

THE VILLAGE OF  
**Winnetka**  
**2025**

**IMEA STUDY SESSION**

May 13, 2025



- Timeline
- History with IMEA
- Capacity Credits
- Market Indicators
- Cost of Power
- Additional Context
- Sustainability Measures
- Presentation by Mr. Mark Pruitt
- Closing Remarks



- February 2024 – IMEA Board approves final form of contract extension
- May 14, 2024 – Council Study Session (IMEA Presentation)
- October 22, 2024 – Winnetka Future Energy Coalition Forum
- Dec 10, 2024 – Council Study Session (Mark Pruitt)
- Feb 11, 2025 – Council Study Session (IMEA Presentation)
- March 11, 2025
  - Based on feedback from the public and Council, Mr. Mark Pruitt was engaged to further investigate the Power Marketer option for the Village. Those findings will be presented tonight.
- Winnetka Council & Staff have worked diligently over the past 15 months to perform a thorough options analysis and continue stakeholder engagement.

- IMEA is a **nonprofit** Municipal Joint Action Agency formed by and run by its members.
- IMEA formed in the Spring of 1984
  - Winnetka was one of the 23 charter members, first CEO was a former Winnetka Director (Zimmerman)
- Village entered a full requirements contract in June 1990. IMEA has acquired power on the Village's behalf ever since.
- Winnetka has a direct voice in power supply through its IMEA Board seat.
  - IMEA Staff serve and take policy direction from the Board, similar to how Winnetka staff serve and take policy Direction from the Village Council.



# CAPACITY CREDITS

- Winnetka, as a power generator, is entitled to capacity credits through IMEA.
- Our assets are fully dedicated to IMEA, and they are utilized towards meeting the capacity requirements of the agency.
- Generating capacity provides both a physical and financial hedge in the energy marketplace.
- When called upon, the plant runs to “net” our load off the grid. This results in a power cost savings for IMEA and the Village.



## CAPACITY CREDITS

- Since the inception of the current contract (1991), the Village has received **\$47 million** in capacity credits.
- From 2014-2024, the Village's wholesale bill was lowered on average by **16% per year** when including capacity credits.
- At the most recent IMEA Board Meeting, the Board unanimously approved a more generous capacity payment structure.
  - If our assets remain in operation through 2035, the Village will make an additional **\$2.6M** in credits over ten years based on the new structure, on top of the existing \$1M/year in credits.
- Capacity payments through IMEA distribute the benefits and risks of generation across the membership.

- DOE forecasts that data center energy consumption will jump from about 4.4% of total U.S. electricity in 2023 to 6.7-12% of total U.S. electricity by 2028.<sup>1</sup>
- This rise in demand coincides with a fall in supply due to retirements of thermal resources.
- Power (capacity and energy) is traded on markets, in hourly, day-ahead and year-ahead increments (PY.)
  - PJM clearing prices for PY25/26 are up 800% Y/Y
  - MISO summer prices for PY25/26 are up 2,121% Y/Y
- Both MISO and PJM are signaling **dramatic** increases in capacity pricing in the near term.
- This is a price signal to the market that more generation capacity is needed to fulfill a looming shortfall and ensure grid stability.
- Inadequate capacity = inability to meet demand, emergency load shedding ( I.e. blackouts or brownouts.)

<sup>(1)</sup> DOE Data Center Consumption





## PJM capacity prices hit record highs, sending build signal to generators

Consumers across the PJM Interconnection footprint will pay \$14.7 billion for capacity in the 2025-26 delivery year, up from \$2.2 billion in the last auction.

## MISO summer capacity prices jump to \$666.50/MW-day as power supplies shrink

“The results reinforce the need to increase capacity, as demand is expected to grow with new large load additions,” the Midcontinent Independent System Operator said.



## Is nuclear energy the answer to AI data centers' power consumption?

January 23, 2025 Share ↗



## Three Mile Island nuclear plant will reopen to power Microsoft data centers

SEPTEMBER 20, 2024 · 1:40 PM ET



## The Electricity Supply Bottleneck on U.S. AI Dominance



## ComEd energy costs to increase 'significantly' next year, according to watchdog group

by: [John Clark](#)  
Posted: Sep 2, 2024 / 10:36 AM CDT



# CASE STUDY – RELIABILITY & COST

- Winter Storm Elliot on Christmas Eve 2022 brought the eastern grid to near total collapse.
  - Freezing temps caused natural gas supply & transportation issues
  - Grid operators under-estimated peak electricity demand.
  - Southeastern utilities conducted rolling blackouts of more than 5 GW of load.
  - Consolidated Edison (NYC) was on verge of total collapse due to low pipeline pressure.
  - PJM market provided more than enough power to meet demand, even exporting excess power to other regions to help grid stability.
- Real time power prices in PJM Zone jumped to \$3,700/MWh on 12/24/22. Day-Ahead markets had prices pegged around \$250/MWh.
  - Broad exposure to the open market = costs passed to consumers
  - We ran Diesel Generators (5 MW) for two straight days to lower our load.

<https://epsa.org/fortifying-grid-reliability-after-winter-storm-elliott/>

<https://www.pjm.com/-/media/DotCom/library/reports-notice/special-reports/2023/20230717-winter-storm-elliott-event-analysis-and-recommendation-report.pdf>



- IMEA continues to provide affordable, reliable, and sustainable power for its members.
- Stable power costs allow the Village to perform long-term planning.
- Power supply costs from IMEA are projected to fall by 25% in 2035 when the debt is paid off.
- Winnetka's capacity credits reduce its overall power cost and provide it one of the lowest cost portfolios in the agency.
- Instability in the wholesale market is projected to have minimal impact on IMEA cost due to owned assets and other hedges.

- PJM spot pricing is not an accurate comparison to the IMEA offering.
  - PJM location marginal pricing (LMP) represents the typical load factor of the entire RTO.
  - Winnetka's load is a majority residential.
  - ComEd owns no generation assets and therefore has no financing cost to pay for those assets.
  - PJM LMP pricing does not factor in value-added services from IMEA that are a requirement to be a PJM participating member. That labor comes at a cost (either directly or contracted.)
  - ComEd adds supply-based riders on to bills that are not directly reflected in the supply portion of customer bills (added 29% in 2024.)
  - Does not factor in the hedging required to avoid exposure to volatility in the marketplace. It would not be prudent business practice to go completely un-hedged into the power markets.

# COST OF POWER

Year	Total Budgeted IMEA Cost of Electricity (\$/MWh)	Winnetka Rate (Includes Capacity Credits) (\$/MWh)	Actual ComEd Historical Weighted Avg* (\$/MWh)
2014	\$ 76.36	\$ 60.22	\$ 61.92
2015	\$ 74.95	\$ 61.99	\$ 70.97
2016	\$ 77.55	\$ 62.56	\$ 63.89
2017	\$ 77.72	\$ 63.71	\$ 65.50
2018	\$ 78.99	\$ 64.73	\$ 69.79
2019	\$ 77.67	\$ 61.39	\$ 67.68
2020	\$ 81.61	\$ 68.70	\$ 68.33
2021	\$ 84.66	\$ 70.31	\$ 71.01
2022	\$ 79.99	\$ 72.90	\$ 95.83
2023	\$ 80.49	\$ 71.66	\$ 78.65
2024	\$ 82.56	\$ 75.81	\$ 64.27
<b>Average</b>	<b>\$ 79.32</b>	<b>\$ 66.73</b>	<b>\$ 70.72</b>

\*Based on historic ICC data of the Price-to-Compare for ComEd supply, including historic Purchased Energy Adjustment (PEA.) This does not include ComEd supply-based bill riders such as Renewable Portfolio Standard (RPS), Zero Emission Standard (ZES) and Carbon Free Energy Resource Adj. (CFRA.) These riders added an additional 29%, on average, to the ComEd supply cost in 2024.

- While IMEA’s budgeted power supply costs are higher than ComEd’s over the last 10 years, Winnetka benefits from the Capacity Credits.
- This means Winnetka has had **lower power supply costs**, on average, than ComEd over the last ten years.
- **When factoring in capacity credits, being an IMEA member has saved the Village ratepayers about \$5.56M compared to being with ComEd, over just the last ten years.**



- Naperville's Public Utility Advisory Board (PUAB) approved a recommendation from consultant Customized Energy Solutions (CES) who was hired to evaluate Naperville's options.
  - Naperville's system demand is approximately 10X ours.
  - CES recommends that Naperville continues to procure energy and capacity through IMEA while leveraging the MDR clause in its contract to explore renewable energy procurement via PPAs. By starting with 10% of its peak load, Naperville can gain valuable market experiences in contracting non-fossil resources and managing associated risks, such as project delays and underperformance while maintaining rate stability through IMEA's supply stack.
- As of the April 2025 IMEA Board meeting, 27 of 32 members have signed the Power Sales Contact(s) and Capacity Purchase Agreements(s) with no changes.
- Although the April 30, 2025, deadline passed, a decision on a possible extension of the open contract period through August will be on the agenda for the June IMEA Board Meeting.

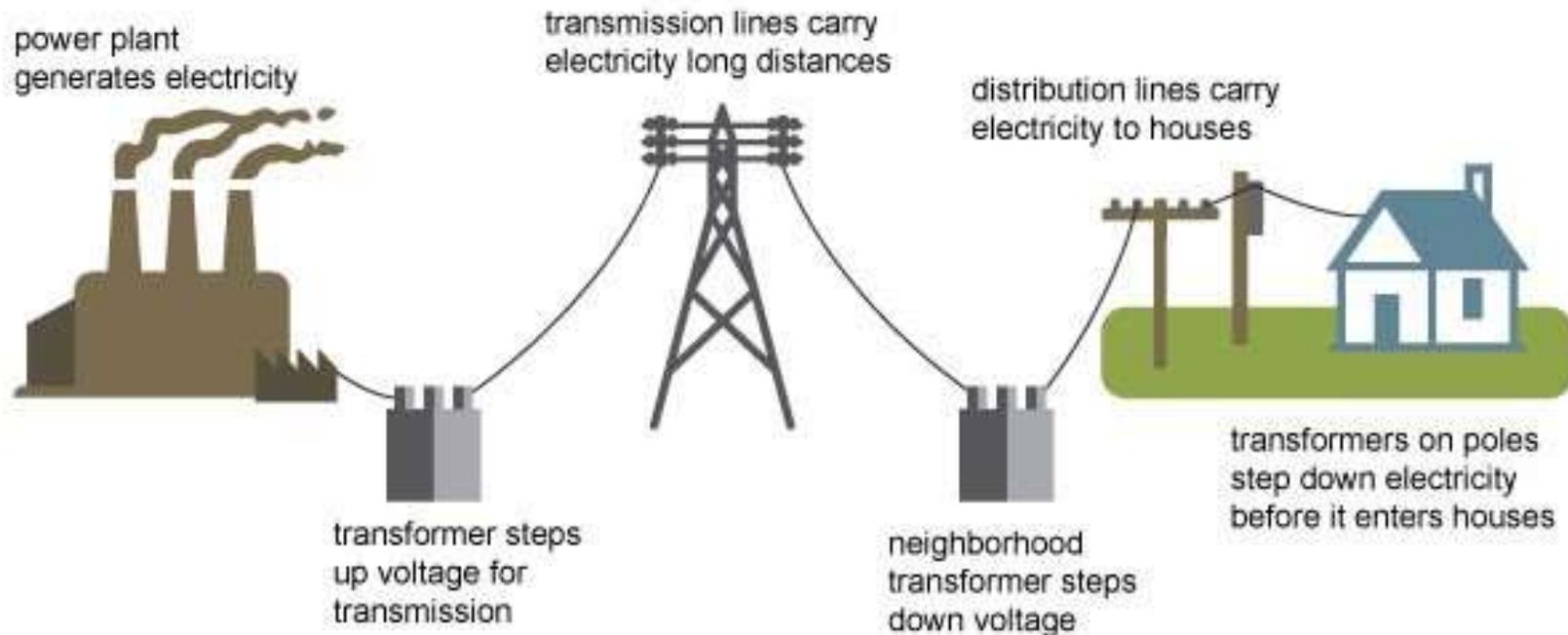
- How can The Village increase sustainability on the local level?
  - Utilize the Member Directed Resource (MDR) Option (Currently 10% of peak.)
  - Explore creating a voluntary program for renewable energy credit (REC) purchases to offset emissions from its power consumption.
  - Pursue opportunities to make Village operations fully net-zero through rooftop solar and MDR.
  - Create programs to incentivize and streamline customer rooftop solar.
  - Continue to award the maximum allowable IMEA Energy Efficiency and EV funding.
  - Leverage the AMI deployment to find ways to reduce the Village's peak demand.

- MDR Contract Provision can be rolled forward to date of contract signing, we do not need to wait until 2035.
- Village staff are working to implement Pillar 4 of the Comprehensive Plan, including drafting a Climate Action Plan.
- The Village, as an IMEA Board Member, has a vested interest in shaping the power portfolio and ensuring progress on the long-term sustainability plan for 32 member communities in IL.
- IMEA, as a non-profit, has a business incentive for pursuing renewable resources as the overall market shifts toward an economical, dispatchable solution since those resources will **lower costs to the membership.**



# WHOLESALE MARKET: Basics of the electric system

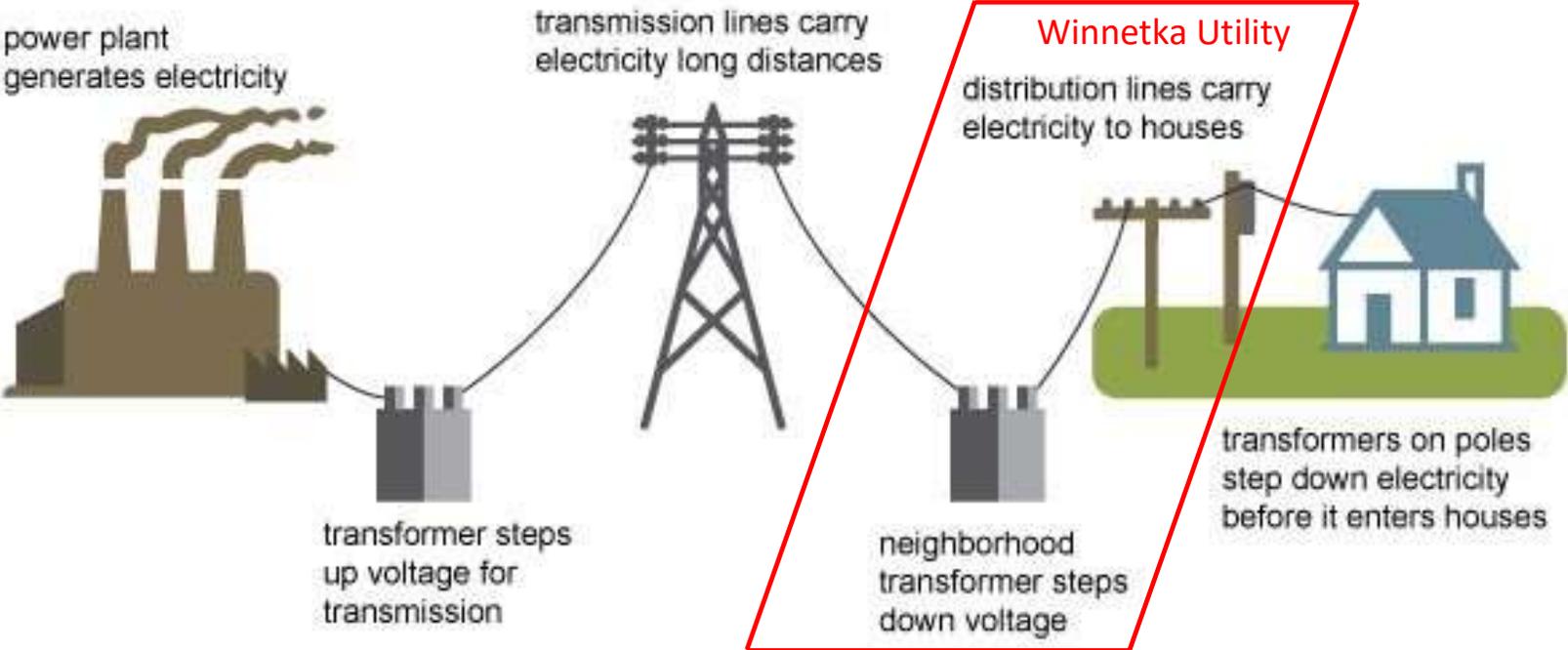
## Electricity generation, transmission, and distribution



Source: Adapted from National Energy Education Development Project (public domain)

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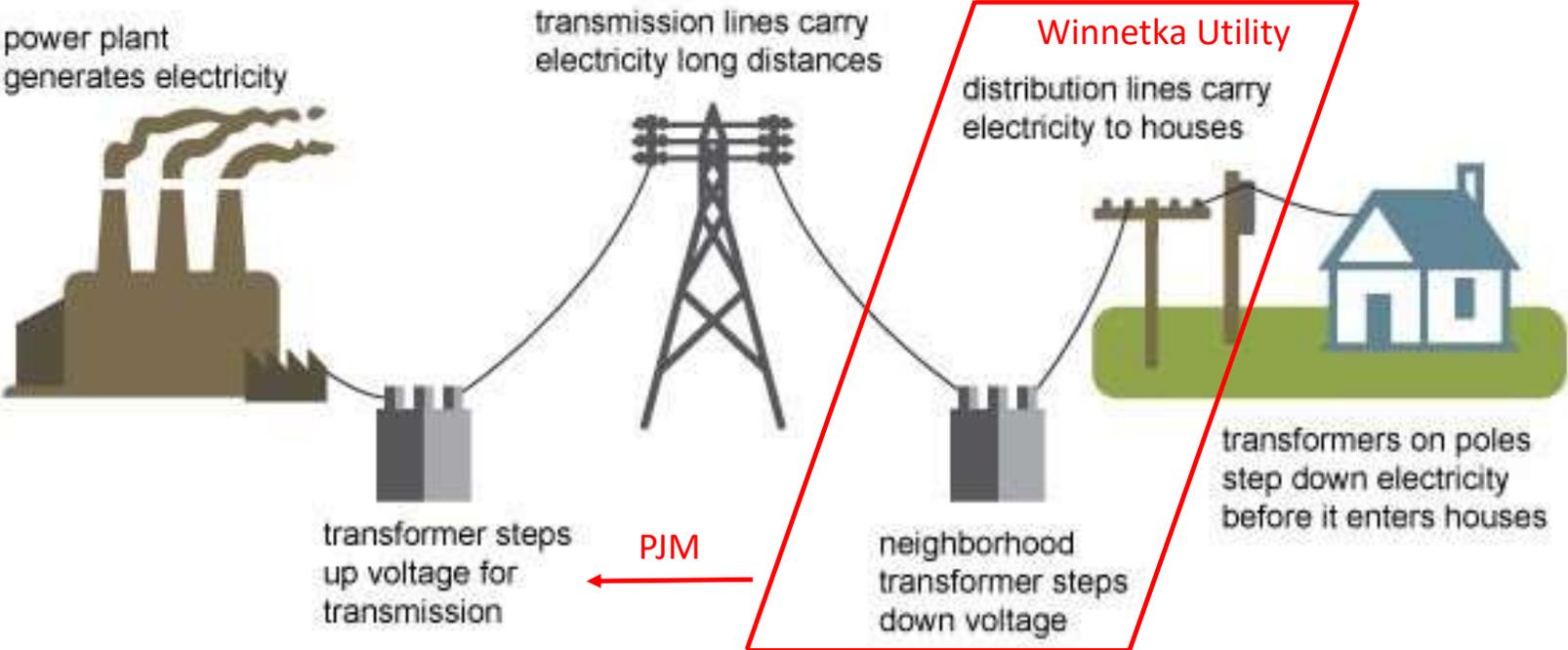
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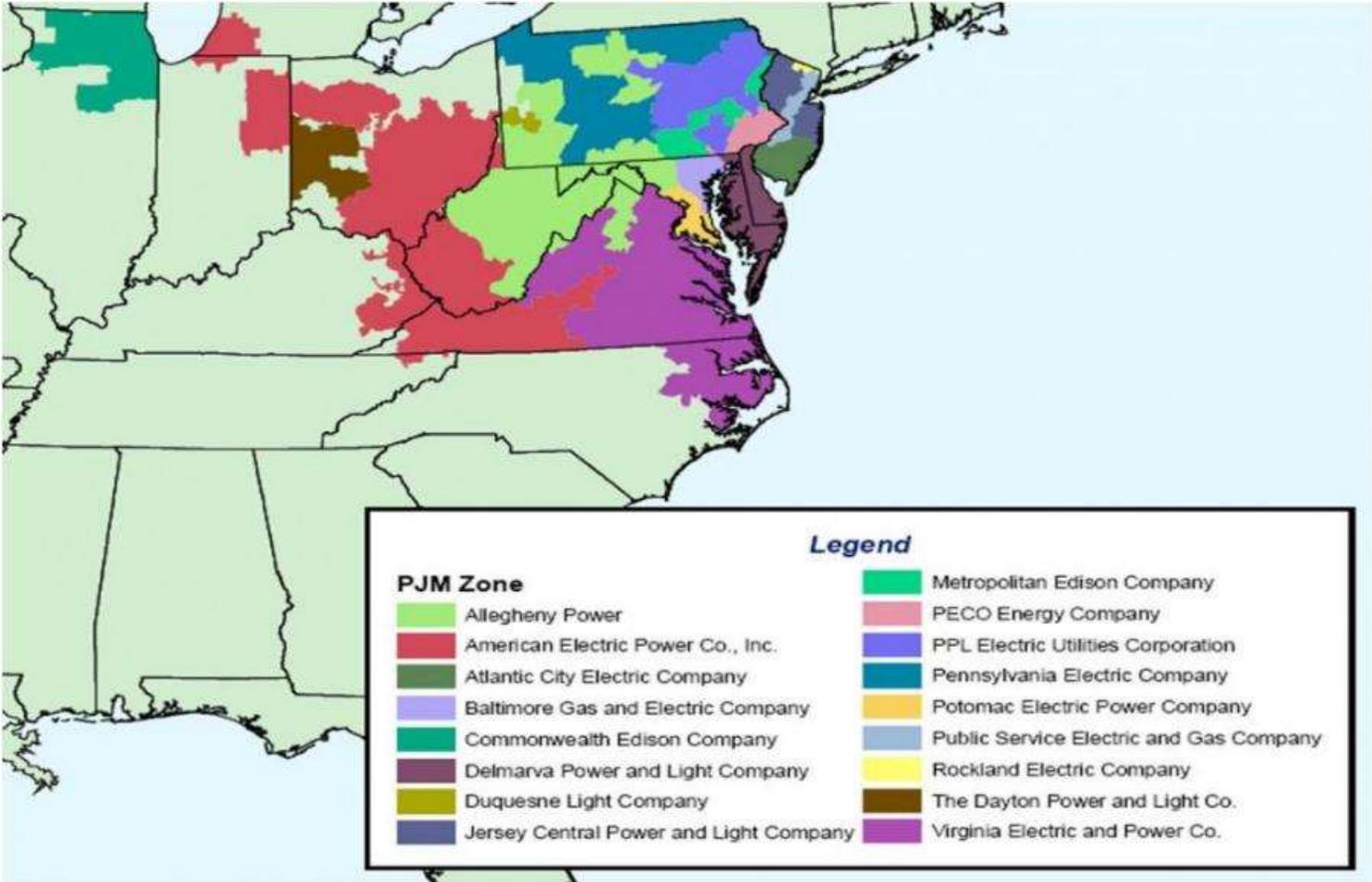
# WHOLESALE MARKET: Basics of the electric system

## Electricity generation, transmission, and distribution



Source: Adapted from National Energy Education Development Project (public domain)

# WHOLESALE MARKET: PJM is the Wholesale Market



# PJM Member Requirements

Member Requirements	Market Operations	Load Management
Apply Requirements Agreements Network Transmission Load Response Credit Requirement	Day-Ahead Markets Capacity Requirements Ancillary Services Congestion & Losses Metering & Settlement	Scheduling - Load - Capacity - Ancillary Services Scheduling Settlement & Billing

General Planning	Legal Activities	General Transaction
Load Forecasting - Near term - Long term Supply Source Management	Compliance Internal/External Audit Admin and Compliance Costs Special Rules Stakeholder Engagement Proceedings (FERC, PJM)	Procurement Hedging Environmental Attributes

## PJM Member Requirements

### Operating Area for Alternative Providers

Member Requirements	Market Operations	Load Management
Apply Requirements Agreements Network Transmission Load Response Credit Requirement	Day-Ahead Markets Capacity Requirements Ancillary Services Congestion & Losses Metering & Settlement	Scheduling - Load - Capacity - Ancillary Services Scheduling Settlement & Billing
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## Alternative Providers: Types

### RESELLERS

**Buys wholesale power and supply** from counterparties (e.g., independent power plant operators, financial and trading institutions, etc.) **and then sells** those commodities to other parties (either wholesale entities or retail consumers).

Examples: Constellation, Direct Energy, Calpine, Dynegy, AEP

Revenue: Usually add a \$/MWh fee on top of wholesale electricity purchases

### SERVICE BUREAU

Provide wholesale market services that allow PJM Members to execute their own wholesale power market transactions.

Examples: American PowerNet, ACES, The Energy Authority

Revenue: Fee adder or annual fee for support services

# Internal Staffing Schedule

POSITION AND PRIMARY TASKS	TYPE	Annual Cost	
		Estimated Base Salary	Benefits and Admin Cost
<b>Wholesale Energy Manager</b> - Oversee all wholesale activities - Primary contact for Utility and Board - Manage internal reporting - Supplier selection and negotiations - Budgeting and resource management - Compliance filings - Point of contact for FERC, PJM, ICC - Long term planning and hedging	Internal	\$244,000	\$97,600
<b>Energy Market Analysts (2)</b> - Price forecasting (energy, capacity, transmission) - Hedge modeling (energy capacity transmission) - Capacity sales planning, bidding strategy - PJM process participation, compliance - Contract administration/monitoring - Weekly PJM billing audit/review - Regional resource planning monitoring - Procurement/vendor selection	Internal	\$306,000	\$122,400
<b>Energy Policy Analyst</b> - Monitor federal/state energy policy proposals - Identify risk mitigation options for adverse policies - Monitor ICC, DCEO, IPA, IEPA proceedings	Internal	\$143,000	\$57,200
<b>Support</b> - Scheduling - Clerical - Project tracking	Internal	\$68,000	\$27,200
<b>Regulatory Attorney</b> - PJM Membership Contracts - FERC proceedings - Supply Contract Negotiation - Capacity Sales Contract Negotiations - PJM Stakeholder Proceedings - PJM Compliance Filings - Illinois Commerce Commission Proceedings - State Energy/Utility statute monitoring	External	\$250,000	-
<b>Lobbyist</b> - Monitor state energy legislation - Engage with state agencies - Develop/advocate policies	External	\$120,000	-
<b>TOTALS</b>		<b>\$1,131,000</b>	<b>\$304,400</b>
<b>GRAND TOTAL (2025 Dollars)</b>		<b>\$1,435,400</b>	

## “Bidding Out” the Village’s Electricity Load

- **What would the Village be procuring?**
  - Wholesale electricity supply, capacity and transmission
  - Delivery commencing in 2035
- **Constraints to Bidders**
  - Market Risk: What will wholesale prices be in the future?
  - Regulatory Risk: What will be the rules for wholesale power sales?
  - Performance Risk: Will the Village meet its obligations?
- **Options for Bidders (to mitigate the risks)**
  - Inflate price offers to cover any potential risk
  - Offer an indicative price, but reserve the right to escalate
  - Not bid

## Conclusions

- **Replacing IMEA will require the Utility to fully engage as a PJM Member.**
  - 1-2 year process to prepare and then execute
  - Up to 1 year to secure Alternative Provider (and additional staffing)
- **No “One-Stop-Shop” to support Utility operations in PJM.**
  - No single Alternative Providers would commit to meeting all of PJM membership obligations for the Utility.
  - Did not identify any municipal utilities of similar size to that of Winnetka’s that participated on its own in the wholesale energy markets by utilizing only the services of an Alternative Provider.
- **Lack of clarity regarding future costs for commodities and services.**
  - Pricing for energy delivery in 2035 is not knowable today
- **The case for the Village operating as an independent PJM Member lacks the normal economic drivers usually associated with participating in wholesale markets**
  - Economies of scale to gain operating efficiencies and reduce costs
  - Secure access to sell resources (e.g., capacity)

# THANK YOU

**Mark Pruitt**

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## SUMMARY COMMENTS

- Winnetka was a founding member of IMEA, has taken a strong role in shaping IMEA policy over time and can continue to do so going forward.
- Winnetka has realized significant financial benefits on its power supply costs through our arrangement with IMEA since 1991.
- The energy industry is entering a period of volatility and transition.
- Risk management comes at a cost. IMEA has positioned the agency well to manage the coming turbulence.
- Reliability is the #1 priority of Grid Operators and Utilities.
- Winnetka has options to increase sustainability locally while benefiting from the stability of IMEA's power supply cost.

PUBLIC COMMENT  
COUNCIL QUESTIONS  
And  
GENERAL DISCUSSION

