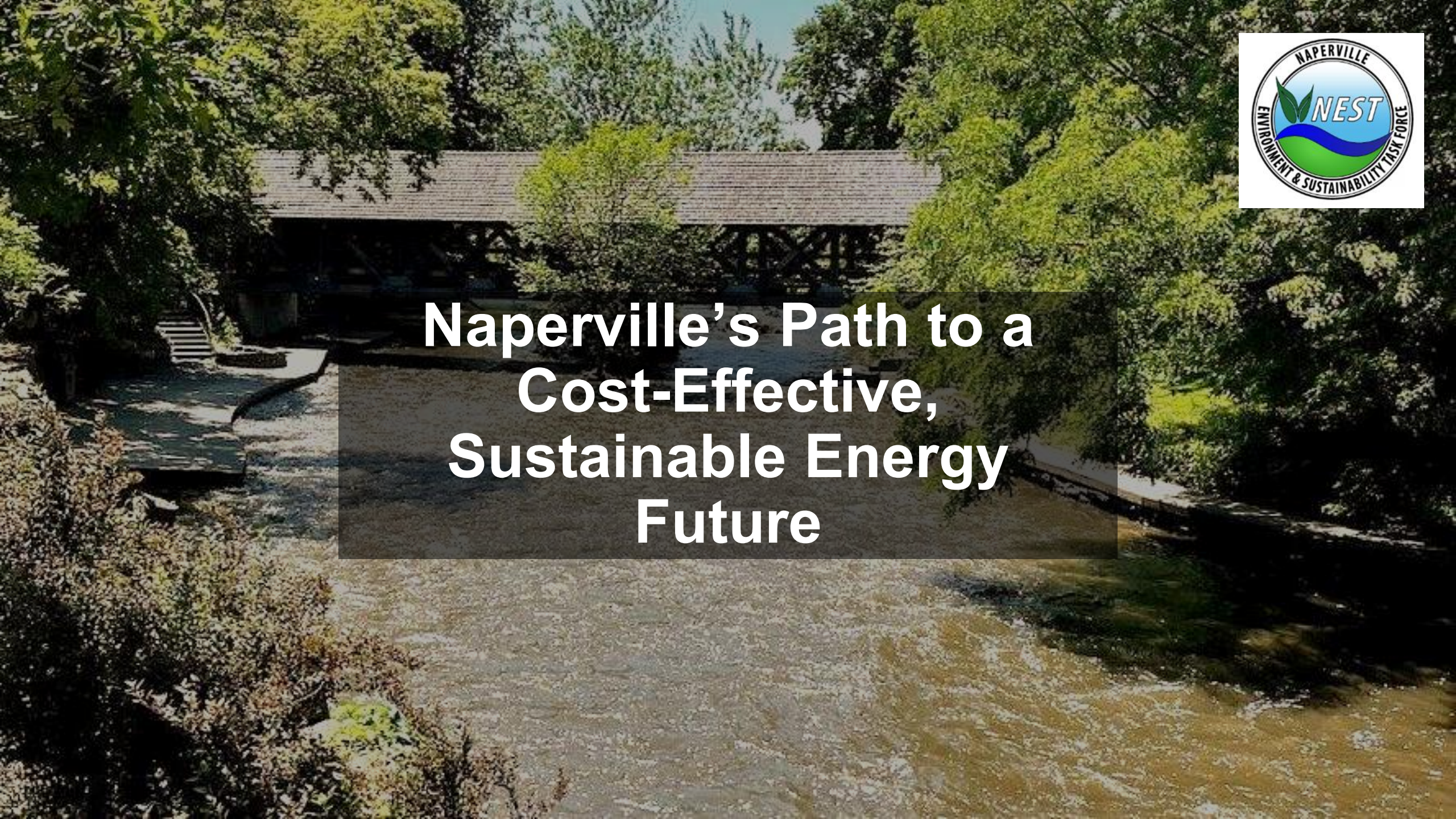
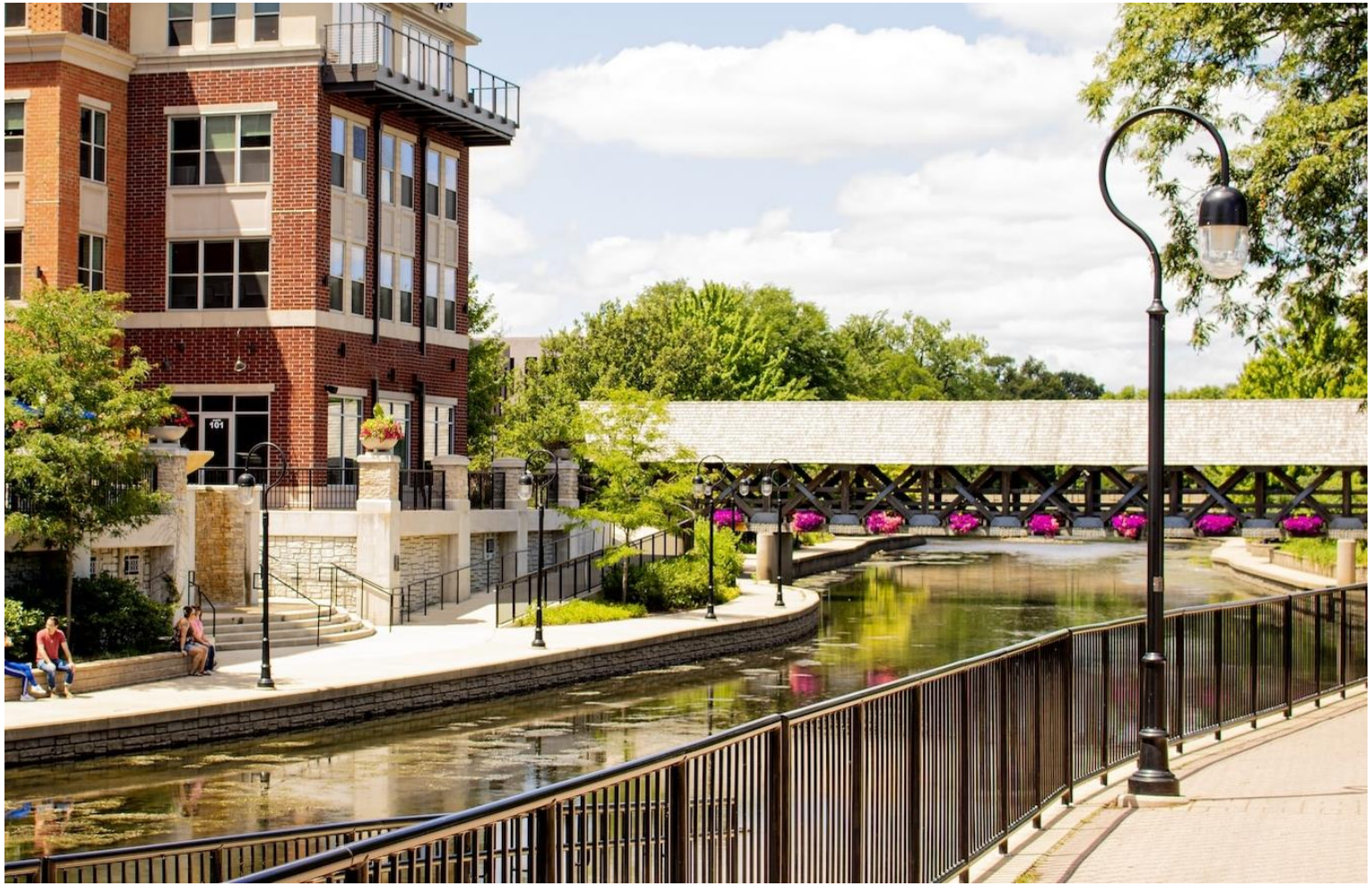

Naperville's Path to a Cost-Effective, Sustainable Energy Future

Agenda and Problem Statement



Agenda

- Problem Statement and Background
- IMEA Alternatives
- Potential Selection Criteria
  - Cost
  - Business, Jobs, and Economy
  - Risk/Flexibility/Control
  - Environmental Impact
- Proposed Process
- Summary
- Appendix

Key Points of the IMEA Proposal Consideration

- **Same contract** that the council did not agree to in April. IMEA members voted to extend the deadline.
- **No price information** or price caps. Naperville pays a percentage of the costs regardless of what those costs are.
- **$3 billion** contract based on CES's model.
- Naperville pays for **35%** of IMEA's **costs** and gets **3%** of the **vote**
- **No way to exit** IMEA contract until **2055**.
- **No competitive bids** have been requested.

https://www.naperville.il.us/services/electric-utility/your-electric-service/imea for the contract
Page 38 of CES Report to see their cost projection

NEST Strongly Opposes the Early Renewal

We Can Do Better

Less Expensive

Better for Businesses, Jobs, and our Economy

Better for the Environment

Less Risky and More Flexible

Let's Not Repeat the Mistakes in Our Current Contract

Expensive

Towns pay a high price for power

By CHICAGO TRIBUNE
UPDATED: August 24, 2021 at 7:53 PM CDT

"five Chicago suburbs and more than 200 other Midwestern towns that made a big bet on coal."

"Naperville has been paying a monthly average of $75.04 a megawatt hour this year, for example. By contrast, Chicago pays about $56 a megawatt hour "

Environmental Disaster

Clean coal dream a costly nightmare

By MICHAEL HAWTHORNE | mhawthorne@chicagotribune.com
UPDATED: June 18, 2018 at 6:51 AM CDT

"Sold on a promise of cheap, clean electricity, dozens of communities in Illinois and eight other Midwest states instead are facing more expensive utility bills after bankrolling a new coal-fired power plant that will be one of the nation's largest sources of climate-change pollution."

"The communities are locked into 28-year contracts that will require higher electricity rates to cover the construction overruns"

Inflexible

Prairie State coal-fired plant to cap costs

By CHICAGO TRIBUNE
UPDATED: August 23, 2021 at 3:39 AM CDT

"The Prairie State Energy Campus already has more than doubled in cost to $4.4 billion"

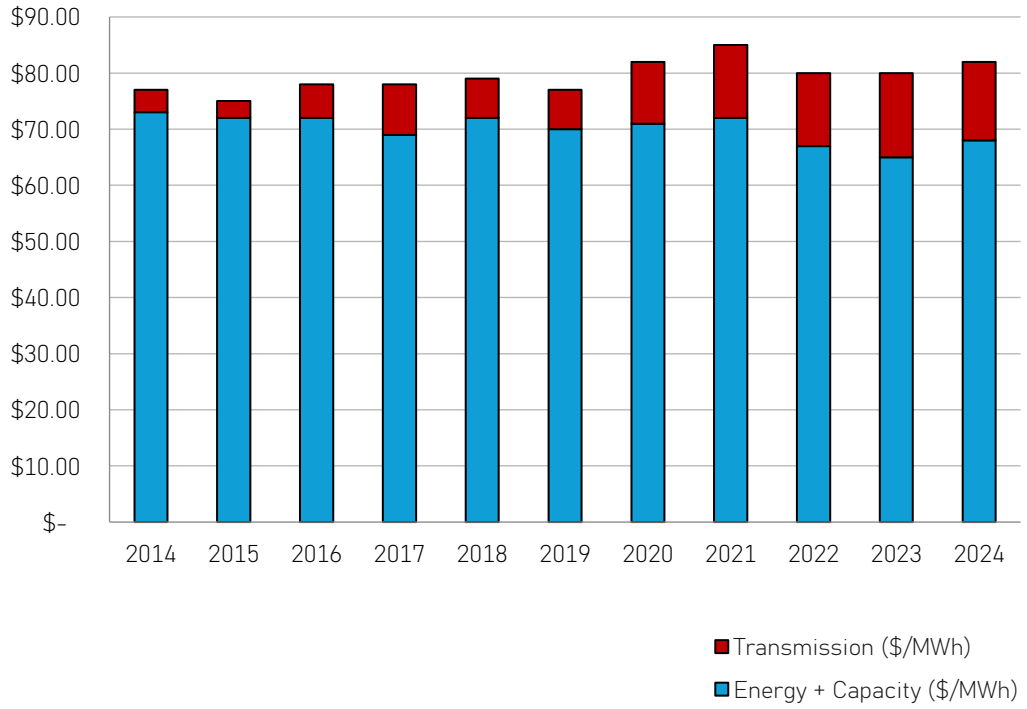
"cities are facing the prospect of higher rates to cover the plant's soaring cost overruns"

"Beware of a coal company promising you low-cost power"

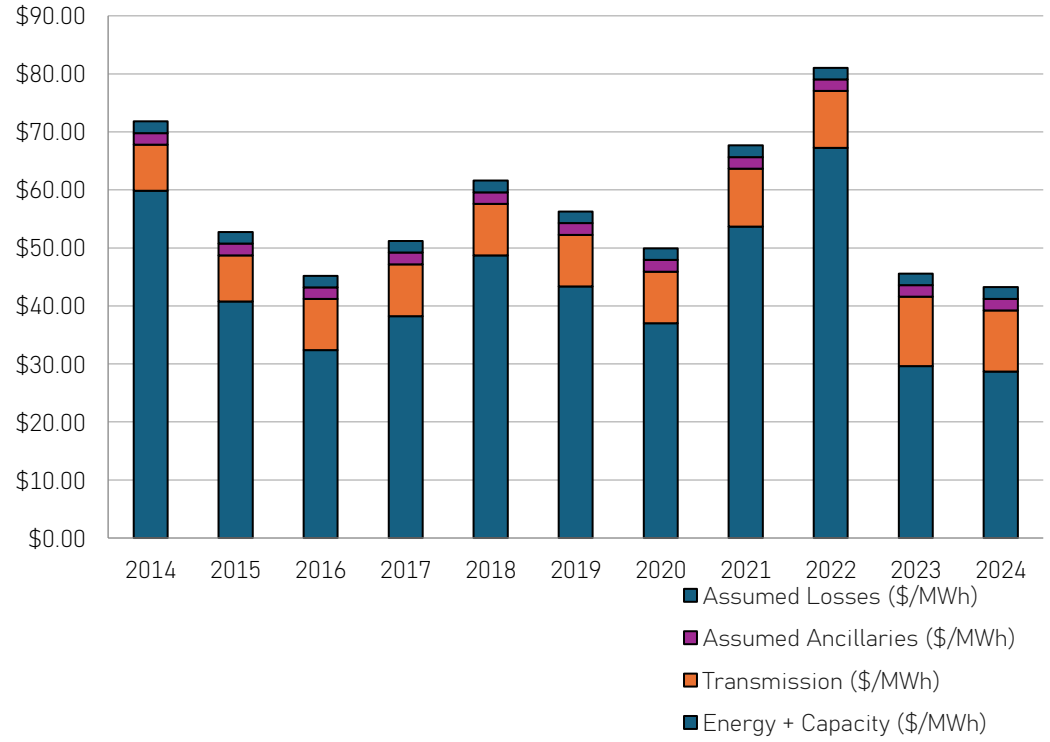
Much More Expensive than Alternatives

Ratepayers could have saved over $300 million

Total Wholesale Cost of Electricity from IMEA (Source: Presentation to Naperville PUAB 2/27/25)



Total Wholesale Cost Of Electricity PJM/COMED Zone (Source: EIA and PJM)



IMEA's Sales Strategy

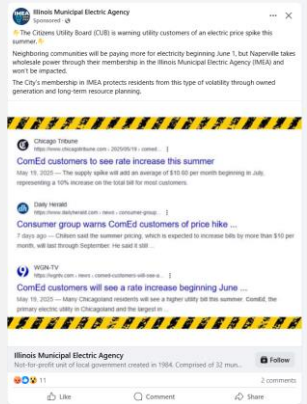
- **Lock in Naperville before we can get competitive bids**.

- Create a sales presentation that **says one thing**, but a contract that says another.
  - Slide 9 of the sales presentation states, "IMEA is **committed** to a carbon-free portfolio," but the **contract says absolutely nothing about** moving to a carbon-free portfolio.
  - They say the power is "low-cost," but make **no cost commitments** in the contract.

- Try to **create urgency** by creating "fake leverage" by creating deadlines. First April 30, then August 19, and now it is indefinite but with unspecified "penalties"

https://www.imea.org/GetIMEAMeetingPDF.asp?type=boardpacket&id=70

IMEA Targeted Facebook Ads at Naperville Ratepayers

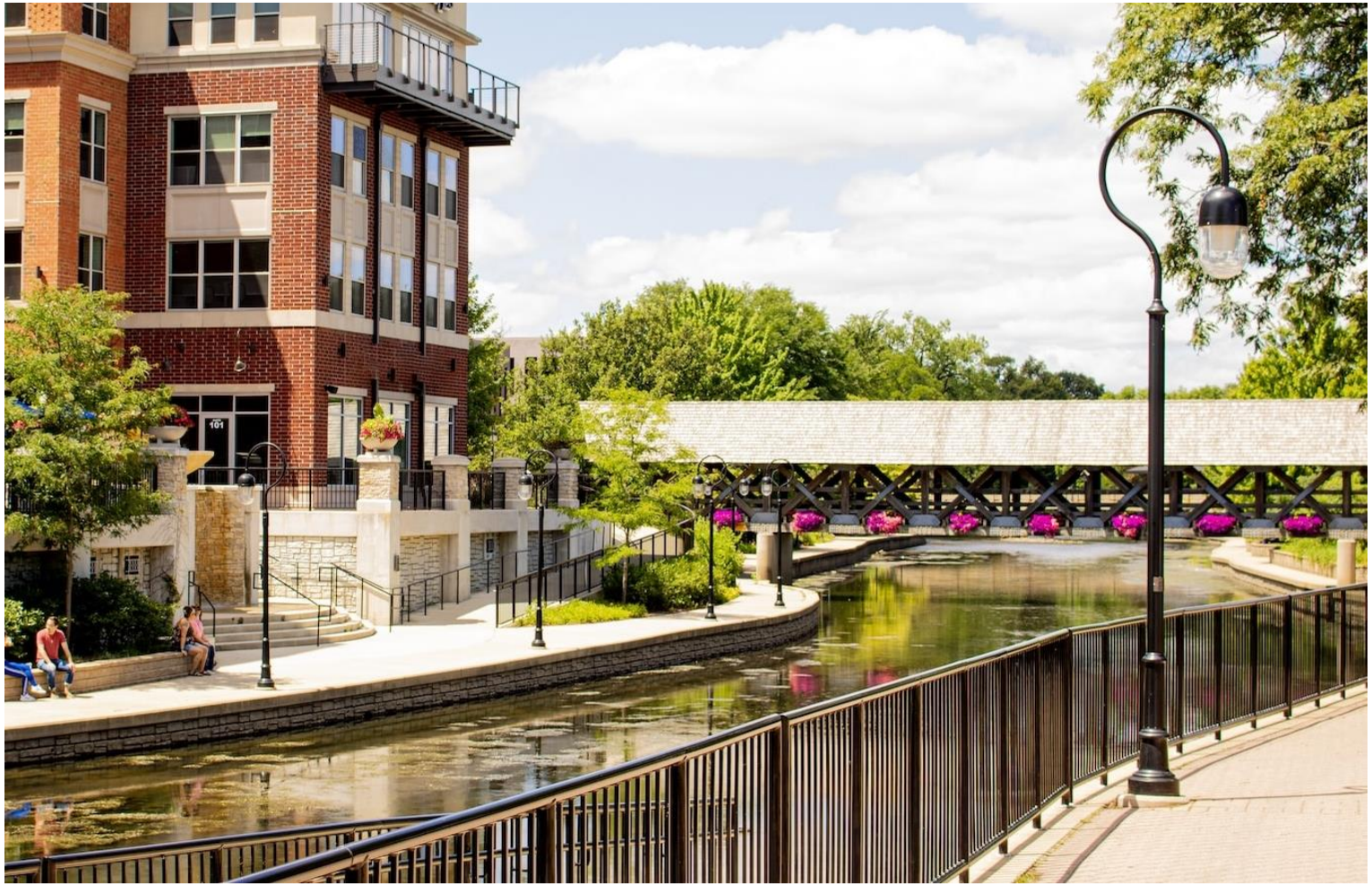


We aren't losing any options if the council votes no.

The council's vote on August 19 is either going to be

- Yes, extend now
- No, we can consider this later with more information

Alternatives to IMEA



Power Marketers

Benefits of Power Marketers

1. **Prices are in the contract.**

2. **Contracts have shorter durations, so we can switch if they aren't the best choice.**

3. **Flexibility in Generating Assets**
   Large portfolios of generating assets that cater to different energy preferences and reduce risk of a single asset failing.

4. **Flexibility in Contracts**
   The contracts don't prevent us from entering into power purchase agreements or implementing peak shaving.

5. **No Need to Hire More City Employees**
   Offer the same full-provider services as IMEA, so no need for additional staffing in the Electricity department.

Most Illinois customers get their wholesale electricity from Power Marketers. They offered to come to this workshop

NEXTera ENERGY

Constellation

SmartEnergy

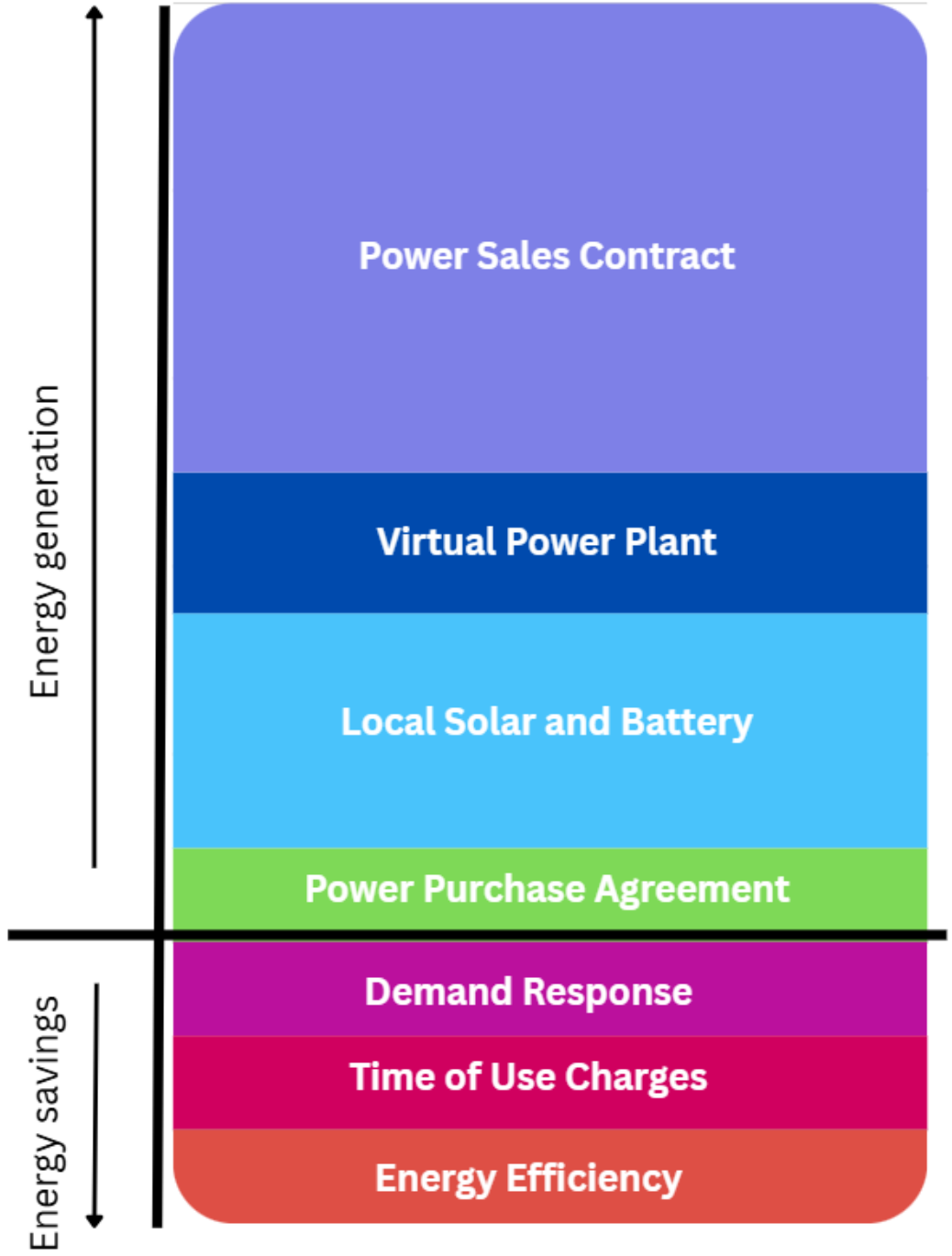
nrg

Green Mountain Energy

direct energy

Alternative in Detail

- Contract with a power marketer for same services IMEA provides. That best meets our selection criteria.
- Leverage new technology like virtual power plants to shave peaks and keep bills low
- Local solar and battery to keep jobs and spending local while reducing capacity charges and buying power at the least expensive time of the day.
- Commercial consumers can save money by lower usage during peaks.
- Consumers can control their costs by shifting their usage to times when electricity is less expensive.

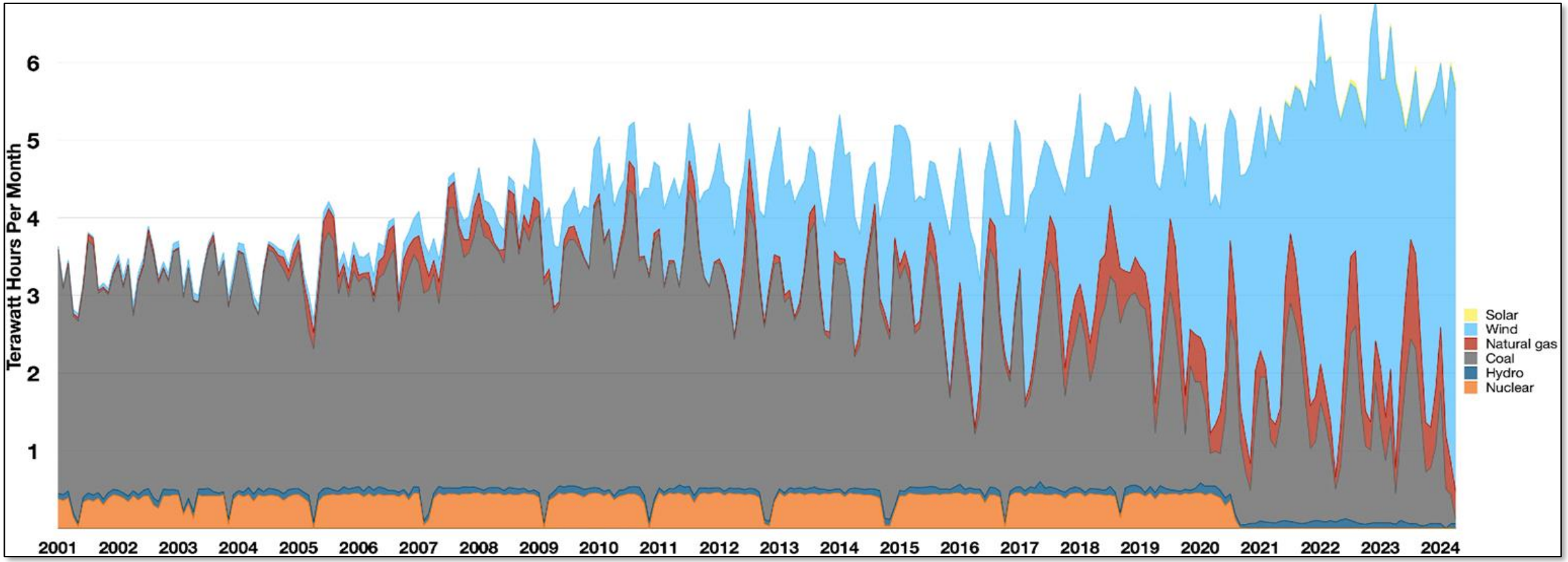


Alternative Like Iowa

Local Control and Benefits

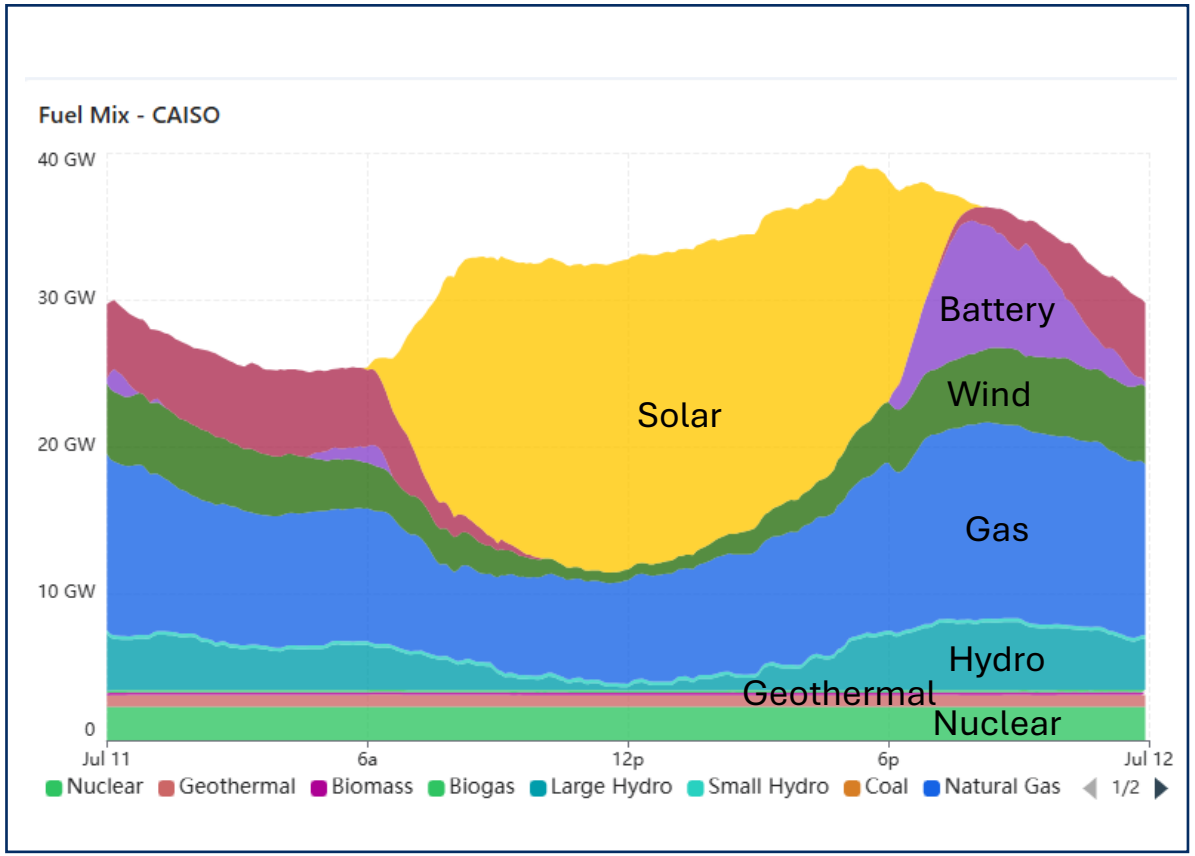
"Not only has Iowa's reliance on fossil fuels been decreased due to the commitment to wind energy, but it has also resulted in the creation of employment and promoted **economic development** in the area of renewable energy." – The Daily Iowan, January 16, 2024

In 2024, **Naperville's** electricity cost was **~20% more than** Iowa's (Source EIA)

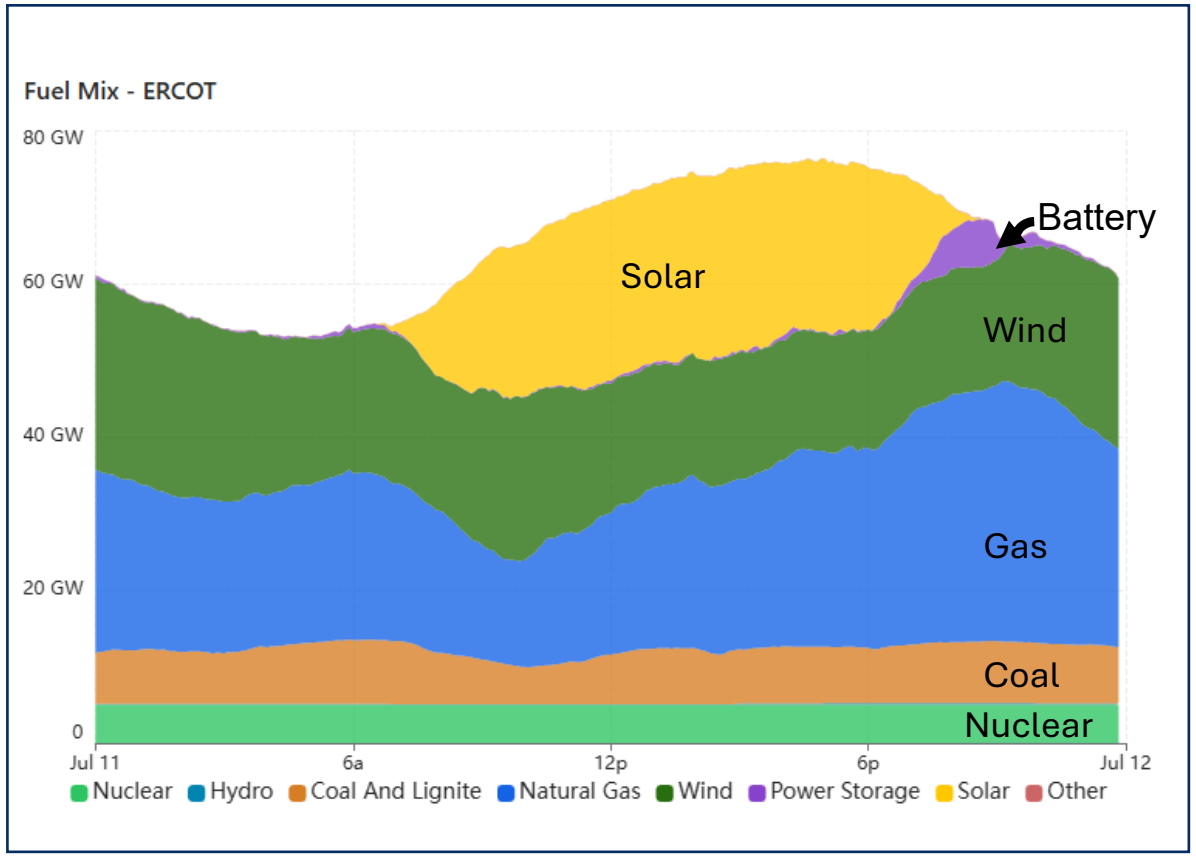


Alternatives – Others are Doing It Already

California



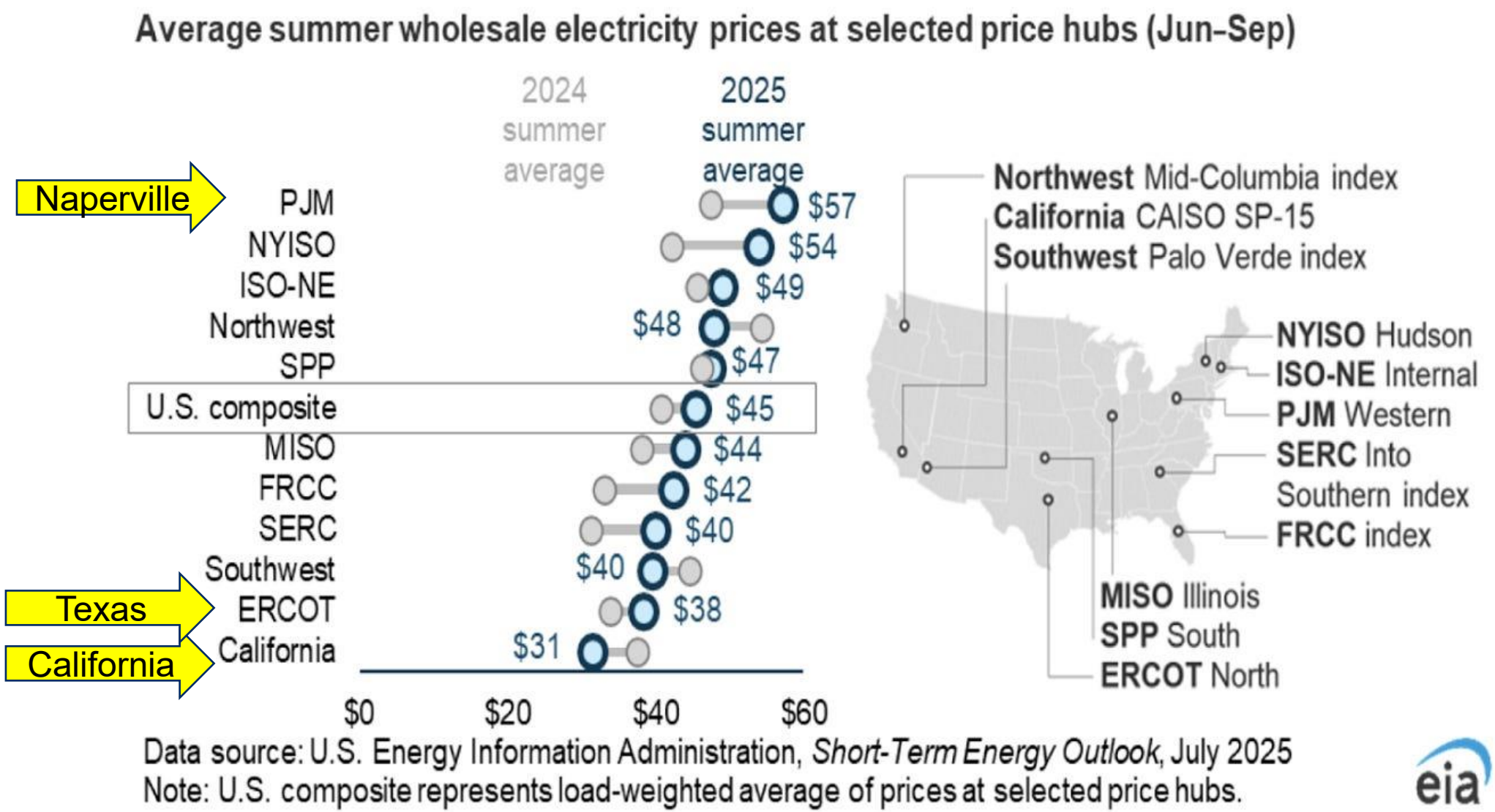
Texas



July 2025 – Solar and Battery shaved the peaks on both grids

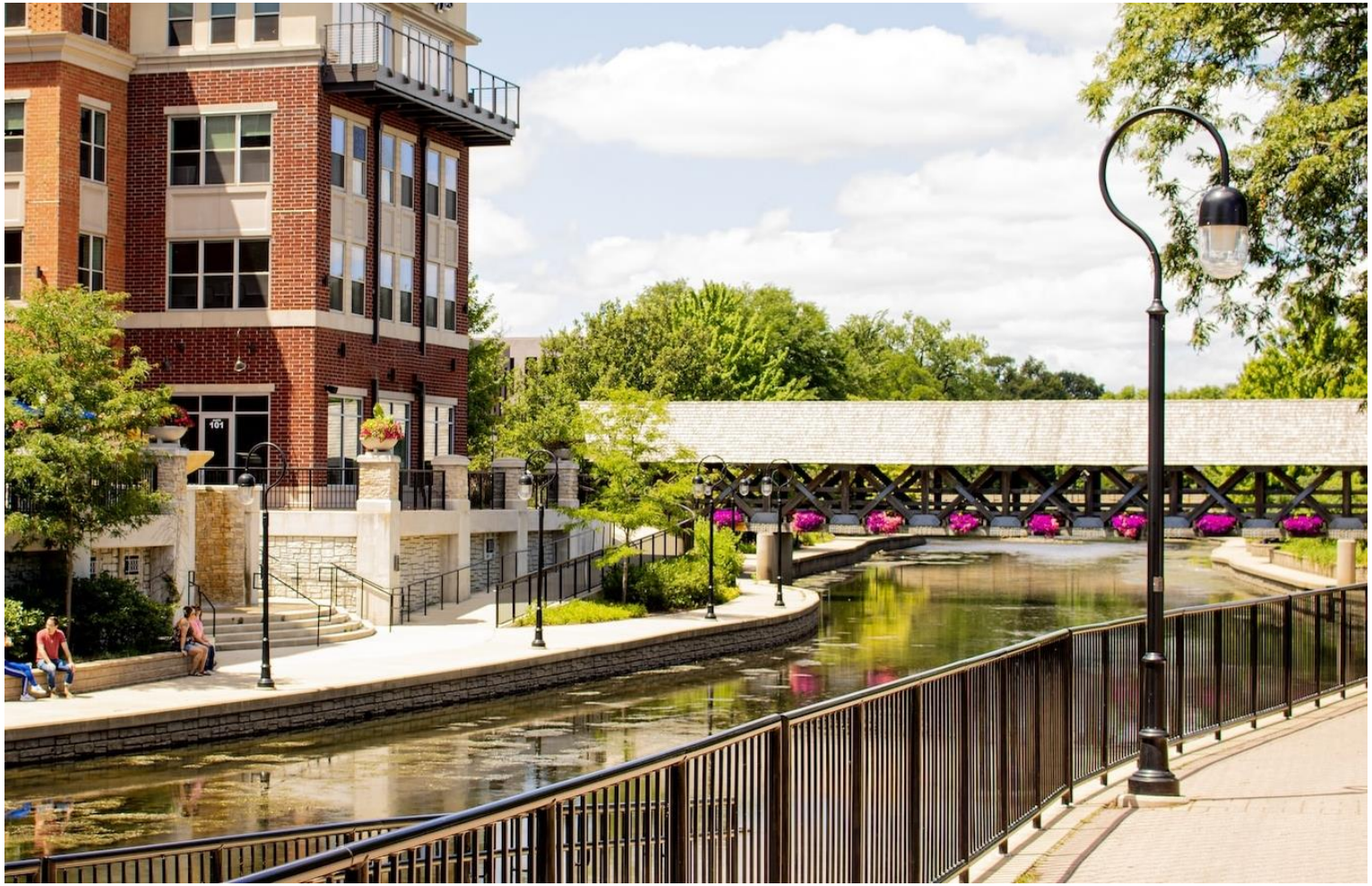
Data is from https://www.gridstatus.io/live

Alternatives – Most Renewables. Lowest Prices



Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, July 2025
Note: U.S. composite represents load-weighted average of prices at selected price hubs.

Comparing the Alternative to the IMEA Contract to



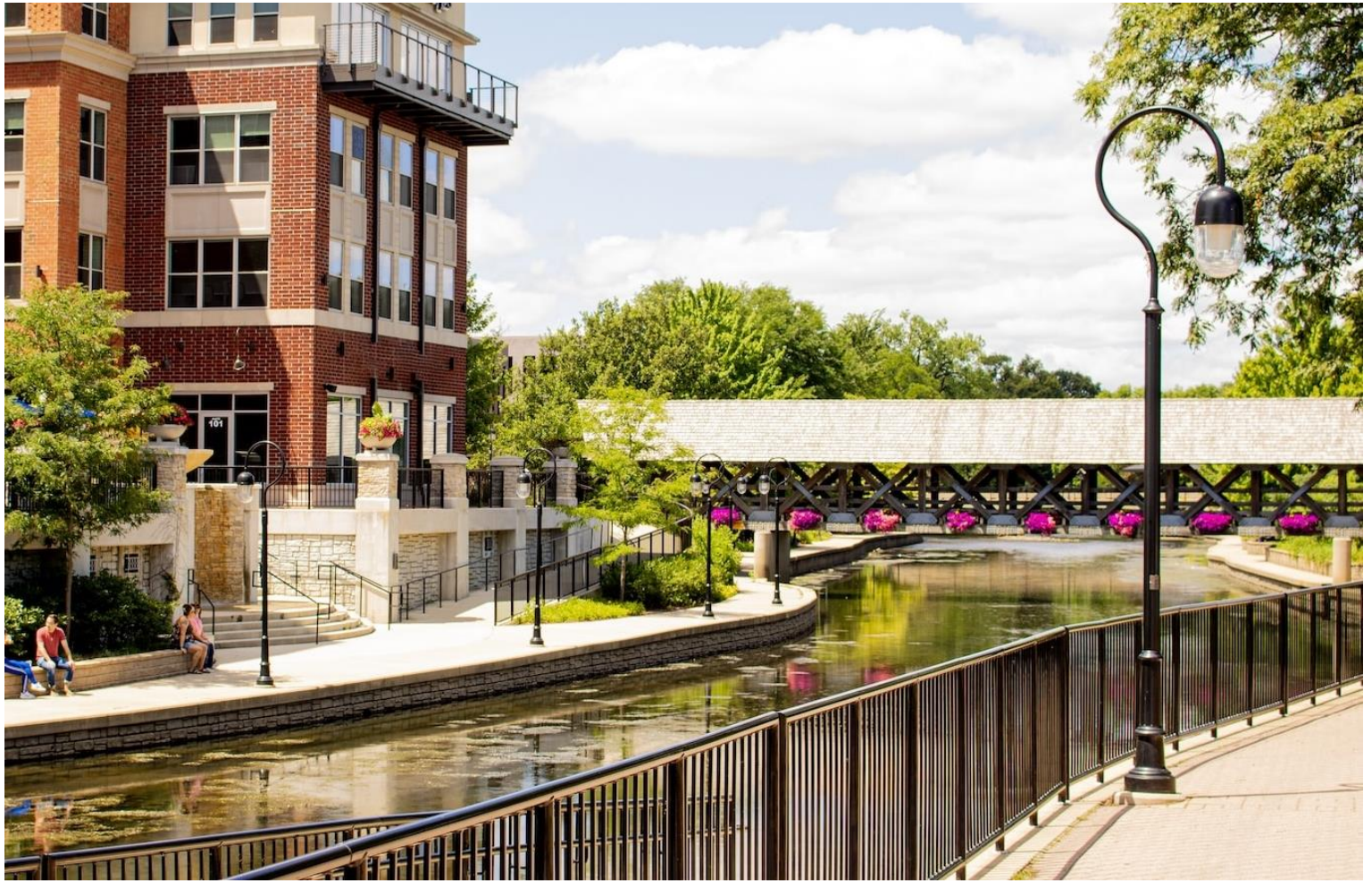
Selection Criteria

Criteria	Alternative	IMEA Contract
Cost		
Business, Jobs, & Economy		
Risk/Flexibility/Control		
Environment		

Other Potential Criteria

- Ability for individuals to select an energy mix
- Scalable
- Billing Options
- Customer Service

Comparing Cost



IMEA's Historical Cost per Megawatt

Clean coal dream a costly nightmare

By MICHAEL HAWTHORNE | mhawthorne@chicagotribune.com
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Chicago Tribune
June 18, 2018

Towns pay a high price for power

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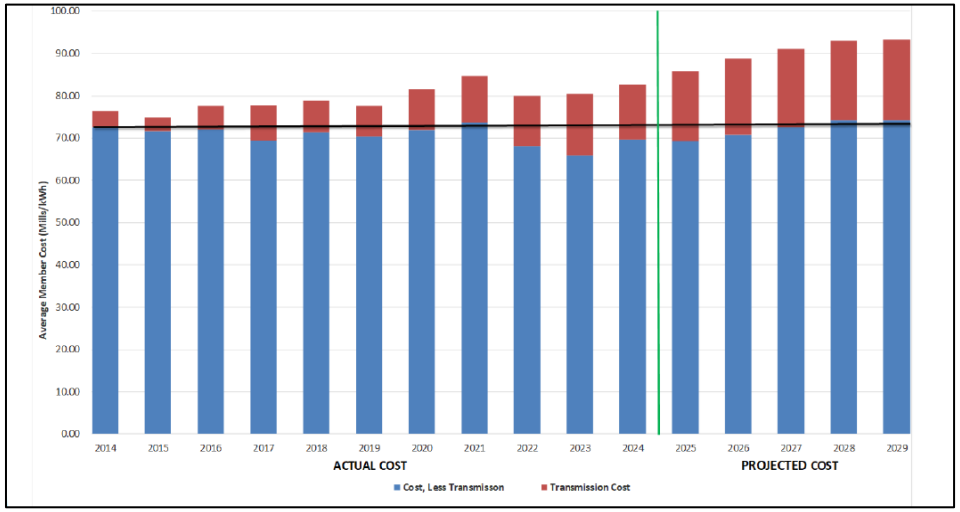
"five Chicago suburbs and more than 200 other Midwestern towns that made a big bet on coal."

"Naperville has been paying a monthly average of $75.04 a megawatt hour this year, for example. By contrast, Chicago pays about $56 a megawatt hour "

Chicago Tribune
August 24, 2021

The **City of Naperville 2024 Annual Report** the cost of electric purchases in 2024 totaled to: $108,622,740 and purchased 1,266,816 MWh which is

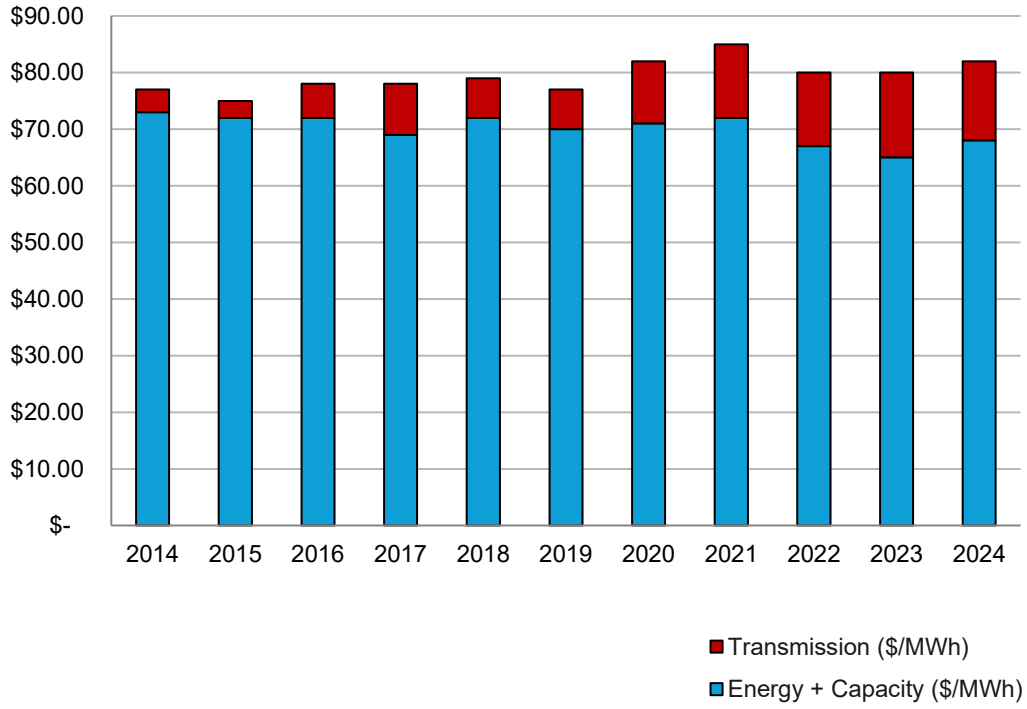
$85.74/MWh



https://naperville.legistar.com/Calendar.aspx
Page 4. IMEA's Presentation to the PUAB
February 27, 2025 Meeting Minutes

Ratepayers could have saved over $300 million

Total Wholesale Cost of Electricity from IMEA (Source: Presentation to Naperville PUAB 2/27/25)



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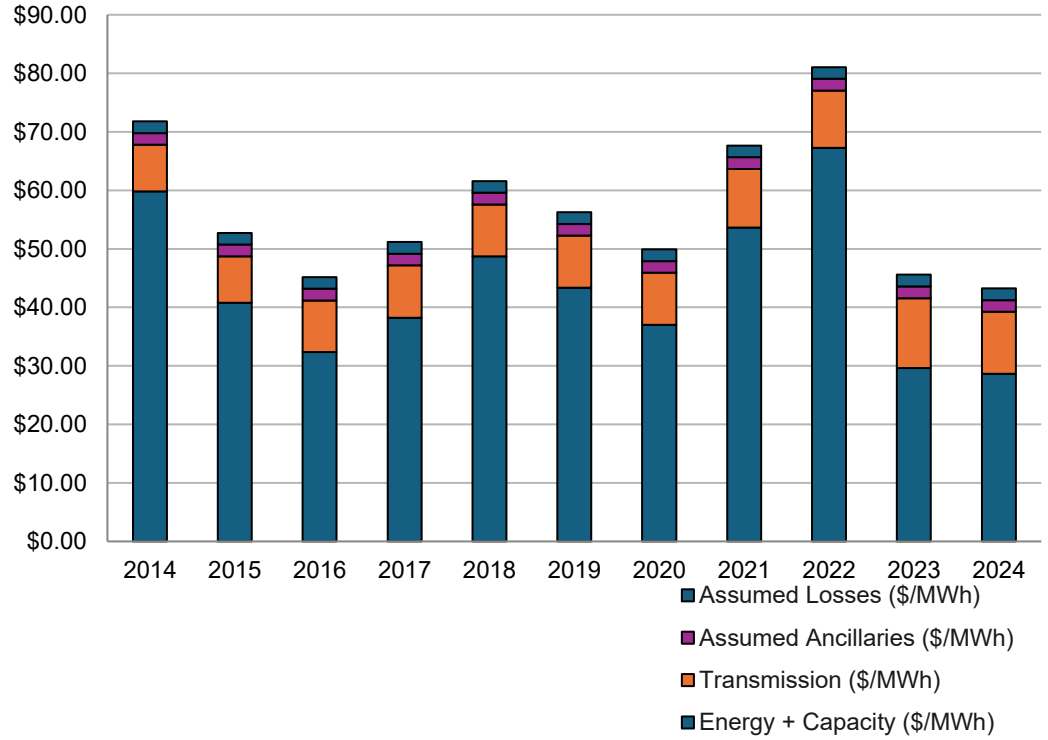


Costs are Purely Speculative and Almost Certainly Wrong

IMEA Costs

No one knows what IMEA will cost because its proposal has **no pricing or price caps.**

We know it has been historically more expensive than market

Alternative Cost

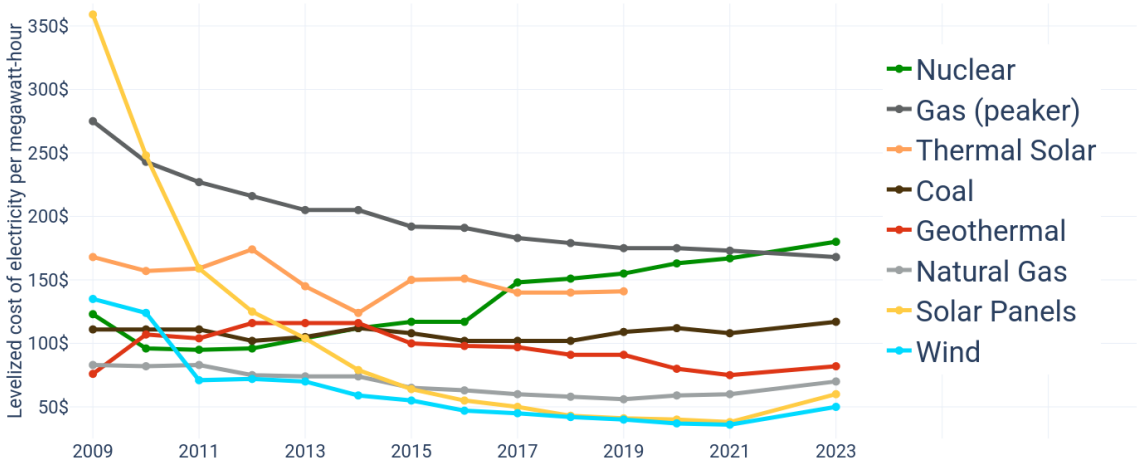
No one knows what the alternative would cost. We don't have any RFP responses, and no one will commit to prices this far out.

We know the term of the Alternative is much shorter so we can exit a contract if it is becoming expensive

https://www.naperville.il.us/services/electric-utility/your-electric-service/imea/

IMEA's Contracts Require It to Burn Coal. Coal is Expensive

Cost is More Expensive than Gas, Solar, or Wind



https://en.wikipedia.org/wiki/Levelized_cost_of_electricity#:~:text=The%20levelized%20cost%20of%20electricity,generation%20on%20a%20consistent%20basis.

Cost has led to Coal Losing Market Share

% of Electricity from Coal	2002	2023	Change
Illinois	44%	15%	-29%
U.S	51%	16%	-35%

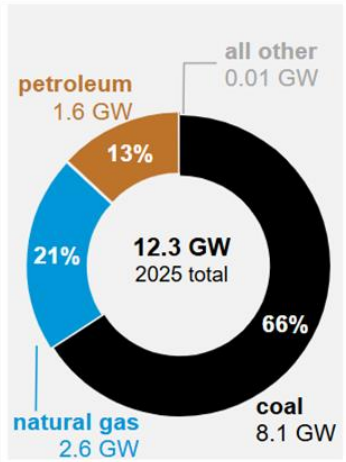
https://www.nytimes.com/interactive/2024/08/02/climate/electricity-generation-us-states.html

Market Share Loss is Accelerating

eia

FEB 25, 2025

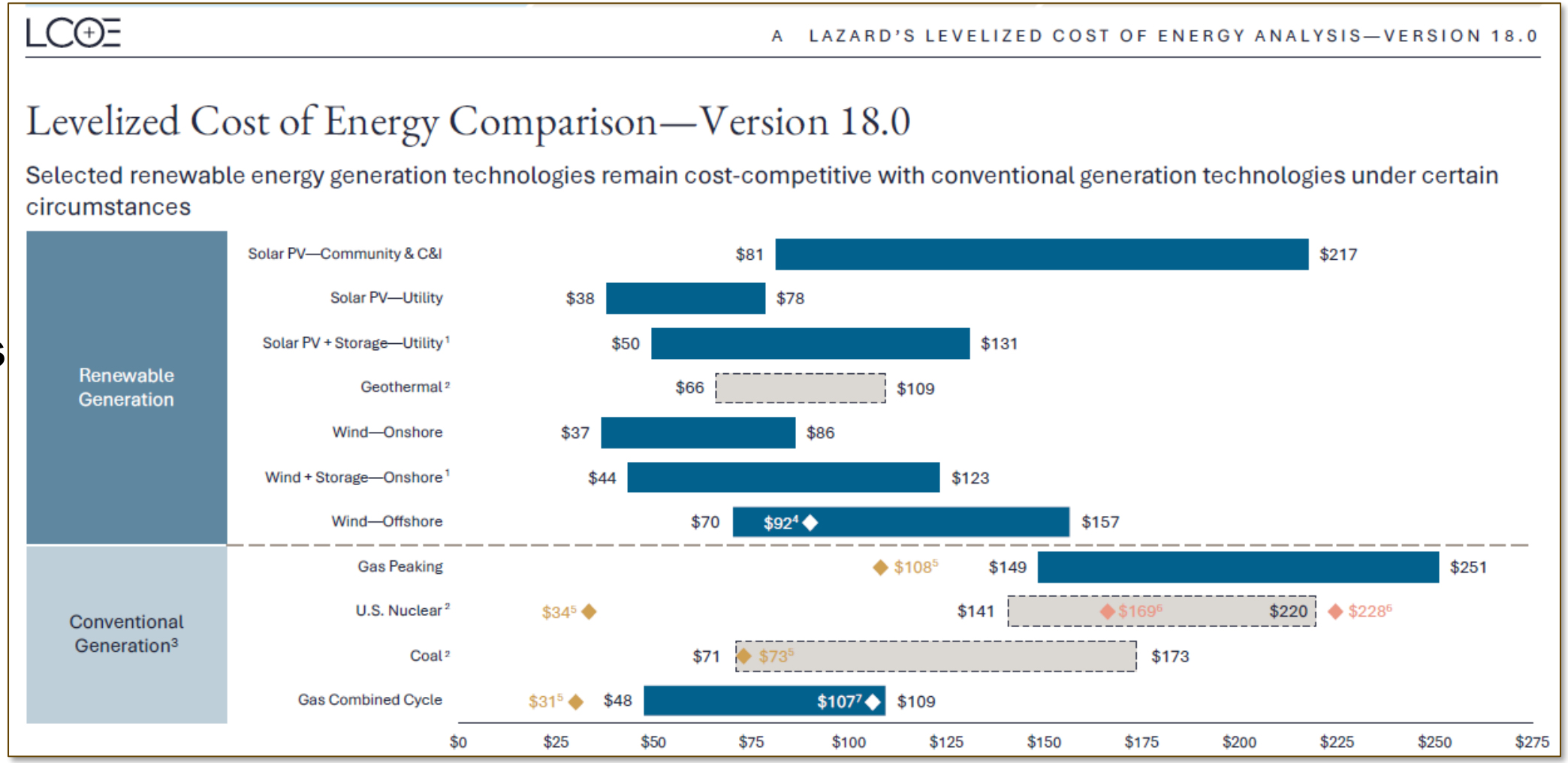
Planned retirements of U.S. coal-fired electric-generating capacity to increase in 2025



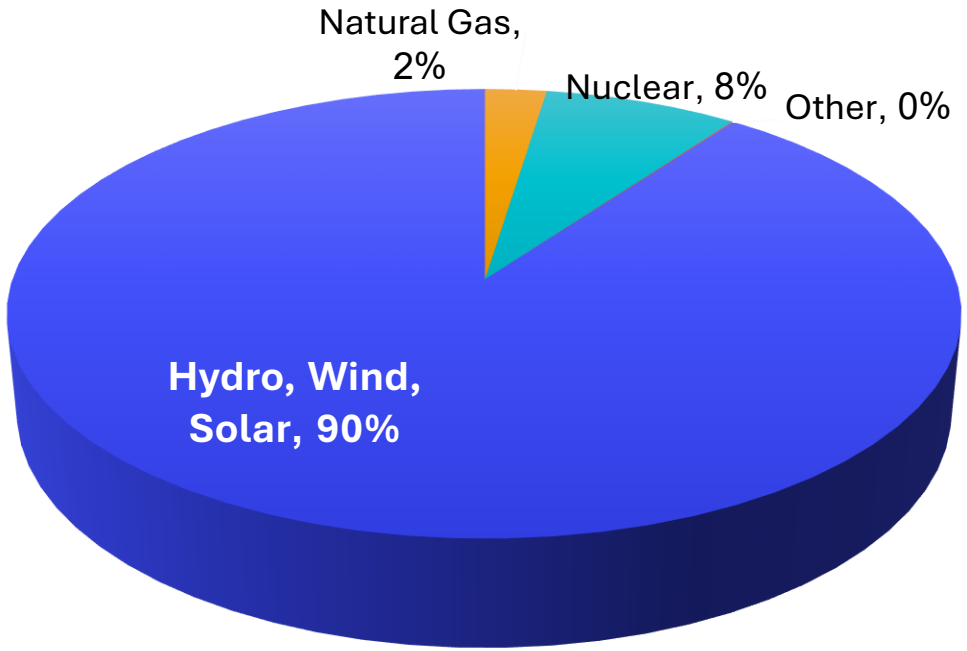
https://www.lazard.com/research-insights/levelized-cost-of-energyplus-lcoeplus/

Cost Comparison

Modern Technologies Cost Less



90% of Power add in 2024 was Renewable



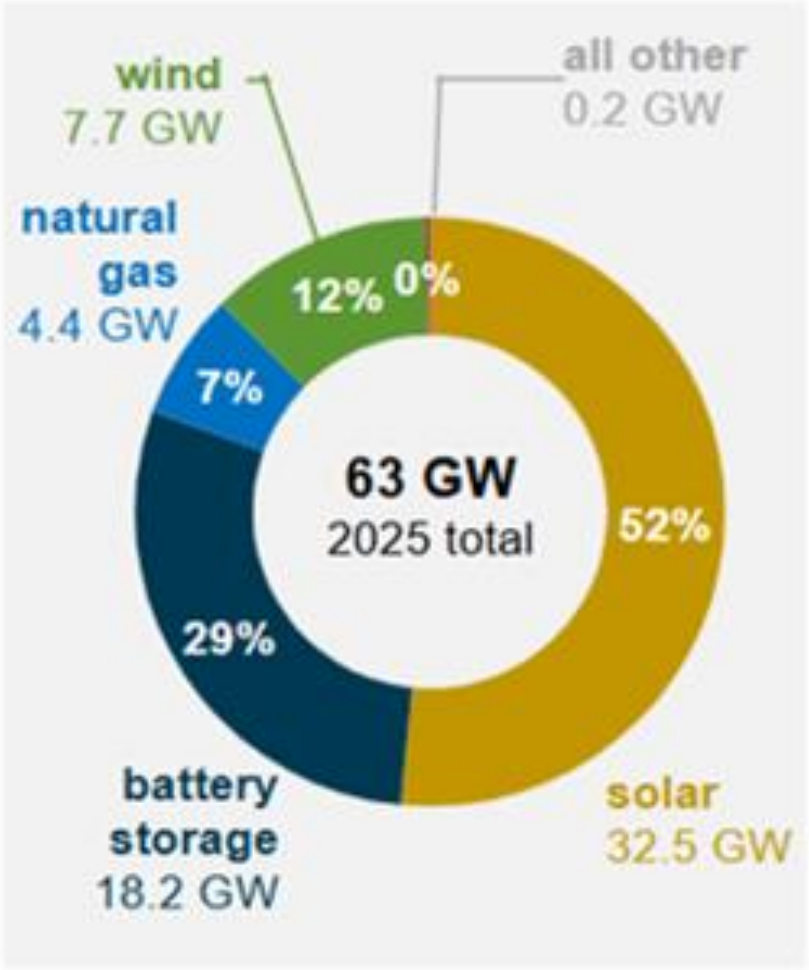
Added to U.S. Grid in 2024

https://www.eia.gov/electricity/data/browser/

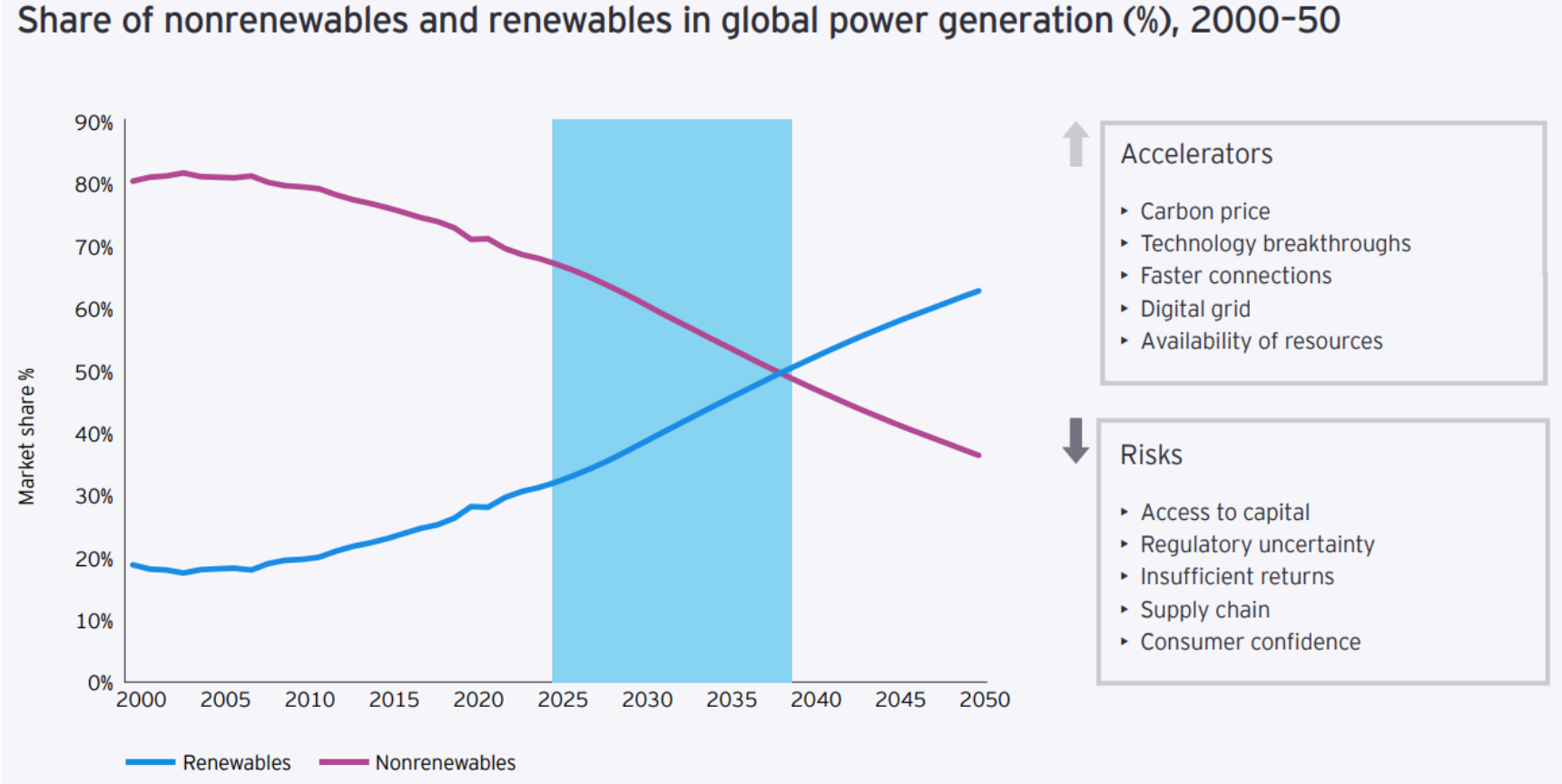
FEBRUARY 24, 2025

eia

Solar, battery storage to lead new U.S. generating capacity additions in 2025



EY reports that globally, “Solar is now 29% lower than the cheapest fossil fuel alternative.”



www.ey.com/content/dam/ey-unified-site/ey-com/en-gl/insights/energy-resources/documents/ey-energy-and-resources-transition-acceleration-report-v4.pdf

Executive Summary—Selected Key Findings from Lazard's 2025 LCOE+

On an unsubsidized $/MWh basis, renewable energy remains the most cost-competitive form of generation. As such, renewable energy will continue to play a key role in the buildout of new power generation in the U.S. This is particularly true in the current high power demand environments, while renewables stand out as both the lowest-cost and quickest-to-deploy generation resources

https://www.lazard.com/research-insights/levelized-cost-of-energyplus-lcoeplus/

Cost – Renewable and Storage Continue to get Cheaper

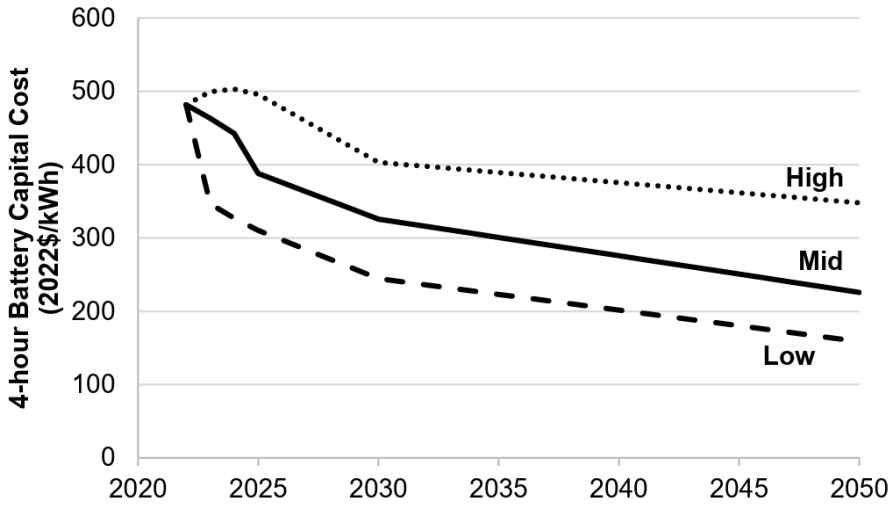
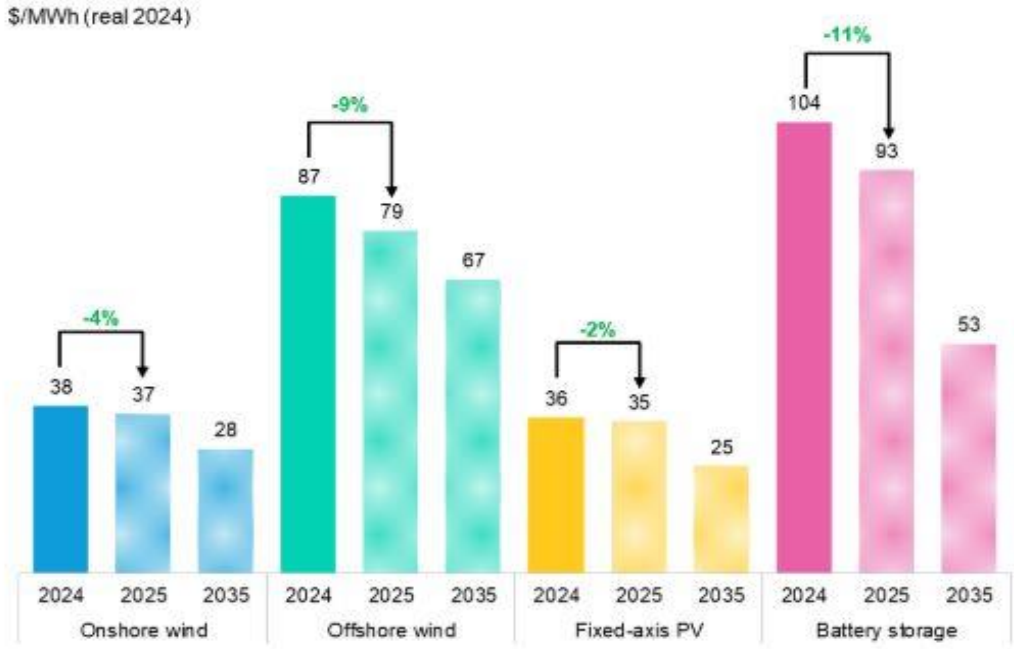


Figure ES-2. Battery cost projections for 4-hour lithium-ion systems.

U.S. Department of Energy Office of Energy Efficiency & Renewable Energy
https://docs.nrel.gov/docs/fy23osti/85332.pdf

Renewable and Storage are less expensive now and will be even less expensive in 2035

Figure 1: Global benchmark levelized cost of electricity, 2024, 2025 and 2035



Source: BloombergNEF. Note: Global benchmarks are capacity-weighted averages using BNEF capacity forecasts. LCOEs reported without subsidies or tax credits. Offshore wind includes transmission costs. Battery storage reflects four-hour systems.

Source - https://about.bnef.com/insights/clean-energy/global-cost-of-renewables-to-continue-falling-in-2025-as-china-extends-manufacturing-lead-bloombergnef/#:~:text=New%20York/%20London%2C%20February%206,supply%20chain%20easing%20in%202025.

IMEA is contractually tied to coal

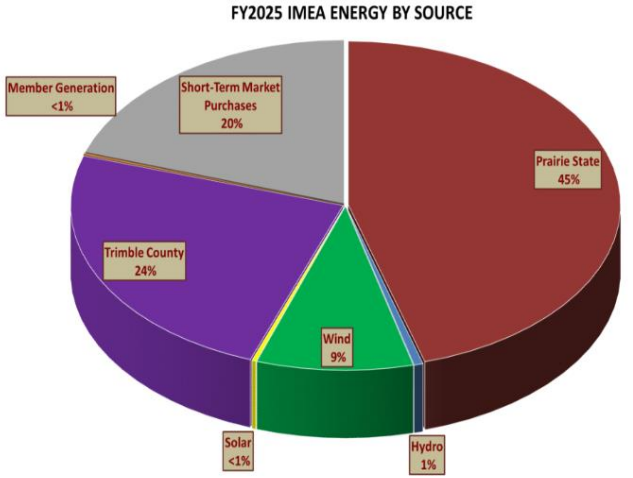
LG&E and KU plan to burn coal for another four decades

By Ryan Van Velzer
Published January 12, 2022 at 10:30 AM EST

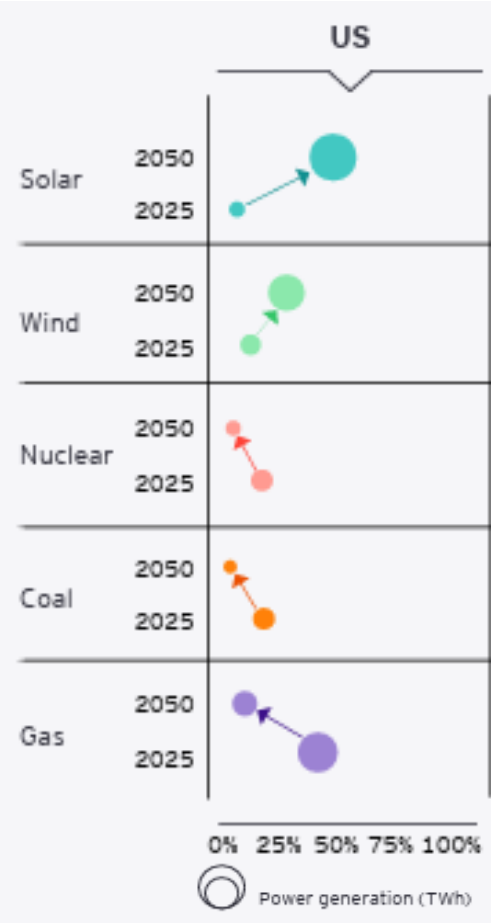
Trimble County is "Planning to burn coal through **2066**."

https://www.lpm.org/news/2022-01-12/lg-e-and-ku-plan-to-burn-coal-for-another-four-decades

Of the electricity IMEA generated in FY25, **86% came from burning coal**



Even without Prairie State, Trimble County means we would be one of the **last cities in America on coal**.



Cost Comparison

Alternative

Power Marketers put price in the contract and compete on price

Contracts don't prevent Naperville from peak shaving

Battery storage can reduce both transmission and capacity charges beyond the Power Marketer's rate

IMEA

The contract has no set prices or price caps.

No one provides prices 10 years out, so any price comparison is purely speculative.

The city's consultant projected IMEA's costs will be 2.8 times higher 15 years into the proposed 20-year contract.[2]

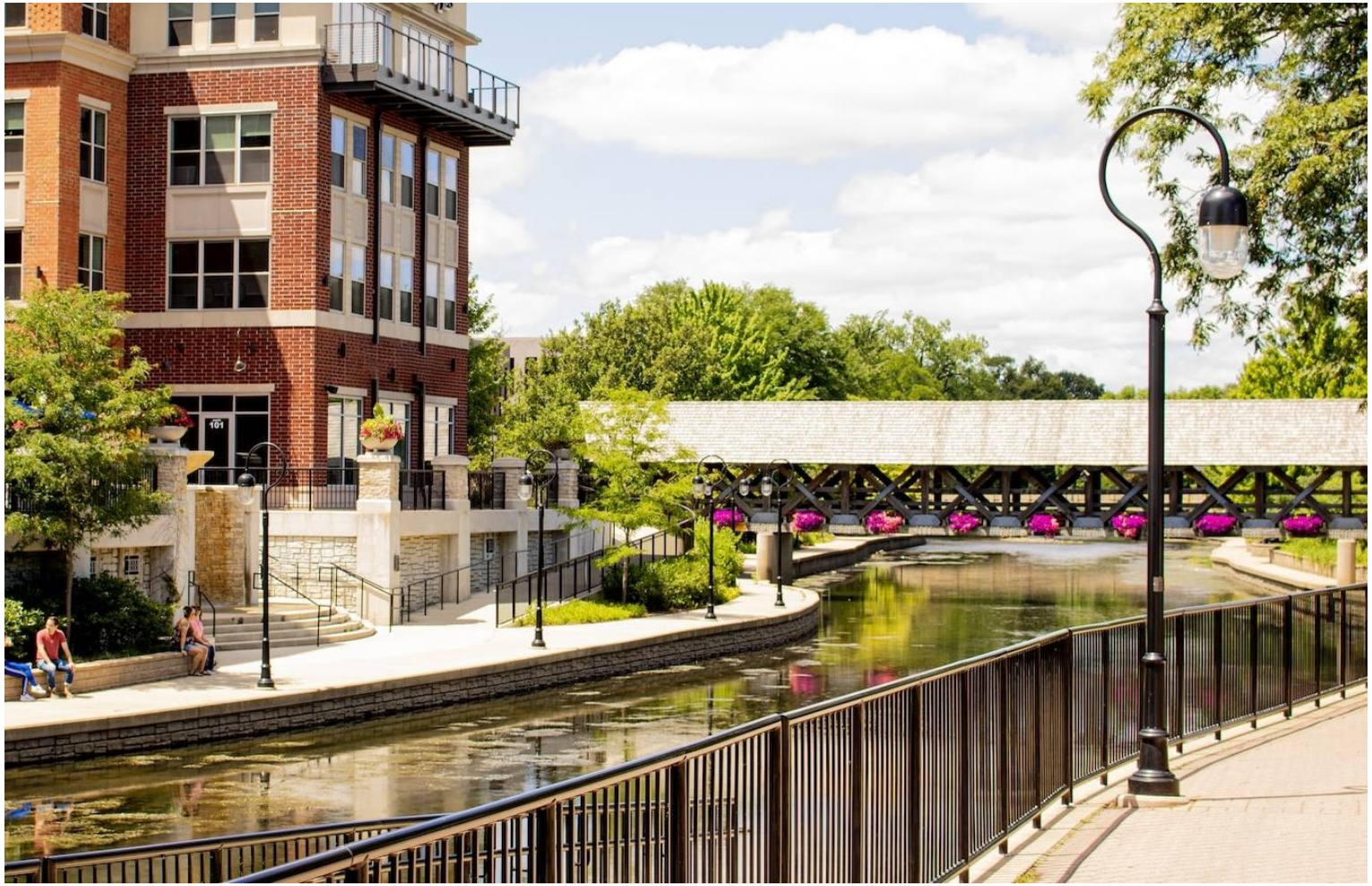
Socialized approach means other communities control what Naperville can do to lower cost (i.e., peak shaving)

Members will have to fund replacing IMEA's largest plant during the contract

Climate Change is contributing to increased insurance costs

No performance exit (i.e., Example-If IMEA is 15% more expensive than average, we can exit)

Comparing Business, Jobs, & Economy



Businesses, Jobs, and Economy

Alternative

Just moving to Illinois average emissions will make it cheaper to meet clean energy commitments without buying as many clean energy credits

Local battery, solar, or wind would keep jobs and spending closer to Naperville

Required reporting to downstream customers will look better with lower emissions

Lower EU Carbon Border Adjustment Mechanism fee

Expected global carbon fees in additional countries will be lower

IMEA

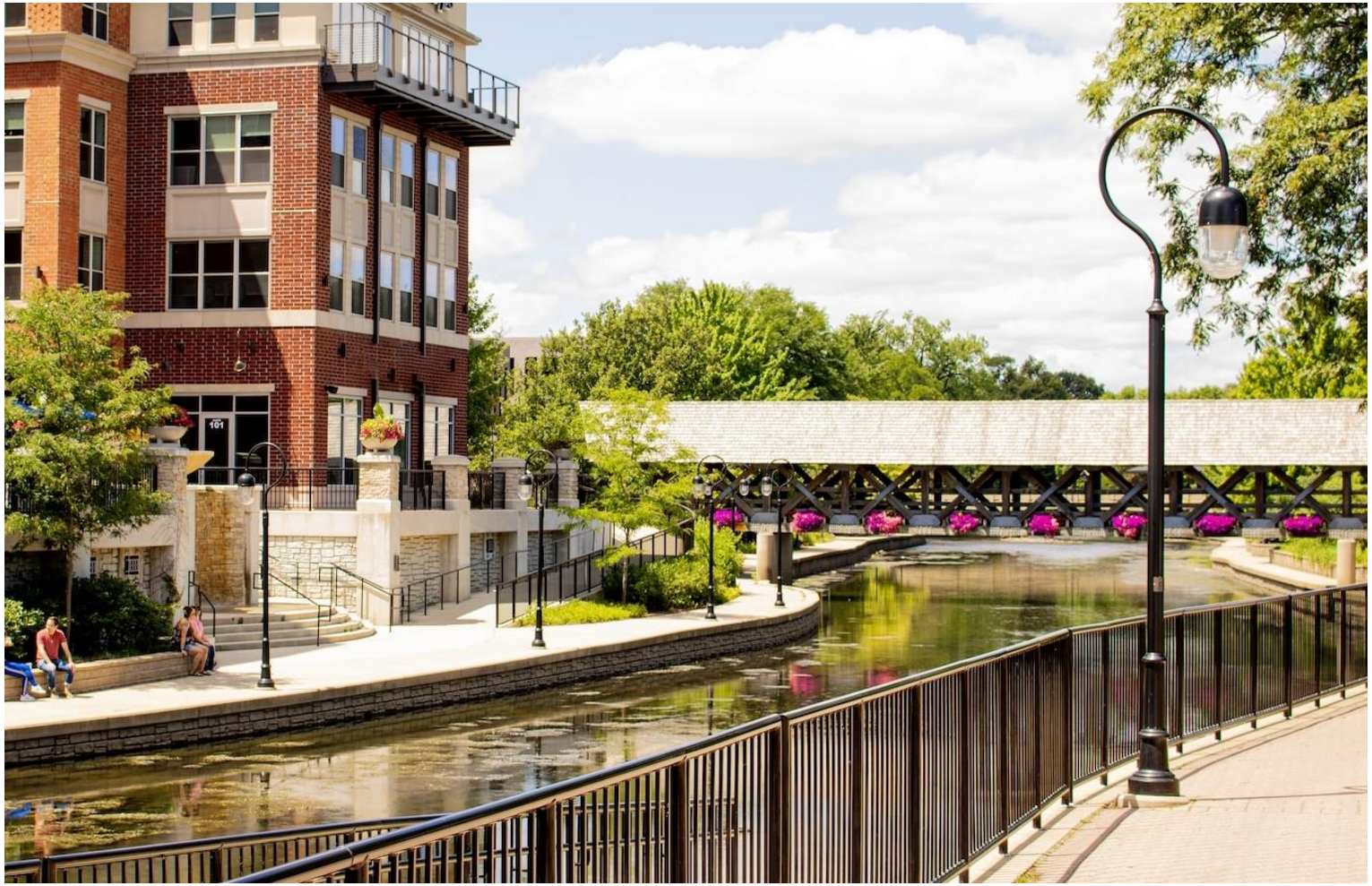
Will definitely send million of our payments out of state

Minimal local presence

Illinois law will limit greenhouse emissions within the state, but the contract doesn't limit IMEA from moving more jobs and spending outside of Illinois

EU companies or ones with a large EU subsidiary report on emissions in earnings statements which will make Naperville less competitive

Risk
Flexibility
Control



Risk Comparison

Alternative

More flexibility as contracts commonly run three to five years

Naperville uses 30 times the electricity of the average IMEA member. We can leverage our size and resources outside of IMEA

Naperville negotiates the terms rather than depending on other communities to agree

If a new technology declines in cost (i.e., VPP, Modular Nuclear), we don't need to wait until 2055 to switch (similar to fracking problem in current contract)

Naperville decides what incentives to give on insulation, EV Chargers, window replacements … rather than IMEA members

IMEA

Naperville **can't leave** the agreement until **2055**

Less Control. Naperville pays **35% of the costs** but gets **3% of the vote**.

IMEA can purchase assets or take on debt, and Naperville **will have to pay regardless of whether we agree**.

IMEA is contractually required to take electricity from its coal plants even if it can get cheaper power elsewhere

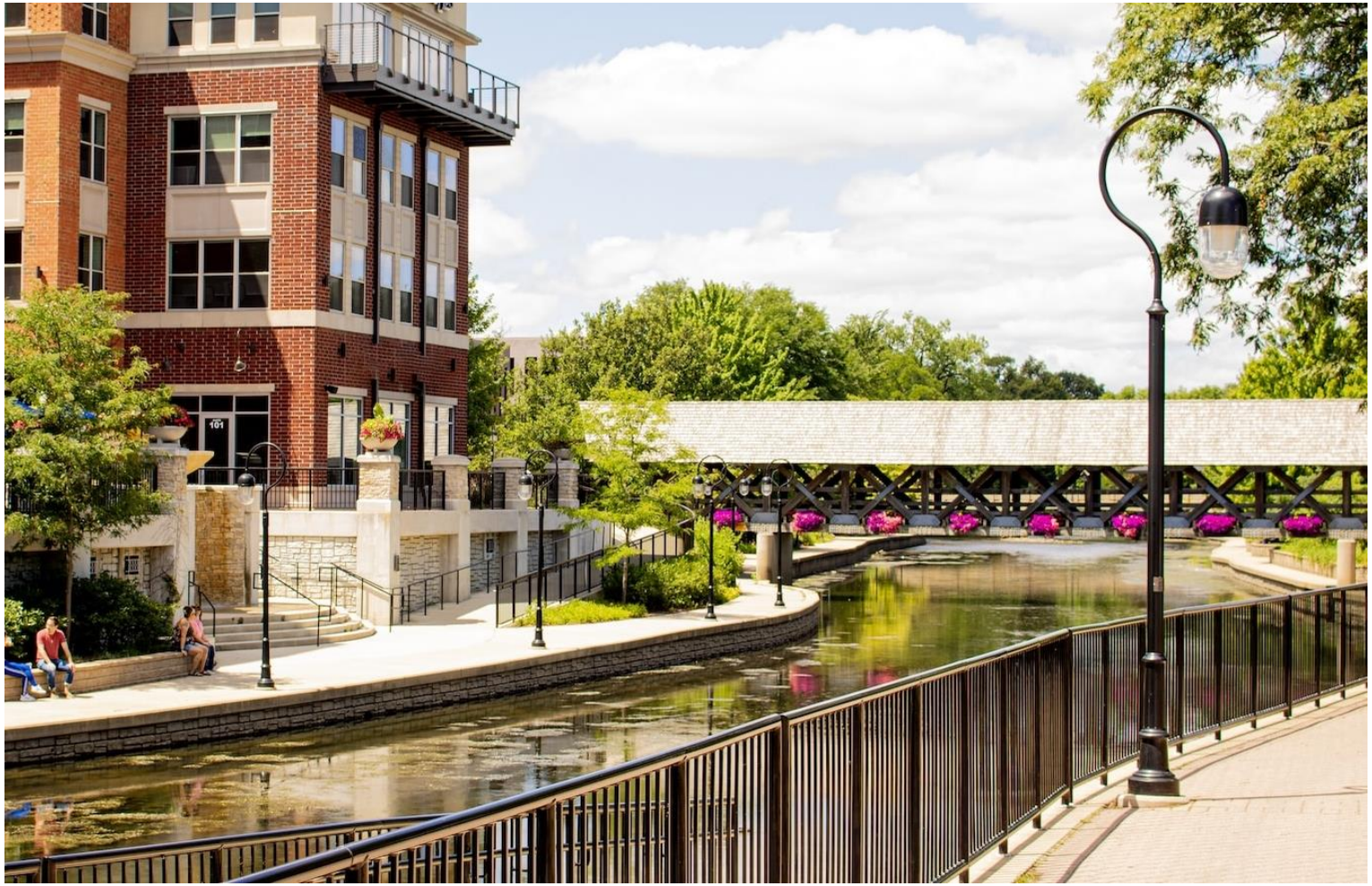
IMEA controls and keeps all assets purchased

If a future federal administration is not coal friendly, IMEA might need to quickly get new generation capabilities

Relative to most power marketers, IMEA depends on a small number of generating assets so the failure of one could be expensive

Most IMEA members and plants are not on the same grid as Naperville

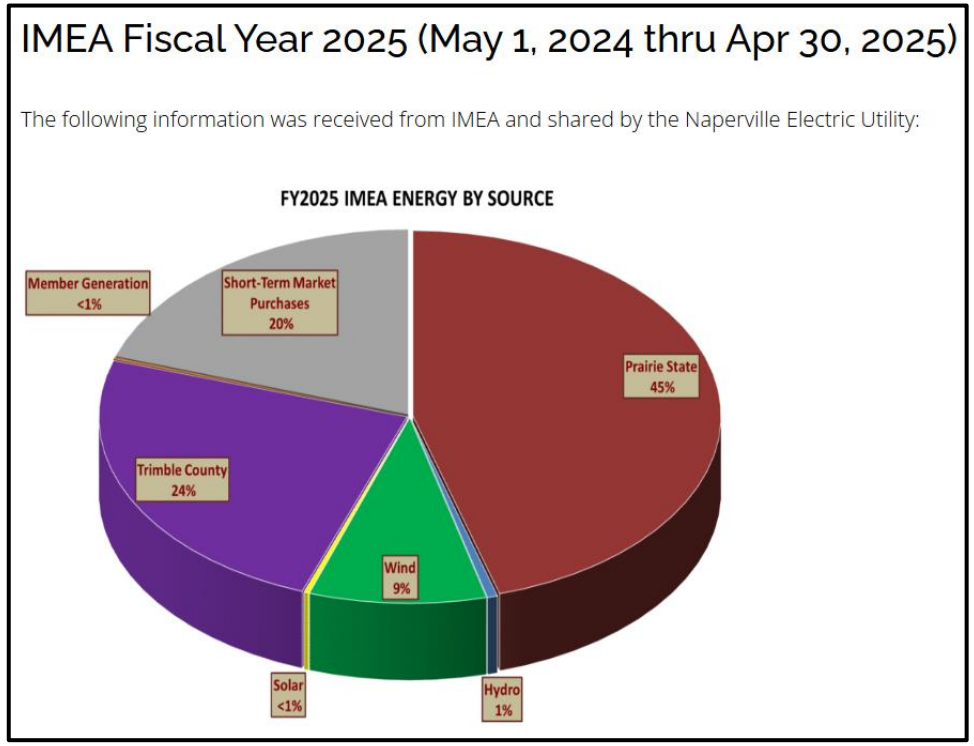
Environment

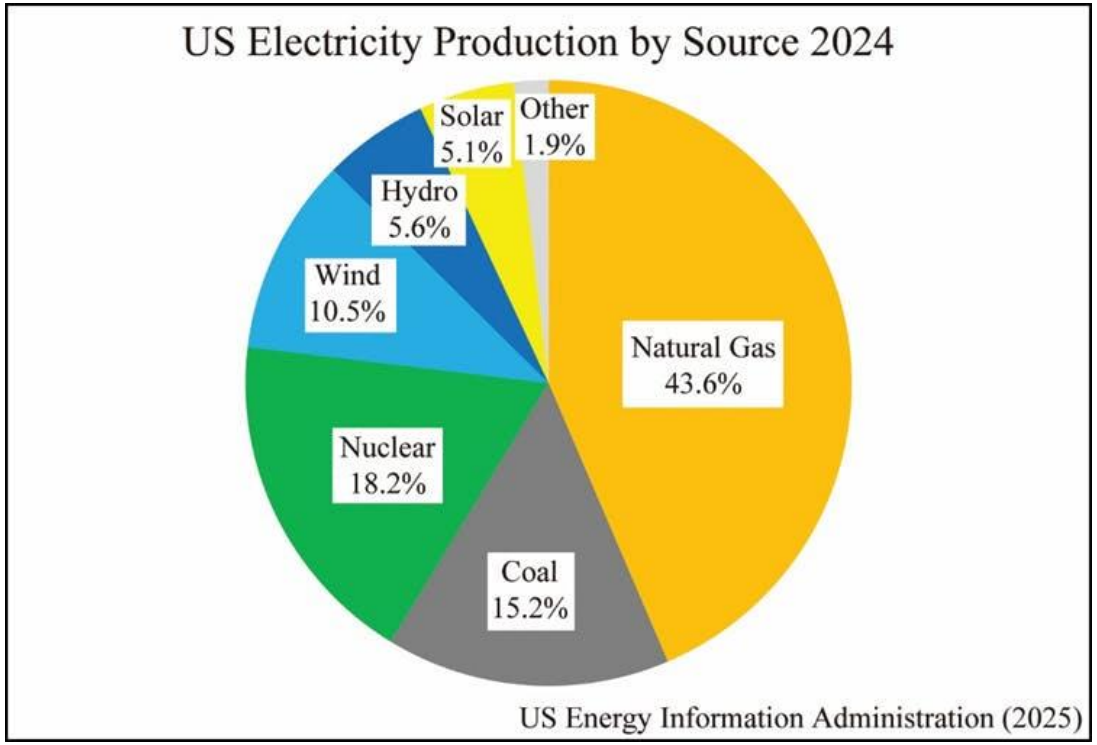


IMEA's Coal Problem

Of the electricity IMEA generated in FY25, **86% came from burning coal**

The federal government said **15%** of the national's electricity came from burning coal





https://cleanenergynaperville.org/did-you-know/naperville-imea-sources-of-electricity/

IMEA's Coal Problem

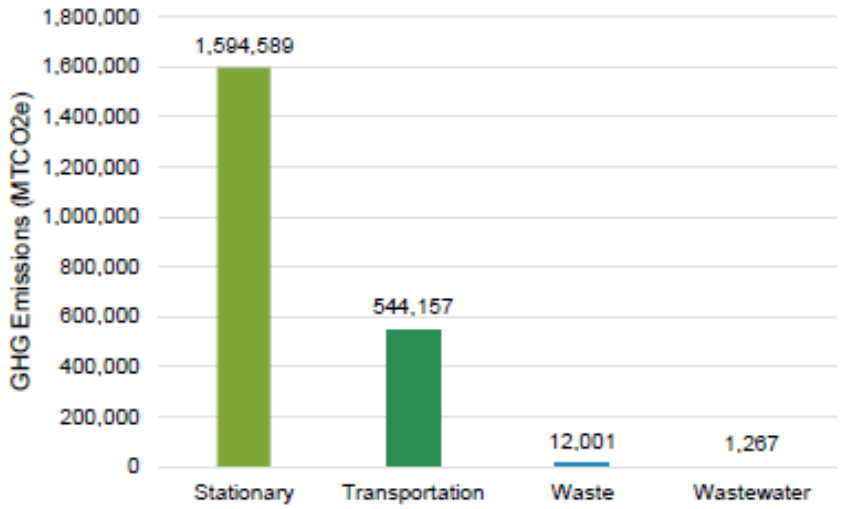
Naperville's electricity generates 3.5 billion pounds of CO_2 annually

IMEA generates 31% more CO_2 than the average energy source on our grid

NAPERVILLE GREENHOUSE GAS INVENTORY

MARCH 2025

Figure 3: Community Emissions Summary by Sector Using IMEA, Naperville, IL (2022)



Electricity from IMEA

Impact of Climate Change on Naperville Today

Chicago Tribune

State Farm to raise Illinois homeowners insurance rates by 27.2% in August

Chicago Tribune

Tornadoes touching down in new areas; season is starting sooner and lasting longer, experts say

A flipped car along 77th Street, June 21, 2021, in Naperville.

Naperville flood cleanup won't be a snap

Water spilled well over the banks of Centennial Beach in Naperville.
Daniel White/dwhite@dailyherald.com

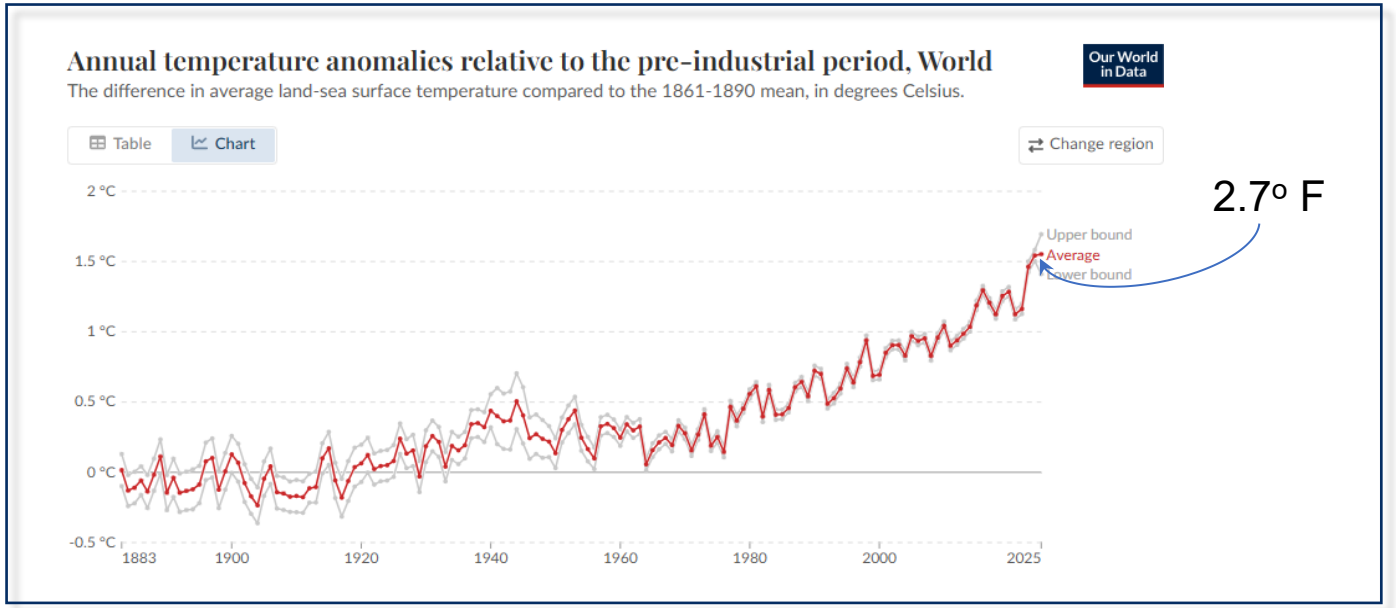
Chicago Tribune

Naperville Sun | Three years after EF3 tornado, Naperville

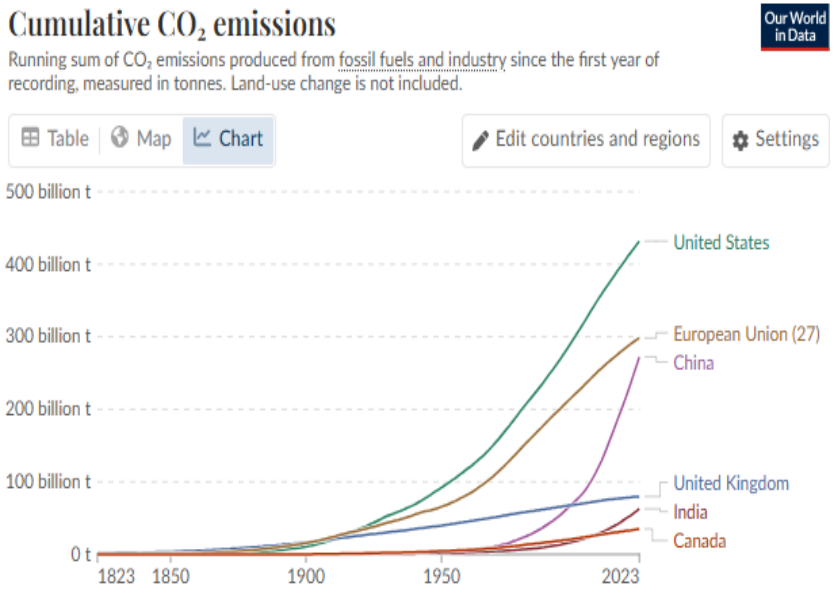
Erin Hooley / Chicago Tribune

Damage from a tornado that struck June 21, 2021, can be see in the area of Princeton Circle in Naperville.

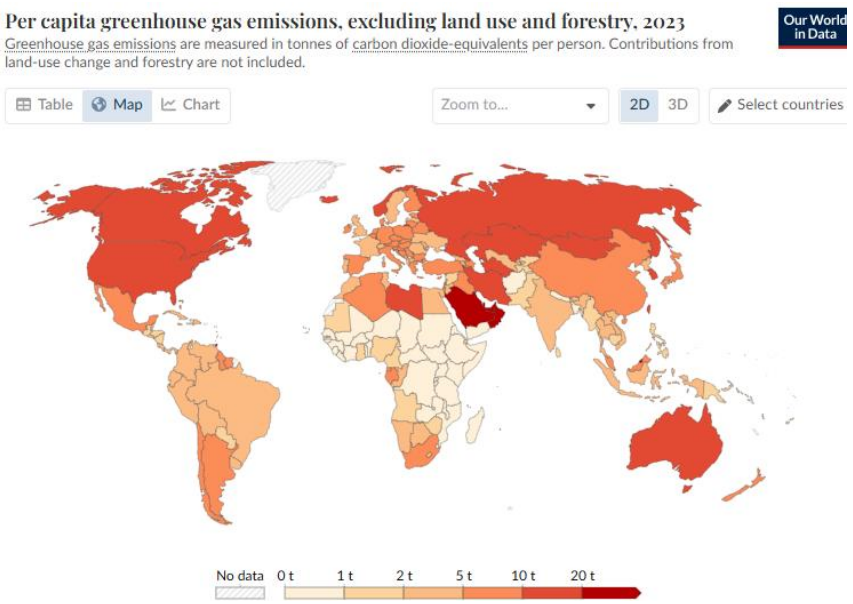
The world is getting hotter. Naperville isn't doing its part.



U.S. has emitted more greenhouse gases than any country



U.S. is currently 6th highest per capital greenhouse gas polluter



With IMEA, Naperville's per watt greenhouse gas emissions are higher than the state or U.S. average

Environmental Impact

Alternative

Just moving to the PJM average would **cut our greenhouse gas emissions by 30%**

Two-thirds of U.S. adults say the country should **prioritize developing renewable energy** sources, such as wind and solar, over expanding the production of oil, coal, and natural gas

IMEA

No clean energy commitments in IMEA's proposal. CES made assumptions that weren't in the contract

IMEA's main plant generates **more greenhouse gasses** than any other plant in Illinois. It is one of the top emitters in the country.

Illinois law will limit greenhouse emissions within the state, but the contract doesn't limit IMEA from **building more plants outside of Illinois**

Blazina, Carrie. "What the Data Says About Americans' Views of Climate Change." *Pew Research Center*, April 14, 2024. https://www.pewresearch.org/short-reads/2023/08/09/what-the-data-says-about-americans-views-of-climate-change/.

Selection Criteria

	Clear Winner	
Criteria	**Alternative**	**IMEA Contract**
Cost	✓	
Business, Jobs & Economy	✓	
Risk/Flexibility/Control	✓	
Environment	✓	

Headlines – IMEA loses the evaluation because

- Cost is likely higher because of unbreakable ties to old, expensive generation
- IMEA sends most of our money out of our community, so it doesn't help our local economy, and the high pollution doesn't attract global companies
- Risk is higher because of a 30-year contract that can't be exited
- Environmental impact isn't even close

Recommended Process

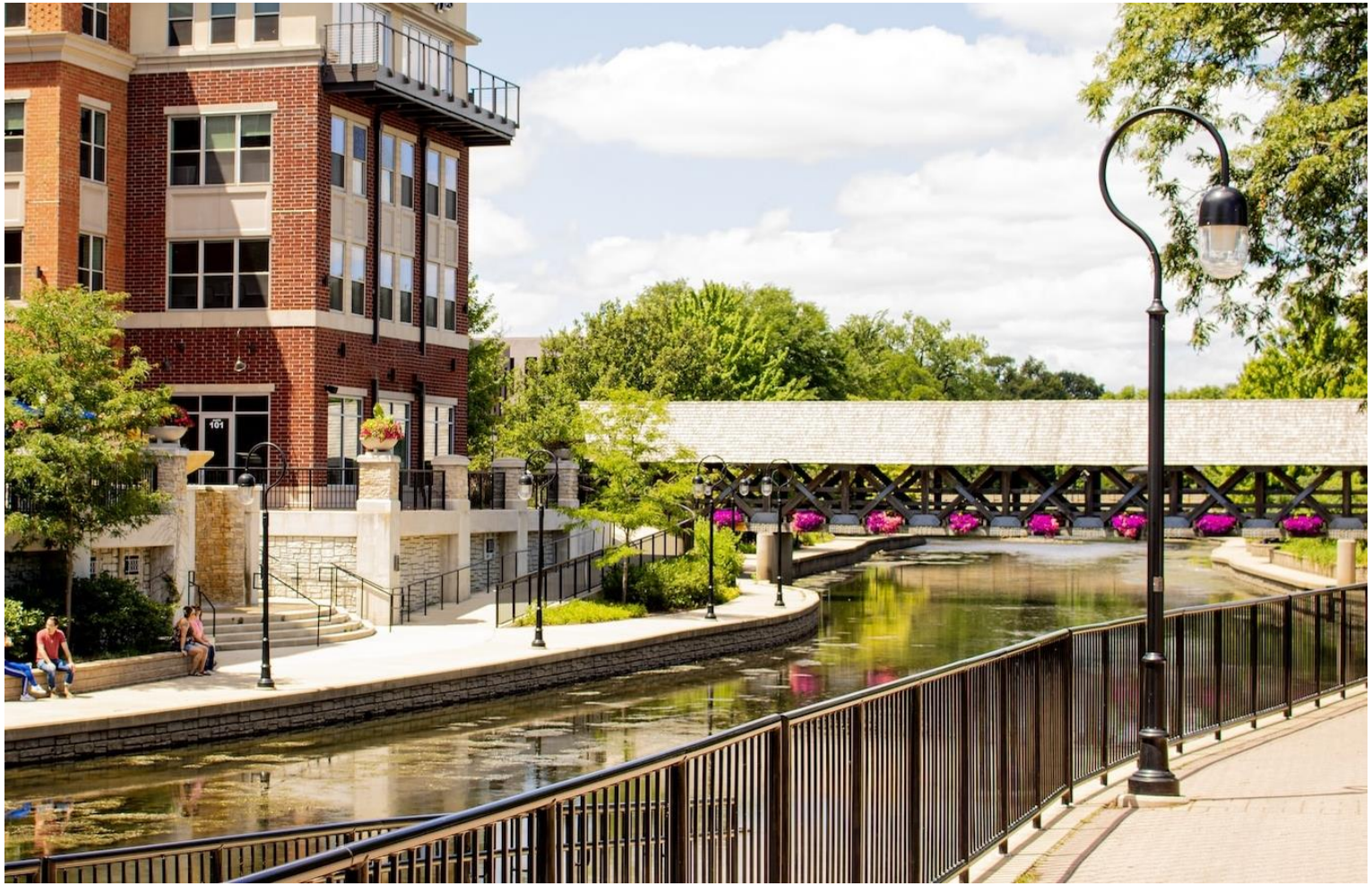
Transparent and Competitive

Our Municipal Code Recommends Competitive Bidding

City contracts should generally be awarded by **competitive bidding** unless it is a small contract, sole-sourced, or an emergency situation.
(Naperville Code1-9B-4)

Key Steps to a Transparent & Competitive Process

Summary



Don’t make a $3 Billion bet with Ratepayers’ money

- **No price information** or price caps. Cost is a top priority for ratepayers, but IMEA’s contract doesn’t have any pricing information.
- **No competitive bids** have been requested. No negotiations have taken place
- **No way to exit** IMEA contract until **2055**.

Fiscally irresponsible to lock in ratepayers without price information from IMEA or any alternatives

Appendix

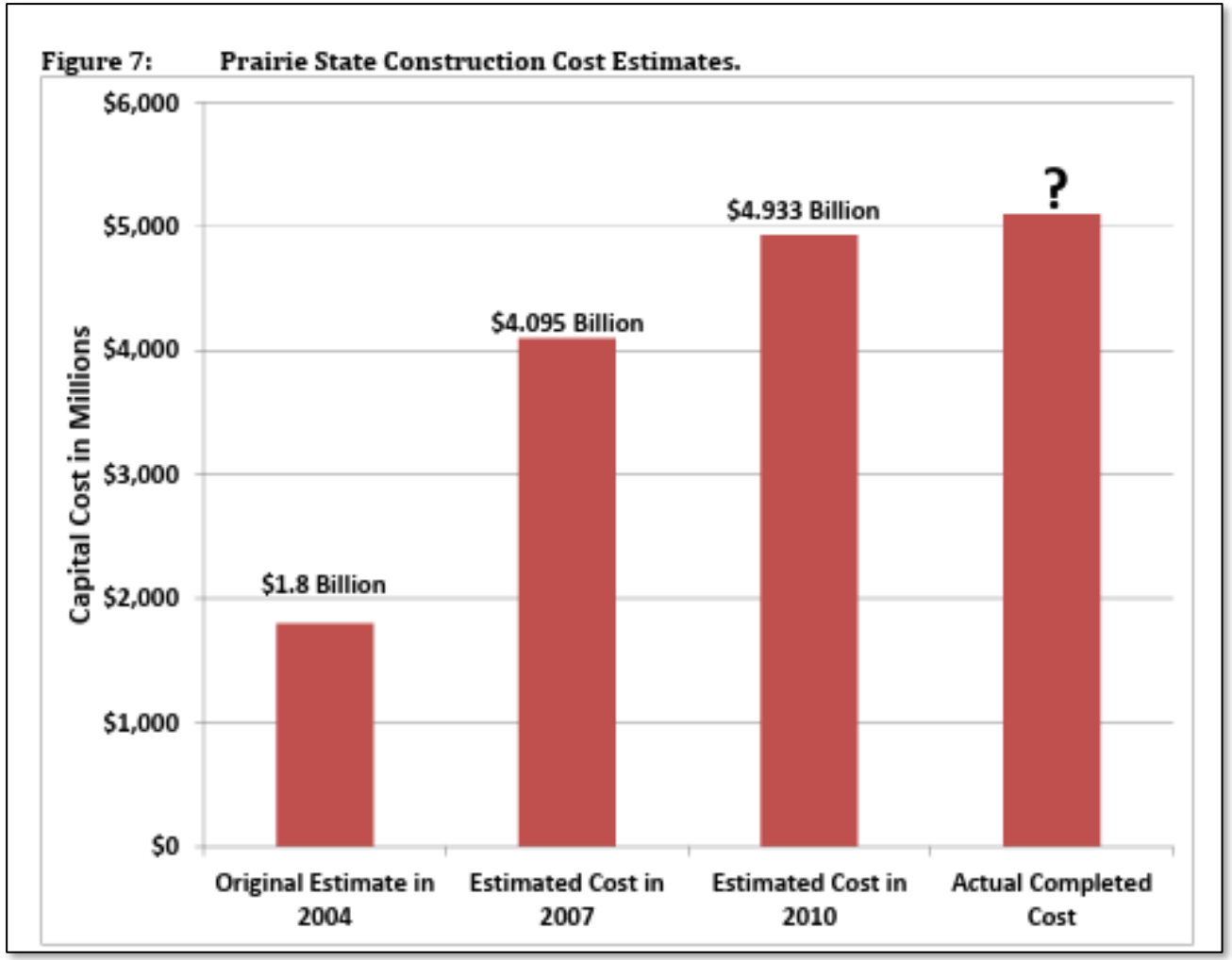
Some Reasons IMEA is so Expensive

THE INSTITUTE FOR
ENERGY ECONOMICS
& FINANCIAL ANALYSIS

The Prairie State Coal Plant:
The Reality vs. the Promise

Tom Sanzillo
Lisa Hamilton
David Schlissel

August 29, 2012



https://ieefa.org/articles/prairie-state-coal-plant-reality-vs-promise

Some of Prairie State's Government Subsidies

GOV. BLAGOJEVICH INVESTS NEARLY $15 MILLION INTO MAKING ILLINOIS COAL MORE COMPETITVE WHILE ALSO CREATING HUNDREDS OF NEW JOBS

Press Release - Wednesday, September 21, 2005

The Governor's Illinois Coal Competitiveness Program, nearly $600,000 in grants will help launch the $2 billion Peabody Energy-Prairie State initiative to build a new power plant

https://www.illinois.gov/news/press-release.4340.html

GOV. BLAGOJEVICH CELEBRATES BEGINNING OF CONSTRUCTION FOR THE PRAIRIE STATE ENERGY CAMPUS

Press Release - Wednesday, October 25, 2006

Gov. Blagojevich announced today a $422,500 grant from the Illinois Department of Commerce and Economic Opportunity's (DCEO) Coal Competitiveness program for a share of the capital costs associated with connecting to the power grid at the nearby Baldwin Substation. The substation upgrades are a part of a $68.5 million interconnect project for Prairie State. The Governor previously invested $422,500 for Phase 1 of the interconnect work.

https://www.illinois.gov/news/press-release.5455.html

Supporting Data on IMEA Cost Comparison (1 of 3)

PJM Network Integration Transmission Service Rates ($/MW-Yr)

Zone	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Effective
AECO	$40,731	$36,810	$ 50,96	$53,775	$56,171	$45,693	$66,741	$79,876	$91,559	$103,398	June
AEP	$41,438	$41,438	$56,991	$59,818	$65,923	$80,306	$95,598	$110,857	$123,925	$125,467	January
APS	$17,895	$17,895	$17,895	$17,895	$17,895	$17,895	$13,930	$18,162	$16,760	$17,115	January
ATSI	$37,014	$43,391	$45,058	$54,689	$55,185	$57,482	$66,399	$67,421	$66,479	$87,624	January
BGE	$25,237	$27,285	$32,851	$35,762	$29,860	$31,311	$40,962	$45,531	$46,400	$55,851	June
ComEd	$31,470	$35,544	$34,392	$34,516	$33,116	$34,280	$37,749	$36,069	$39,796	$38,531	June
Dayton	$13,296	$13,296	$13,296	$13,296	$12,561	$14,456	$19,203	$18,410	$18,687	$32,782	January
Duke	$17,039	$19,881	$20,055	$24,077	$25,840	$32,143	$35,136	$37,718	$40,717	$45,820	June
Duquesne	$38,880	$50,695	$47,892	$51,954	$49,200	$53,072	$51,001	$60,851	$63,330	$63,699	June
Dominion	$42,902	$41,245	$47,376	$52,457	$47,471	$54,914	$61,729	$62,645	$64,053	$68,235	January

Electricity Transmission Competition Coalition

Source: PJM Transmission Owners' Annual Transmission Formula Rate Informational Filings

1

8. In accordance with Paragraph 7 above, wholesale distribution service shall be provided to the customers identified below at the identified monthly/annual charge corresponding to such customer:

Customer	Charge
Town of Winnetka	$164,080/year
Town of Rock Falls	$166,082/year
City of Naperville	$58,540.79/month
City of St. Charles	$181,479/month
McHenry Battery	$131,824.87/year
Marengo Battery	$ 7,367.24/month
Magid Glove & Safety Mfg. Co.	$ 3,921.02/month
Sterling Rail LLC	$ 2,620.91/month

9. In accordance with Paragraph 3 above, the annual distribution loss factors identified below shall apply to wholesale distribution service provide to the identified customers:

Customer	Annual Distribution Loss Factor
Town of Winnetka	0.30%
Town of Rock Falls	0.83%
The City of Geneva	2.20%
City of Naperville	0.09%
City of St. Charles	1.94%

Supporting Data on IMEA Cost Comparison (2 of 3)

	Naperville Usage		COMED Pricing History										
Year	Energy (kWh)	Peak Demand (MW)	Average LMP ($/MWh)	Capacity ($/MW-Day)	NITs / Transmission ($/MW-yr)	Energy + Capacity ($/MWh)	Transmission NITs ($/MWh)	Regional Transmission Expansion Charge	Comed Distribution (2024 used as baseline)	Assumed Ancillaries ($/MWh)	Assumed Losses ($/MWh)	Transmission + Distribution +Ancillaries	Total Wholesale Cost of Electricity ($/MWh)
2014	1,357,490,430	365.00	$ 48.21	$ 125.99	$ 24,025.00	$ 60.57	$ 6.46	$ 0.70	$ 0.52	$ 1.44	$ 0.04	$ 9.16	$ 69.73
2015	1,357,490,430	322.00	$ 28.21	$ 136.00	$ 31,470.00	$ 39.98	$ 7.46	$ 0.61	$ 0.52	$ 1.36	$ 0.03	$ 9.98	$ 49.97
2016	1,384,411,276	328.00	$ 27.00	$ 59.37	$ 35,544.00	$ 32.13	$ 8.42	$ 0.61	$ 0.51	$ 1.36	$ 0.02	$ 10.93	$ 43.06
2017	1,319,954,600	352.00	$ 26.84	$ 120.00	$ 34,392.00	$ 38.52	$ 9.17	$ 0.69	$ 0.53	$ 1.43	$ 0.02	$ 11.85	$ 50.37
2018	1,337,939,416	343.6	$ 28.57	$ 215.00	$ 34,516.00	$ 48.72	$ 8.86	$ 0.66	$ 0.53	$ 1.41	$ 0.03	$ 11.49	$ 60.21
2019	1,275,478,304	342	$ 23.53	$ 202.77	$ 33,116.00	$ 43.37	$ 8.88	$ 0.69	$ 0.55	$ 1.44	$ 0.02	$ 11.58	$ 54.96
2020	1,257,940,516	325.8	$ 19.03	$ 190.40	$ 34,280.00	$ 37.03	$ 8.88	$ 0.67	$ 0.56	$ 1.41	$ 0.02	$ 11.54	$ 48.57
2021	1,286,894,022	340.7	$ 34.76	$ 195.55	$ 37,749.00	$ 53.66	$ 9.99	$ 0.68	$ 0.55	$ 1.43	$ 0.03	$ 12.68	$ 66.34
2022	1,255,483,584	340.7	$ 60.43	$ 68.96	$ 36,069.00	$ 67.26	$ 9.79	$ 0.70	$ 0.56	$ 1.45	$ 0.05	$ 12.55	$ 79.81
2023	1,208,353,417	340	$ 25.88	$ 34.13	$ 39,796.00	$ 29.39	$ 11.20	$ 0.73	$ 0.58	$ 1.47	$ 0.02	$ 14.00	$ 43.39
2024	1,252,093,000	340	$ 25.78	$ 28.92	$ 38,531.00	$ 28.65	$ 10.46	$ 0.70	$ 0.56	$ 1.45	$ 0.02	$ 13.20	$ 41.84
2025	1,266,816,000	340	$ 25.78	$ 269.92	$ 38,531.00	$ 52.22	$ 10.34	$ 0.69	$ 0.55	$ 1.44	$ 0.02	$ 13.05	$ 65.27

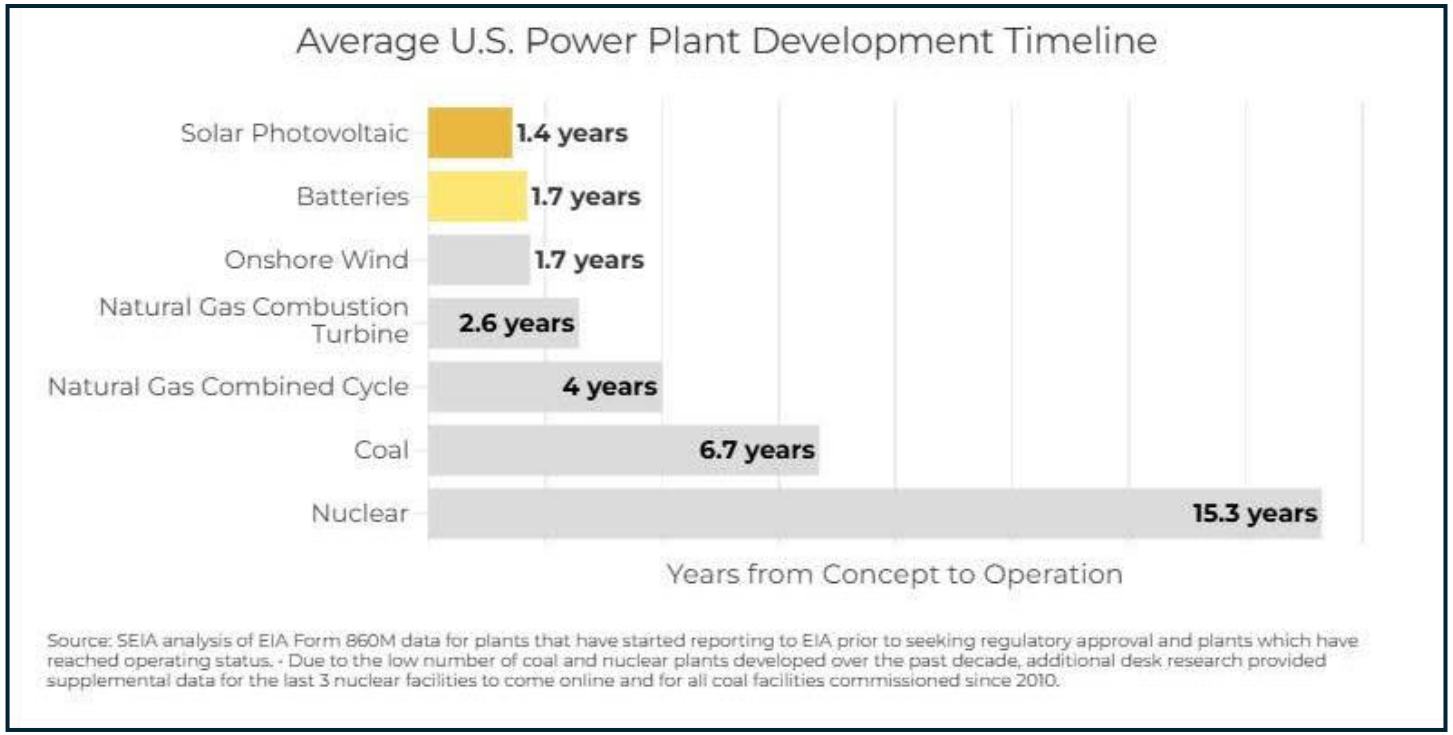
Supporting Data on IMEA Cost Comparison (3 of 3)

IMEA (Dollar values are approximated based slide 4 of IMEA presentation to Naperville PUAB on 2/27/2025)				Difference between IMEA and PJM Wholesale	
Energy + Capacity ($/MWh)	Transmission ($/MWh)	Total IMEA Cost of Electricity ($/MWh)			
					Transmission Premium
$ 73.00	$ 4.00	$ 77.00		$ 9,869,016	$ (6,998,153.58)
$ 72.00	$ 3.00	$ 75.00		$ 33,983,524	$ (9,476,902.13)
$ 72.00	$ 6.00	$ 78.00		$ 48,372,388	$ (6,818,343.31)
$ 69.00	$ 9.00	$ 78.00		$ 36,468,215	$ (3,763,471.04)
$ 72.00	$ 7.00	$ 79.00		$ 25,137,855	$ (6,004,844.07)
$ 70.00	$ 7.00	$ 77.00		$ 28,115,151	$ (5,844,546.44)
$ 71.00	$ 11.00	$ 82.00		$ 42,056,335	$ (677,036.93)
$ 72.00	$ 13.00	$ 85.00		$ 24,012,120	$ 405,904.97
$ 67.00	$ 13.00	$ 80.00		$ 239,021	$ 566,049.21
$ 65.00	$ 15.00	$ 80.00		$ 44,243,280	$ 1,208,027.77
$ 68.00	$ 14.00	$ 82.00		$ 50,282,020	$ 1,007,625.53
			Total Premium Paid to IMEA 2014-24	$ 342,778,926	$ (36,395,690.01)

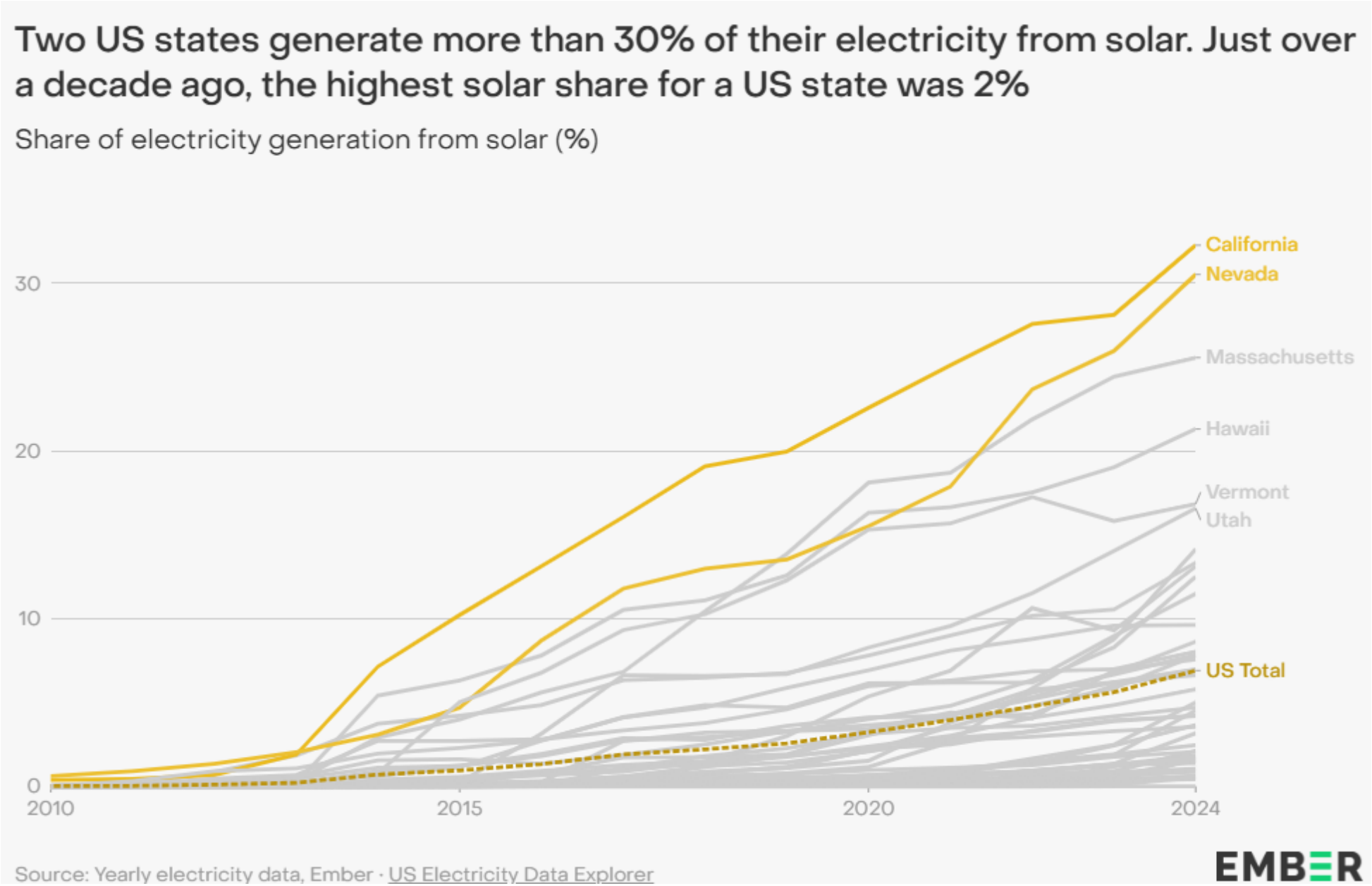
Historical penalty for having IMEA over the wholesale market for the past 10 years

Deadlines to Create "Fake Leverage"

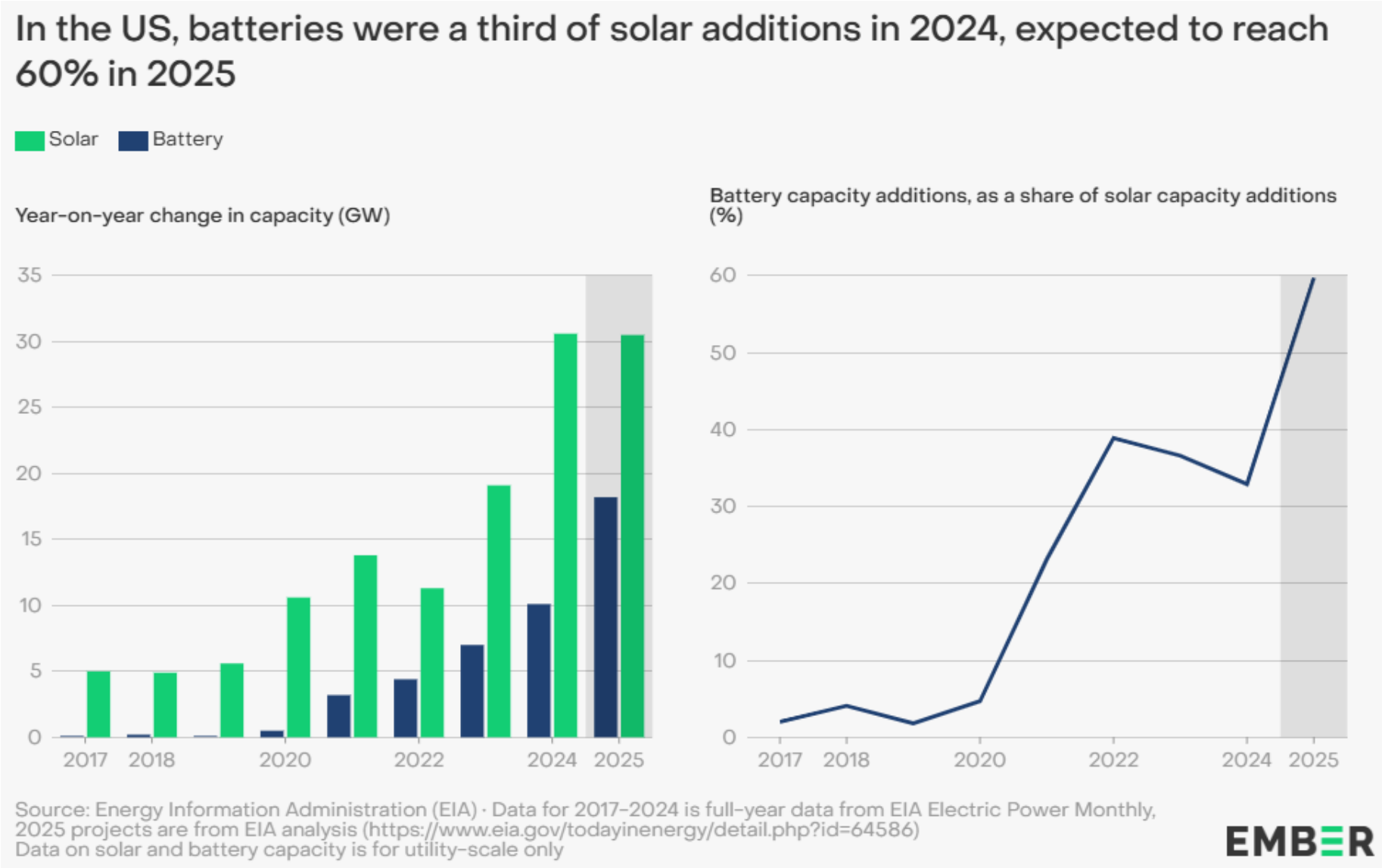
- IMEA stated that the reason for the long notice period is that over 10 years' lead time is required for generation assets.
- Industry averages are much less than 10 years (See chart)
- We spoke with three of IMEA's competitors, who all stated that they would wait years before discussing a 2035 renewal.
- Mark Pruitt, one of our consultants, stated outside of this contract that he has never seen anyone sign an electricity contract this far in advance.



Technology Advancements Quickly Shifting Energy Markets



Falling Battery Prices Lead to the Majority of Solar Installations Having Storage



Example SWOT Analysis that Could Be Part of an Energy Strategy

Strength	Weakness
1. Naperville owns a reliable distribution 2. The city's finances are in good shape 3. Naperville is a large electricity consumer, so more providers are interested in bidding 4. Naperville's high adoption of EVs means that with cleaner electricity, we could lower our transportation emissions	1. Naperville owns very little generation capacity 2. Naperville doesn't have contract flexibility to leave IMEA for 10 years. 3. IMEA members approval is required for some generation and storage options. 4. Naperville doesn't have inexpensive land to build a solar farm within city limits
Opportunity	**Threat**
1. Utility-scale solar and wind prices are consistently declining 2. Utility-scale battery prices have been steeply declining which could drive down capacity costs 3. PJM has increased its spending to reduce the backlog of energy projects trying to connect to the grid 4. Technical advances in electricity generation and distribution are accelerating (i.e., Small Modular Reactors, Smart Grids, Virtual Power Plants) 5. Western Illinois gets higher than average winds	1. Increased demand could lead to higher prices 2. Capacity costs could increase as more intermittent sources are added to the grid 3. Federal government could increase taxes on renewables. 4. Government could create a carbon tax. 5. Government could reduce subsidies for nuclear, gas, or geothermal 6. Shifts in federal climate priorities over our planning horizon add risks

Why Reliability Isn’t a Criterion for Selecting Wholesale Electricity

PJM, our transmission organization, is solely responsible for ensuring the reliability of electricity delivery to Naperville. The city of Naperville is responsible for receiving the electricity from PJM and distributing it to customers.

When IMEA's coal plants were both down for maintenance, Naperville customers experienced no problems. Whether we continue to receive wholesale power from IMEA or another vendor, the reliability of electricity in Naperville will remain unchanged.

One should be skeptical of wholesale energy providers competing on the basis of reliability.

Texas Grid Reliability Increases after Gigawatts of Solar and Battery are Added Despite Dramatic Demand Increases (Slide 1 of 2)

Pablo Vegas, the CEO of ERCOT, said, “The peak in the summer, of course, is in the afternoon at the peak heat, when air conditioning load is at its highest. Solar energy is very well suited to help support that.”

And the Chairman of the Public Utility Commission of Texas, Thomas Gleeson, said much the same late last year: “**Solar and storage are key for reliability in this state**,” Gleeson said. “We need them to be successful.”

He added that **solar and storage “saved us this summer.**

https://www.douglewin.com/p/puc-chairs-key-to-reliability-in

Texas Grid Reliability Increases after Gigawatts of Solar and Battery are Added Despite Dramatic Demand Increases (Slide 2 of 2)

The chance of failure declined year over year

ercot

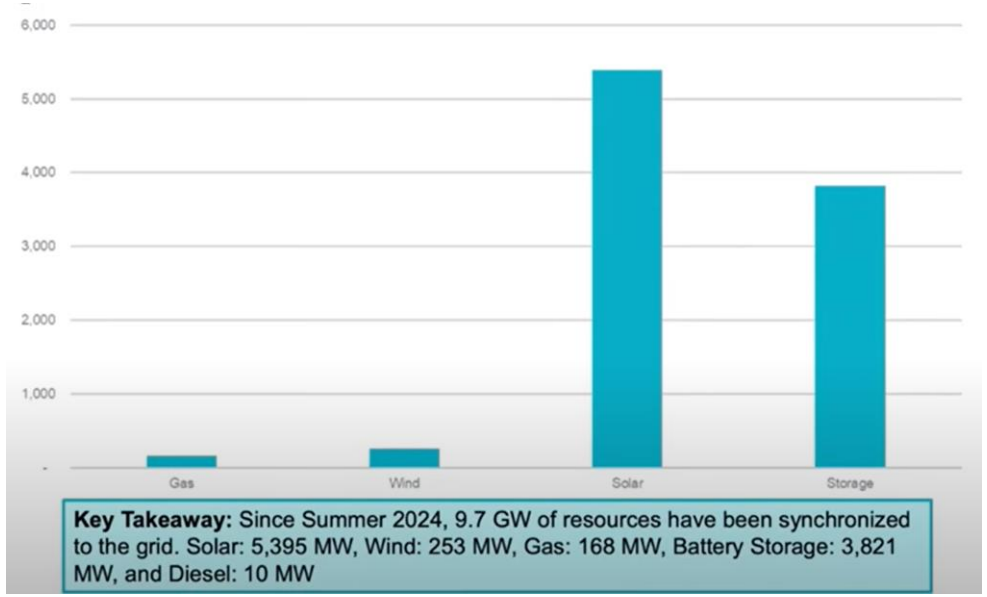
Monthly Outlook for Resource Adequacy (MORA)
Reporting Month: August 2024

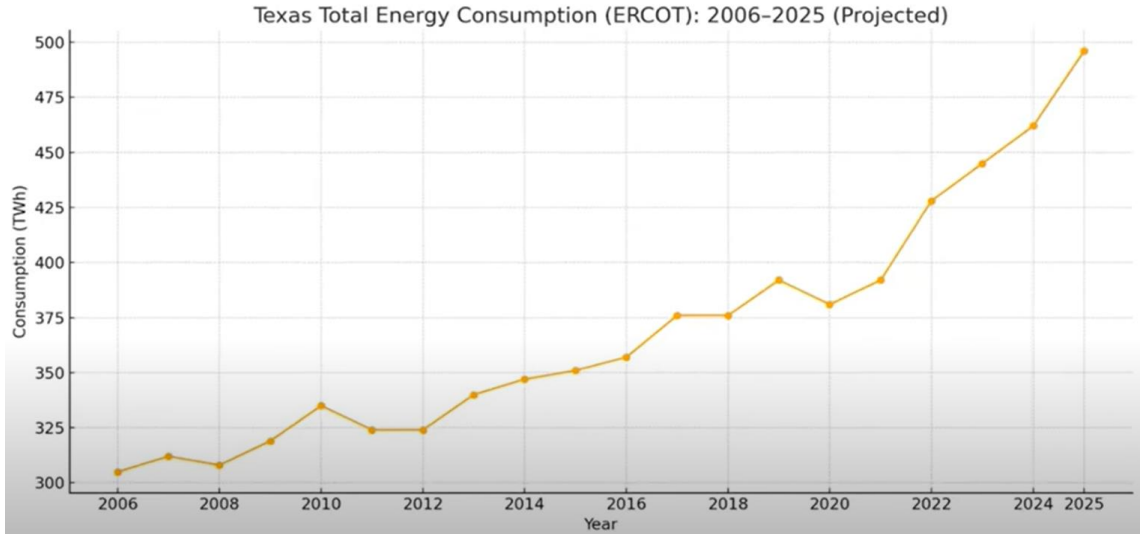
Hour Ending (CDT)	Chance of Normal System Conditions: Probability of CAFOR being above 3,000 MW	Chance of an Energy Emergency Alert: Probability of CAFOR being less than 2,500 MW	Chance of Ordering Controlled Outages: Probability of CAFOR being less than 1,500 MW
1 a.m.	100.00%	0.00%	0.00%
2 a.m.	100.00%	0.00%	0.00%
3 a.m.	100.00%	0.00%	0.00%
4 a.m.	100.00%	0.00%	0.00%
5 a.m.	100.00%	0.00%	0.00%
6 a.m.	100.00%	0.00%	0.00%
7 a.m.	100.00%	0.00%	0.00%
8 a.m.	100.00%	0.00%	0.00%
9 a.m.	100.00%	0.00%	0.00%
10 a.m.	100.00%	0.00%	0.00%
11 a.m.	100.00%	0.00%	0.00%
12 p.m.	100.00%	0.00%	0.00%
1 p.m.	100.00%	0.00%	0.00%
2 p.m.	100.00%	0.00%	0.00%
3 p.m.	100.00%	0.00%	0.00%
4 p.m.	100.00%	0.00%	0.00%
5 p.m.	99.97%	0.00%	0.00%
6 p.m.	99.94%	0.02%	0.01%
7 p.m.	99.67%	0.04%	0.02%
8 p.m.	88.19%	4.68%	2.88%
9 p.m.	72.01%	16.33%	12.02%
10 p.m.	88.73%	4.58%	2.54%
11 p.m.	99.16%	0.06%	0.00%

ercot

Monthly Outlook for Resource Adequacy (MORA)
Reporting Month: August 2025

Hour Ending (CDT)	Chance of Normal System Conditions: Probability of CAFOR being above 3,000 MW	Chance of an Energy Emergency Alert: Probability of CAFOR being less than 2,500 MW	Chance of Ordering Controlled Outages: Probability of CAFOR being less than 1,500 MW
1 a.m.	100.00%	0.00%	0.00%
2 a.m.	100.00%	0.00%	0.00%
3 a.m.	100.00%	0.00%	0.00%
4 a.m.	100.00%	0.00%	0.00%
5 a.m.	100.00%	0.00%	0.00%
6 a.m.	100.00%	0.00%	0.00%
7 a.m.	100.00%	0.00%	0.00%
8 a.m.	100.00%	0.00%	0.00%
9 a.m.	100.00%	0.00%	0.00%
10 a.m.	100.00%	0.00%	0.00%
11 a.m.	100.00%	0.00%	0.00%
12 p.m.	100.00%	0.00%	0.00%
1 p.m.	100.00%	0.00%	0.00%
2 p.m.	100.00%	0.00%	0.00%
3 p.m.	100.00%	0.00%	0.00%
4 p.m.	100.00%	0.00%	0.00%
5 p.m.	100.00%	0.00%	0.00%
6 p.m.	100.00%	0.00%	0.00%
7 p.m.	100.00%	0.00%	0.00%
8 p.m.	99.73%	0.03%	0.02%
9 p.m.	98.85%	0.48%	0.30%
10 p.m.	99.33%	0.17%	0.11%
11 p.m.	99.89%	0.04%	0.03%





Questions for CES

- Can we get a copy of how you modeled the costs? We have charts but need the data to understand your assumptions.
- Page 38 appears to indicate that you kept battery, solar, and wind costs flat for 30 years. Since that isn't historically how they've performed, why did you do that?
- Electricity providers tell us they won't commit to prices 10 years early. For your projections, what margin of error would you expect and how did you come to that margin?
- We can't currently peak shave. Did your model assume we would do that if we left IMEA, or did it assume the same demand? If it assumed, peak changed, how much did it assume, and did you apply the savings to both capacity and transmission?
- Did you assume no technological improvements over the next 30 years?
- How did you model changes in the legislative landscape, like the repeal of the IRA?
- Did you analyze the impact of Naperville's emissions based on the different alternatives? How did you weight the impact of greenhouse gases on your recommendation?
- You had two pages in your report on gas generation. Did you analyze building it outside of Illinois, or just running it for 10 years until Illinois requires it to be shut down?
- On page 9, why did you analyze Naperville's transition to a load service entity? Energy Law said no communities our size do that and the Power Marketers usually provide those services for communities.
- On page 14, why didn't you compare IMEA's costs to those of other firms selling the same product? You compared retail costs, which bundle in Naperville Electric Dept. costs, versus the wholesale electricity, which is what IMEA sells?
- Given that 18 gigawatts of battery are planned to be added to the grid this year, how did that affect the capacity pricing in your model?
- Can you explain your math on slide 25? Since we are paying IMEA $85 per MWh, why would we need to be solar at $35 per MWh for it to make economic sense? Most solar is now installed with battery. Did you assume no battery?
- Did your models consider the subsidies to battery, geothermal, and nuclear?

Questions for Consultants

- Energy Law – If for the past 10 years, Naperville had purchased wholesale power from PJM would that have cost more or less than what we actually paid IMEA?
- Energy Law – All the capital cost for the plants was omitted from the analysis you provided so you only looked at operating costs even through Naperville owns none of the assets and much of asset will be shut down 3 and 10 years after the bond payments are complete. Why do you model all the assets as free despite this being a capital-intensive industry?
- Why did you describe it as a house mortgage when the life of 45% of the “post mortgage” asset is $0 at 3 years after the last payment, and the whole Prairie State Coal plant needs to be retired less than 10 years after the last payment? Did you assume CEJA would be repealed?
- Energy Law - If you used the same capital treatment in the cost comparison for Solar, Wind, or Battery, how much would we have saved?