Q/A for July 28, 2025

	Title	Requestor Responder
	Naperville Electric Utility Presentation	
Q1.	What is the format for council Q&A for the workshop?	***Longenbaugh***
A.	Each presenter will be available for questions after their presentation, as well as after the final presentation. Presenters have been allocated the following times for their presentations: 1. CJ2 Law - 30 minutes 2. CES - 30 Minutes 3. NEST - 30 Minutes 4. PUAB Majority Opinion - 15 Minutes Minority Opinion - 15 Minutes	***Groth***
Q2.	Page 5 Key dates - What was the difference between the RFPs in March and December 2023?	***Longenbaugh***
A.	The initial RFP released in March 2023 was a single, comprehensive solicitation, which yielded no qualified bidders. Subsequent RFPs in December 2023 divided the scope into separate components: (1) financial forecasting and (2) options analysis, resulting in multiple responses.	***Groth***
Q3.	1. Please provide a cost breakdown and high level summary of the IMEA contract and how Naperville compares to the other 31 municipalities. I've heard anywhere from $1B to $3B. 2. What is it? What are we paying if we sign? 3. What do we get for the money?	***Longenbaugh***
A.	See attached summary.	***Groth/DiSanto***
Q4.	Please reshare the IMEA energy portfolio roadmap.	***Longenbaugh***
A.	Attached are the IMEA Resource Planning 2024 and IMEA Sustainability Plan documents. These are also publicly available on the City's website at: https://www.naperville.il.us/services/electric-utility/your-electric-service/imea/	***Groth***
Q5.	We are the largest municipality in IMEA, yet are just one vote out of 32. Please explain IMEA's voting structure and any nuances in the voting hierarchy. Does an MDR require a vote by the members?	***Longenbaugh***
A.	Per the IMEA bylaws, each member municipality holds one seat on the Board of Directors. The bylaws provide for both weighted and non-weighted voting. For non-weighted voting items, approval requires a simple majority of members present at a meeting with a quorum. Naperville's vote carries equal weight to any other member. Weighted voting applies to matters involving Power Sales Contracts and Capacity Purchase Agreements, such as budgets, rates, charges, capacity credits, power supply planning, and related financing. Votes are re-determined annually based on the prior fiscal year's peak demand. The weighted voting process is as follows: If fewer than five negative votes are cast, a simple majority of members present (with quorum) suffices for approval. If five or more negative votes occur, approval requires both a majority on a one-member-one-vote basis and a majority based on load ratio shares of members present. In this scenario, Naperville holds approximately one-third of the weighted vote. This mechanism implemented when Naperville joined IMEA, balances Naperville's size with other members' interests, providing a form of veto power and encouraging compromise.	***Groth***
Q6.	Please share a table showing the other IMEA municipalities with their populations.	***Longenbaugh***
A.	A list of IMEA municipalities and their population is attached (IMEA Members and Population 2021).	***Groth***
Q7.	Please explain how each option impacts Naperville's rate studies. What factors go into determining the rates residents pay?	***Longenbaugh***
A.	Residents pay a volume charge (KWh price) as well as a meter charge. The meter charge is fixed and is designed to cover the fixed costs of running the utility. The energy charge, which is billed per kWh, covers the capacity, energy and transmission costs and is approximately 59% of this charge. The balance (~41%) is intended to recover local costs including system upgrades and operations.	***Groth***
Q8.	1. What are the limitations to MDR? 2. Are there any restrictions?	***Longenbaugh***
A.	As outlined in the proposed successor contract, all Member-Directed Resources (MDRs) require Board approval, including project type, energy source, and size. The current limit is 10% of a member's rolling 5-year average peak demand, but this can be increased by the Board.	***Groth***

Q9.	How much did Naperville donate to tornado relief? In the last few years, please quantify costs that the City incurred from floods, unusual storms, etc. e.g. cost of overtime from last Tuesday's storms.	***Longenbaugh***
A.	Following the 2021 Father's Day tornado, the City provided $329,314 in relief grants. The City does not routinely track weather-related costs unless required for disaster assistance or insurance claims. On average, one severe weather event per year incurs additional cleanup costs (e.g., contractors, brush hauling, overtime), which are absorbed in the annual budget. Overtime costs from last week's storm are not yet finalized, as the pay period remains open.	***Groth/Munch***
Q10.	How many residents are impacted from State Farm's premium increase?	***Longenbaugh***
A.	The City does not have access to data on State Farm policyholders or premium impacts specific to Naperville residents.	***Groth***
Q11.	Regarding affordability, could Naperville design structured rates that could both 1) provide discounts for low-income residents and 2) allow residents to pay more for sustainability (e.g. renewable energy grant)?	***Longenbaugh***
A.	1.The Electric and Water Utilities currently allocate $300,000 annually ($70,000-$100,000 expended) to Loaves and Fishes for utility assistance. Loaves and Fishes administers applications for a fee. In 2024, 118 households received aid. Implementing a direct discount program would likely require 1-2 additional FTEs in Finance. 2.The recently launched renewable energy program allows customers to offset consumption with renewables via voluntary contributions. This has been promoted on the City's website and social media, but no customers have enrolled to date. It is distinct from the optional $5 renewable energy grant.	***Groth***
	CJT Law	
Q1.	Page 5 Says XX million customers. How many, exactly?	***Longenbaugh***
A.	This was a scrivener error. According to the most recent "Switching Statistics Report from the Illinois Commerce Commission, Commonwealth Edison served 4,117,690 customer accounts as of January 2025." We have inserted the number in the final version of the presentation.	***CJT***
Q2.	Page 9 1. CUB= Citizens Utility Board? 2. If both IMEA/Naperville are on PJM, why is Naperville insulated from capacity rate increases but a market option is not?	***Longenbaugh***
A.	1. Yes, CUB is the common acronym used by the Citizens Utility Board which is a consumer advocacy group operating in Illinois. We have inserted a note regarding this naming convention in the presentation. 2. Naperville is not exposed to rising PJM prices because of the capacity it has already secured through the Prairie State Generating Station. As part of its membership in IMEA and participation in the ownership of the Prairie State Generating Station, Naperville receives a pro rata share of the capacity value of the Prairie State Generating Station. IMEA then assigns this capacity value to PJM as credit against Naperville's capacity obligation within PJM. In so doing, Naperville is alleviated of the financial responsibility of purchasing that amount of capacity from the PJM capacity auction.	***CJT***
Q3.	Page 12 & 14 1. Please explain the "cumulative difference" bar. 2. Debt service IS a cost. So why show page 14? What do these numbers mean as far as impact to customers? An aggregated "savings"?	***Longenbaugh***
A.	1. The "Cumulative Balance" noted in the graph identifies the sum of all cost premiums or discounts achieved in all prior years. As an example, in the third year of the series (2010), the "Cumulative Balance" noted by the purple-colored bar indicates the value by which the Naperville utility wholesale energy charges were less than the estimated ComEd wholesale charges in 2008, 2009 and 2010 (e.g., years 1, 2, and 3 of the series). 2. We agree that debt is a cost, but it is a cost associated with the purchase of a portion of the Prairie State Generating Station – not simply energy – and is thereby a premium that would not be paid if the Naperville utility had simply purchased electricity from the market. Based on this, and what we interpreted as a desire for a true "apples to apples" cost comparison, we removed the debt service from the cost comparison in the graph on the slide.	***CJT***
Q4.	Page 13 What are the abbreviations TC & PS and A&G?	***Longenbaugh***

A.	"Fuel – TC & PS" refers to the cost of fuel for the Trimble County and Prairie State power plants that provide a majority of the power supply to IMEA. Similarly, "O&M – TC & PS" refers to the cost of fuel for the Trimble County and Prairie State power plants. "A & G" refers to administrative and general costs associated with management of the IMEA assets and power portfolio. We have inserted a note regarding this naming convention in the final presentation.	***CJT***
Q5.	Page 15 Shows adjacent subregions in the table, but SRTV and SRVC are not included, though non-adjacent SRSO is. What are the details for SRTV and SRVC?	***Longenbaugh***
A.	We have inserted both SRTC and SRVC in the table in the final presentation.	***CJT***
Q6.	Pages 18-19 Please explain the difference between a PPA and a "virtual" PPA.	***Longenbaugh***
A.	The difference is whether power purchased from a power resource is being delivered to a customer (a PPA), or if the buyer and seller are simply settling their transaction in cash with no power delivery to the customer (VPPA). In general, a Power Purchase Agreement (PPA) allows power from a generator to be scheduled for delivery to meet the load (consumption) of the customer through the transmission system (see box 2 in the diagram on slide 18). A PPA requires the buyer to commit to a long term purchase of power at a scheduled rate (regardless of what market happens to be) and in return receive both power and RECs to the buyer. PPA's typically exist between buyers and sellers located in the same wholesale markets in order to better manage transmission scheduling and reduce transmission costs. Alternatively, a Virtual Power Purchase Agreement (VPPA) allows power from a generator to be sold into the wholesale markets so the customer and power provider settle their transactions on a cash basis (see box 2 in the diagram on slide 19). A VPPA requires the buyer to commit to a long-term purchase of power at a scheduled rate (regardless of what market happens to be) and in return receive the revenue earned by selling the power generated into the wholesale market and RECs to the buyer. VPPA's typically exist between buyers and sellers located in different wholesale markets in order to avoid the cost and complexities of transmission scheduling delivery of the power to the customer.	***CJT***
	CES	
Q1.	Page 4 Why was selling to ComEd not researched? What are the pros/cons?	***Longenbaugh***
A.	This option was deemed to give Naperville less autonomy with more (cost) risks, and therefore not further explored.	***CES***
Q2.	Page 5 Please quantify becoming a PJM participant. 1.How many personnel and forms are required? How much does it cost to join? 2.What kind of management functions are required?	***Longenbaugh***
A.	1. Personnel quantified on p.24, 3-5 FTE. This is a financial requirement depending on load and the financial rating of the LSE and will need to be further explored with PJM to determine the costs. 2. Please see p.13 of the March PUAB presentation	***CES***
Q3.	Page 6 1. What would creating a "rate stabilization fund" entail? Could we set aside a portion of current utility taxes? 2. How do PJM participation fees compare to IMEA participation fees? (I'm assuming we pay some kind of admin fee to IMEA?)	***Longenbaugh***
A.	1. Typically a separate line item on the customer bill dedicated to the fund to cushion market volatility. 2. Naperville currently outsources the market participation functions to IMEA (see table). It is difficult to directly compare the two, but IMEA, by managing more load, probably has better economy of scale, and therefore lower fee for Naperville.	***CES***
Q4.	Page 7 What are some actual examples/names? Eg who/what sources would Naperville contact if they wanted to do this today (hypothetically)?	***Longenbaugh***
A.	Naperville can run an RFP to solicit PPA for solar/wind/other RE. Developers active in PJM could be interested in participating. These can include RWE, Copia Power, NextEra (Renewable Energy), Ormat, EDF Renewable, Jupiter Power, just to name a few.	***CES***

Q5.	Page 8 Can some of the risks of underperformance/lack of energy be hedged with battery storage?	***Longenbaugh***
A.	Unlikely since battery storage still requires a source for charging.	***CES***
Q6.	Page 9 Asset ownership 1. Bullet 3 mentions building a gas turbine. Is building a gas turbine a legitimate possibility in IL given CEJA? If not, is there a better example? 2. Are there any shovel-ready projects in the queue, and if so, what are they? What are the challenges to getting more projects shovel-ready and what is being done to address those challenges? 3. The last bullet point mentions risks. What are the risks of coal generation? 4. Is coal subsidized? If so, can you quantify how those subsidies compare to subsidies on other types of generation?	***Longenbaugh***
A.	1.To be covered in presentation. 2.To be covered in presentation. 3.To be covered in presentation. 4.To be covered in presentation.	***CES***
Q7.	Page 10 The con mentions natural gas. Based on my questions on slide 9, what are the cons if the asset isn't gas?	***Longenbaugh***
A.	Coal generating resources do not comply with CEJA	***CES***
Q8.	Page 11 IL has over 1,200 municipalities and only 32 are in IMEA. What others are using Power Marketers? How are other municipalities of our size procuring their energy in IL? What about our peers nationwide?	***Longenbaugh***
A.	This will require a more thorough survey. Staff have contacted American Public Power Association and 157 out of 197 public power utilities in PJM are using a Joint Action Agency.	***CES***
Q9.	Page 12 1. Why aren't contracts with power marketers longer than 1-3 years? 2. A risk is "long term price transparency". What is IMEA going to charge in 2035?	***Longenbaugh***
A.	1. Power marketers rely on a combination of their own assets, PPAs, market purchases and hedges to provide a fixed price contract. Market predictions beyond 3 years are usually volatile and hedges are not available beyond 3 years. 2. We have provided estimates of IMEA's costs, assuming IMEA follows the supply stack projection and using our assumptions on the market conditions. There are many uncertainties in the market, but such conditions are likely to persist, making it difficult to narrow down the price projections.	***CES***
Q10.	Page 13 1.Please share a table showing the other IMEA members and their populations. 2.Please share IMEA's contract language that says coal will be retired by 2050. 3.IMEA will need to procure large volumes of renewable generation and storage…This will result in higher revenue requirement for IMEA." On the next page, it says a PRO for IMEA is "stable and currently low prices". Does this mean that the costs for IMEA are going up? If so, what will they be? 4.How much can members generate under MDR? 5.What is BTM storage? (Batteries?) 6.Please explain "green tariffs". What does it look like for residents to "opt in to incremental charges"? Is that similar to the optional $5 renewable energy grant our residents currently pay?	***Longenbaugh***
A.	1. Provided as requested above. 2. CEJA requires Prairie State to retire. There is no contract language that states this. 3. To be discussed in presentation. 4. The current limit is 10% of peak demand over the past 5 years but this can be increased by the IMEA board of directors. 5. To be discussed in presentation. 6. To be discussed in presentation.	***CES***
Q11.	Page 14 Risk says coal might not go away, but page 13 says it's gone by 2050. Which is it?	***Longenbaugh***
A.	IMEA currently plans to retire its coal units by 2045-2050, but there is a risk that this might not happen depending on the energy landscape at the time.	***CES***
Q12.	Page 15 What IL municipalities are in the other two JAAs?	***Longenbaugh***
A.	NIMPA members include Geneva, Batavia and Rochelle. AMP does not have any members in Illinois.	***CES***

Q13.	Page 21 1Please provide cost projections in a table. For IMEA, it says “cost shown in previous page”. Where? Please show these comparisons on a table using the same underlying assumptions (eg usage, energy costs, administrative costs, etc) 2What is BESS (battery?) and why is it not included?	***Longenbaugh***
A.	1. To be discussed in presentation. 2. To be discussed in presentation.	***CES***
Q14.	Page 22 Please confirm if I’m reading this right: 1. The most expensive option is to not renew and to go 100% renewable. 2. IMEA costs steeply rise in 2045, almost matching the IMEA+MDR option, but IMEA+MDR emits far less CO2? 3. CO2 is very high for the terminate+ market mix option. Why? 4. What do these numbers assume about retiring the coal plants?	***Longenbaugh***
A.	1. Correct. 2. Because MDR replaces ~25% of Naperville usage with lower-emitting resources (nuclear) while the rest still comes from IMEA supply stack.3) without access to MDR, the next 10 years will follow the trajectory of IMEA's emissions. When switched to the market mix, there is ~45% of RE resources by 2050. 4) These numbers reflect the gradual retirement of IMEA's coal plant.	***CES***
Q15.	Page 23 Can cost figures be added to this table vs generic low/medium/high?	***Longenbaugh***
A.	Many of the cost figures depend on the supply mix of the option. This table is meant to show the trade-off between different metrics.	***CES***
Q16.	Page 24 1Why do well-hedged positions mean higher costs? Isn’t hedging meant to provide protection from price fluctuations? 2Why does the power marketer option require additional headcount? Page 12 said a pro was its low admin burden.	***Longenbaugh***
A.	1. Well-hedged is from the perspective of the supplier. To ensure that a supply contract is not subject to market price fluctuations, more quantities of hedge is required; the cost is therefore higher. 2. This is low compared with the other options. It is likely that Naperville will need 1-2 FTE running RFPs for supply contract, depending on how frequent the auctions occur.	***CES***
Q17.	Page 26 1. Where would D203 solar plan fall into the MDR discussion? 2. Could it be in addition to the city’s percentage rather than included?	***Longenbaugh***
A.	All utility customers in the State of Illinois are able to self supply and therefore there is no issue with D203 installing solar with respect to the MDR discussion. This is the same as any other customer served by the Electric Utility.	***CES***
	NEST	
Q1.	Page 10 1. Power Marketers- what is the lead time for a typical contract? 2. What is the length of time for a typical contract?	***Longenbaugh***
A.	These contracts are typically large and bespoke, allowing us considerable flexibility. Power marketers are flexible regarding the length of the contract. They are commonly between 5 and 15 years and have exit clauses. They are typically signed 3 to 7 years in advance of the date service commences. The power marketers we spoke to have no concerns about adding our load. Some offer contracts with rolling one-year extensions every year as long as we’re happy with the proposed contract and rate. I will argue on Monday night that the city should arrange for the council to meet with IMEA competitors if we want to secure the best deal for businesses and residents. I prefer the council talk directly to the Power Marketers so they can get a complete picture of our options. St. Charles is doing that right now as they consider the IMEA extension.	***NEST***
Q2.	Page 11 Alternative in detail 1.What is a virtual power plant? 2.How do consumers know what time is cheapest to change their usage behavior? Can Naperville’s Empower application offer this?	***Longenbaugh***

A.	1. A Virtual Power Plant (VPP) is a network of distributed energy resources, like solar panels, batteries, and smart appliances, that are coordinated by a central system to function as a single power plant. Customers opt into being part of a VPP, which lowers their electricity bills. Naperville is well-suited to take advantage of a VPP because we own our distribution system. Here's a simple example: A Naperville school operates electric buses and has opted in to participate in a VPP. When energy prices are high, the batteries of the buses that are plugged in discharge energy onto the grid, so the school makes money. When energy prices are low, the buses recharge. 2. How do consumers know what time is cheapest to change their usage behavior? Can Naperville's Empower application offer this? Under IMEA's contract, customers pay the same price regardless of when they receive their electricity. Frankly, it isn't very customer-friendly. For example, our bills would be lower if we knew when to do things like charge EVs. IMEA doesn't provide any incentives for customers to do that. One of NEST's complaints about the contract is that IMEA should help us reduce our costs through measures such as time-of-use charges and peak shaving. IMEA makes it difficult, which in turn increases our electricity bills. I don't know what Empower's capabilities are for sharing messages, but other vendors send emails to their big customers, allowing them to avoid peak usage times.	***NEST***
Q3.	Page 14 For the lower cost hubs, what is their % of renewables?	***Longenbaugh***
A.	I don't have that information. However, it's easy to verify that California (CAISO) and Texas (ERCOT) have the lowest prices. You can access this information for free at https://www.gridstatus.io/live. I took a snapshot while working on your answers. You can see the prices are very different on the different grids. Texas has the highest renewables of any grid. Texas is also known for good transmission, so prices don't vary as much between hubs as they do, for example, on our grid (PJM).	***NEST***
Q4.	Page 22 Lazard - what are the "certain circumstances" mentioned in the graph subtitle?	***Longenbaugh***
A.	I pasted in the footnotes that qualify the graph. I have included the link to the report at the top of that slide. The report is free and very informative. I pulled the specific chart from page 8. (Slide attached in Workshop Questions NEST)	***NEST***
Q5.	Page 23 90% renewable add in US- where is this happening?	***Longenbaugh***
A.	The chart shows the total U.S. generation assets added. I pasted in a map with the specific locations that you can find for free from the federal government via this link https: //www.eia.gov/electricity/monthly/	***NEST***
Q6.	Page 25 What are the subsidies for each energy source?	***Longenbaugh***
A.	Unfortunately, that answer requires the assistance of tax attorneys and a few days of conversation. It is also quite dynamic. We would need to work through the specifics on what we were considering, as the subsidies vary by location, technology, date, and other factors. For example, Naperville is eligible for a 50% Investment Tax Credit for Battery, Geothermal, and Nuclear through 2033. Wind and Solar will lose all subsidies from the Inflation Reduction Act earlier, as part of the One Big Beautiful Bill (OBBB) legislation. However, the expiration dates for Solar and Wind depend on whether the project is residential or commercial, as well as when the project is materially started. The OBBB legislation reduced the cost of federal leases for coal and gas. Certain types of coal received additional subsidies for a couple of years. Slide 47 in the appendix describes some subsidies we received when Prairie State was built, but I didn't include the low-interest federal loans that were also obtained, so the list isn't exhaustive. The subsidies are one of the reasons we recommended hiring a consultant, such as RMI, to help us map our energy future. They have staff who have helped other cities navigate this complex, dynamic environment.	***NEST***
Q7.	Page 28 1.Please explain "peak shaving". 2.Red box says "Members will have to fund replacing IMEA's largest plant…". What do you think that will entail? Debt issuance that will replace the current debt that's expiring?	***Longenbaugh***

A.	1. This concept is crucial to understanding how to manage our electricity costs. Peak usage refers to the maximum amount of electricity we use in a single hour, typically on one of the hottest days of the year. Naperville's electricity bill has three large components: generation, transmission, and capacity. Our peak usage determines the cost we pay for transmission and capacity. Peak Shaving is spreading out our usage over more hours. A super simple example of peak shaving is putting out a message on the hottest day of the year that says, "Avoid charging your EVs until 8 PM." By shifting EV charging from the highest air conditioning usage time of the day to later in the day, Naperville ratepayers would have lower peak usage, so lower transmission and capacity charges. The capacity and transmission prices are set based on a few peak hours per year, but we pay for capacity and transmission throughout the year. A more typical example of peak shaving is using a utility-grade battery. When our usage is low, we would charge up the battery. When we approach a peak, we would discharge the battery, so our transmission and capacity charges would be lower all year long. If you look at IMEA's costs on slide 7, you'll see the transmission part of our bill (red bars) has been increasing. Peak shaving is prohibited by the IMEA contract, which is horrible for customers. 2. IMEA will need to purchase generating assets to replace 50% of its generation when CEJA requires Prairie State to close. All options will require a lot of capital. Financing will depend on the assets purchased; however, bonds are likely to be used. The contract says on page 26, "the agency (IMEA) may issue bonds (or other financial instruments) and enter into long-term contract obligations on behalf of the Agency and Participating Members." If we continue as participating members, IMEA can issue debt without Naperville's approval, which Naperville is obligated to pay. That's a clause that you won't see in any Power Marketer or PPA contract.	***NEST***
Q8.	Page 30 How will IMEA send jobs and our payments out of state?	***Longenbaugh***
A.	Right now, we pay millions of dollars for electricity from Kentucky. That money and the jobs created are in another state. That will continue until Trimble County closes (2066?). It could get worse when CEJA comes into full effect. The IMEA extension allows them to get their electricity from anywhere. For example, they could buy another coal plant in a neighboring state (e.g., Kentucky, Missouri, Indiana) and source Naperville's electricity from that plant. Our money would leave the state and support jobs outside of the state. However, if, for example, we were to purchase a local battery, we could install it on an industrial site in Naperville, and site construction and maintenance would be with local workers. Additionally, if we were to sign a PPA for a solar field near Naperville, the hundred million or so that we pay annually for electricity would be spent closer to home.	***NEST***
	PUAB Pro	
Q1.	Page 6 1. What is the source of the 1,200,000 mwh total power purchase/ year and $100m total cost? 2. Do we pay IMEA $100m/year?	***Longenbaugh***
A.	All of the numbers included in the presentation are indicative numbers.	***PUAB***
Q2.	Page 10 1. Why are the only 2 costs transmission and bonds/fixed assets? 2. Are there other costs?	***Longenbaugh***
A.	This slide shows the portions of the IMEA bill that will be going away in 2035 (Bonds and Premium).	***PUAB***
Q3.	Page 11 LevelTen Q1 report says solar prices are stable and wind decreasing, but graph with source as LevelTen in presentation shows both rising. https://www.leveltenenergy.com/post/levelten-energy-solar-prices-largely-flat-wind-prices-decrease-in-q1-2025	***Longenbaugh***
A.	The chart on slide 11 was put out in January by JP Morgan. The LevelTen report goes through the first quarter of 2025. The point trying to be made is long-term trends in energy pricing.	***PUAB***
Q4.	Page 13 What are the top 10 Naperville businesses consuming half of Naperville's demand?	***Longenbaugh***
A.	The slide states that 300 businesses consume half of Naperville's demand. We were not provided with customer names.	***PUAB***
Q5.	Page 15 2030 battery storage 1. Where will this be located, is it already built/under construction? 2. How much is in IMEA's portfolio?	***Longenbaugh***
A.	IMEA has stated that their battery storage study will be completed by the end of 2025. This will determine the economic feasibility of battery storage for the agency and where any battery storage projects should be located.	***PUAB***
Q6.	Page 18 How much higher could Naperville's MDR percentage be?	***Longenbaugh***

A.	Per the contract the IMEA board could vote to allow ANY MDR project and/or percentage.	***PUAB***
Q7.	Page 19 Please explain the math behind the "10% peak = 26% total power"	***Longenbaugh***
A.	35MW Capacity *8760 (hours in the year) = 306,600 MWH 306,600 / 1,200,000 = 25.55%	***PUAB***
Q8.	Page 20 What needs to happen for MDR to be 26% by the end of 2025? That's great, but seems quick.	***Longenbaugh***
A.	The City will need to: 1.Renew the IMEA contract; requesting that the IMEA board approve nuclear MDR. 2.Revise the existing contract with IMEA, pulling the MDR portion forward into the existing contract as stated will happen by IMEA. 3.Execute Power Purchase Agreement with whomever is selling us the nuclear energy.	***PUAB***
Q9.	Page 25 1. Does the energy report state that closing coal plants is the only reason behind possible blackouts? 2. What about high demand (e.g. data centers), rising temperatures, extreme weather?	***Longenbaugh***
A.	The Department of Energy report is comprehensive and covers all aspects of their findings.	***PUAB***
Q10.	Pages 31-32 What are the underlying numbers for the per MWH calculations?	***Longenbaugh***
A.	The cost information has been presented publicly from IMEA and CES' reports to PUAB.	***PUAB***
Q11.	Page 33 What makes Prairie State an "efficient coal plant"?	***Longenbaugh***
A.	Prairie State is a super critical plant by design which means that it extracts more energy per pound of coal burned than a critical or sub critical plant.	***PUAB***
Q12.	Page 37 Would IMEA make sustainable decisions if Naperville was in or out?	***Longenbaugh***
A.	The IMEA board of directors has adopted the agency's sustainability plan and since adoption has added the Bee Hollow project to its portfolio which, regardless of Naperville's decision, will mean the agency will be 20% renewable by 2027. The agency needs to know what members will be with the agency beyond 2035 to make long term planning decisions.	***PUAB***
Q13.	Page 39 1. Why is the electricity market expected to be volatile for the next 10 years? 2. The landscape is changing rapidly, with new technology. Isn't that an opportunity?	***Longenbaugh***
A.	All industry participants, including NERC and PJM, have indicated that electricity shortages are on the horizon. Supply shortages lead to higher prices. There are three forms of clean energy that we know of today: wind, solar and nuclear energy. There are no new technologies on the horizon, in the timeframe that we are discussing, that will drastically improve the efficiency or cost of any of these technologies.	***PUAB***
Q14.	Pages 41-42 Given Winnetka's smaller size vs Naperville, why would we assume their discussions with Power Marketers would be the same as our discussions?	***Longenbaugh***
A.	The only difference between Naperville and Winnetka is the volume of energy procured. Pruitt states in his Winnetka report that the issue is not related to size but that power marketers are not willing to provide pricing this far out, there is too much risk.	***PUAB***
Q15.	Page 43 Why is "bidding out a decision to leave IMEA"?	***Longenbaugh***
A.	Power marketers will not provide load following energy pricing for several years because of risk issues previously discussed. Once Power Marketers are willing to provide firm pricing, IMEA will have moved on and will have planned their future without Naperville. Naperville does not have a unilateral contract extension option with IMEA.	***PUAB***
	PUAB Con	
Q1.	Page 7 Why is IMEA regulatory landscape moderate to high risk?	***Longenbaugh***

A.	IMEA's ownership of generation assets inherently exposes it to market forces it cannot control or avoid. These include: a. Disruptive pricing from new market entrants b. Demand shifts from large-scale consumers like data centers c. Upgrades to the transmission and distribution grid—costs which are passed directly to ratepayers d. Unpredictable regulatory changes driven by political shifts, technological leaps, and worsening climate extremes Layered atop these external pressures is CEJA's mandate: a 90% emissions reduction or forced shutdown of Prairie State's coal units by 2045. IMEA has yet to offer a concrete strategy to meet this obligation. What's most concerning? The renewal proposal fails to address this risk. And IMEA's history tells us what that might mean—when Prairie State's construction costs spiked, Naperville residents were the ones who paid. Why would it be different next time? This isn't just theoretical—it's precedent. Without binding safeguards or clear mitigation plans, Naperville remains exposed to future cost burdens triggered by regulation, infrastructure mandates, or market shifts. The risk is real, and it's growing. But it could be mitigated through bilateral negotiations or alternate procurement strategies.	***PUAB***
Q2.	Page 10 How does IMEA's "roadmap to replace sources" rate on the net zero scale on this slide?	***Longenbaugh***
A.	IMEA's roadmap to increase its renewable energy portfolio is commendable and reflects a stated intent toward progress. However, intent alone does not constitute guarantee. Consider this scenario: CEJA requirements are repealed or delayed, reducing IMEA's obligation to transition away from coal. In such a case, without contractual guardrails, there's little to prevent IMEA from indefinitely postponing its net zero goals. The current proposal includes no enforceable mechanism to ensure delivery of the roadmap. If Naperville accepts the proposal based on the promise of lower power costs, the same logic would imply IMEA has little incentive to accelerate its renewable transition—especially given persistent arguments that renewable energy will remain more expensive in the near term. This isn't to say IMEA won't achieve its roadmap. But the proposal, crafted unilaterally and without City negotiation, fails to address or allocate the risk of non-performance. Without structured accountability, Naperville is left relying on IMEA's best intentions in a rapidly changing regulatory and energy landscape.	***PUAB***
	Energy Related Question	
Q1.	1.Regarding affordability, could Naperville design structured rates that could both 1) provide discounts for low-income residents and 2) allow residents to pay more for sustainability (e.g. renewable energy grant)?https://www.naperville.il.us/services/electric-utility/powering-our-community-for-the-future/energy-efficiency-grant-programs/ https://www.naperville.il.us/services/electric-utility/powering-our-community-for-the-future/energy-efficiency-grant-programs/non-residential-renewable-energy-grant-program/	***Longenbaugh***
A.	See answer to Q11 in the Naperville Electric Utility Presentation section.	***Groth***

Q3. Please provide a cost breakdown and high level summary of the IMEA contract and how Naperville compares to the other 31 municipalities. I've heard anywhere from $1B to $3B. What is it? What are we paying if we sign? What do we get for the money?

A. Summary of the Current IMEA Power Sales Contract (Executed February 6, 2007)

The current contract is a full-requirements agreement under which IMEA supplies all of Naperville's electric power and energy needs for its municipal utility system. Key provisions include:

Term: Effective June 1, 2011, through September 30, 2035, with potential extension to September 30, 2040, upon mutual agreement. Termination requires five years' prior written notice.

Scope: IMEA provides 100% of Naperville's power requirements, including capacity, energy, transmission, and ancillary services. Naperville may not procure from other sources except in limited cases (e.g., force majeure shortages or legally mandated purchases from qualifying facilities, which must be resold to IMEA).

Rates and Charges: Rates are set annually by IMEA's Board of Directors on a cost-based, not-for-profit basis to recover "revenue requirements," including debt service on bonds, operations, maintenance, fuel, purchased power, and reserves. Rates are generally "postage stamp" (uniform across members, adjusted for load factors, delivery voltage, and other variances). Naperville pays as an operating expense from electric utility revenues, not general taxes or obligations.

Ownership and Assets: Naperville shares in IMEA's asset portfolio, including fractional ownership in coal-fired plants like Prairie State Energy Campus (PSEC) and Trimble County (TC), which were key to meeting base load needs. The contract was contingent on IMEA acquiring at least 15% of PSEC.

Covenants: Naperville must maintain sufficient rates to cover IMEA payments, preserve tax-exempt bond status, and comply with prudent utility practices. IMEA handles planning, procurement, and enforcement. Assignment is restricted, and disputes are resolved via executive negotiation before litigation.

Historical Context: Approved by City Council on January 16, 2007, to secure long-term stable supply post-ComEd contract expiration. From 2007-2011, Naperville sourced from Goldman Sachs while IMEA prepared.

This contract has provided stable pricing through shared costs and asset ownership, though it ties Naperville to IMEA's resource mix, including coal (e.g., PSEC supplies base load).

Key Changes in the Proposed Successor Power Sales Contract

The proposed successor contract extends and updates the current framework to address post-2035 needs, incorporating evolving industry dynamics like regional transmission organizations (RTOs) and sustainability goals. It must be executed before August 20, 2025 (or a Board-approved extension) and is contingent on sufficient member commitments (at least four members with 50 MW combined peak demand or Board-determined benefits). Substantive changes include:

Term: Effective October 1, 2035, through May 31, 2055 (20-year initial delivery term), then year-to-year, terminable with five years' notice. This aligns with long-term resource financing (e.g., 20-25 year developer contracts).

Scope and Flexibility: Remains full-requirements but introduces a "Member-Directed Resource" (MDR) option, allowing up to 10% (or more with Board approval) of peak demand to be self-supplied from qualifying clean resources (e.g., solar, wind, batteries, advanced nuclear) within Illinois or approved locations. MDR resources must be dedicated to IMEA, with Naperville credited for RTO revenues but bearing development risks and costs. Batteries/storage are treated as power supply substitutes.

Rates and Charges: Retains cost-based structure but adds: (1) "Cost Causation" principle, allocating extraordinary costs (e.g., member-specific requests) to the causing member(s) rather than socializing; (2) potential separate rates/Addendums for MDR elections, varying from standard "postage stamp" rates; and (3) explicit references to RTO costs (e.g., PJM for Naperville). Automatic adjustments for fuel/purchased power remain.

Agency Relationship: Grants IMEA limited agency to handle RTO interactions (e.g., PJM/MISO), transmission agreements, and MDR management on Naperville's behalf.

Sustainability and Resources: Aligns with IMEA's 2023 Sustainability Plan (carbon neutrality by 2050), emphasizing renewables. No specific resource mix is mandated, but Board decisions guide procurement.

Other Updates: Modernizes metering/testing for industry changes; enhances cooperation on demand-side programs; clarifies no adverse distinction (with remedies limited to contract terms). Dispute resolution, assignments, and covenants remain similar, with minor cleanups.

The successor aims to provide continuity while adding flexibility for clean energy and cost accountability, reflecting shifts toward renewables and RTO complexities.

- IMEA"s.summary.of.the.proposed.successor.power.sales.contract.is.provided.in.the. attached.PDF.(Contract.Legal.Review.Training.Slides.FINAL)¡
- A.list.of.IMEA.member.municipalities.and.their.populations.is.attached.(IMEA. Members.and.Population.8687)¡

High-Level Cost Breakdown

Both contracts are cost-based, with no fixed pricing; rates are set annually to recover IMEA's revenue requirements (e.g., bonds, operations, fuel, reserves). Costs are socialized across members via "postage stamp" rates, adjusted for load/share. MDR: Naperville bears direct costs/risks for up to 10% self-supply but gets RTO credits; remainder socialized. Cost Causation: Allocates member-specific expenses (e.g., new connections) directly.

IMEA bills monthly based on demand, energy, and ancillary services. Using Naperville's baseline consumption of approximately 1,200,000 MWh per year and the average energy cost since IMEA began serving the City in 2011 ($80.68/MWh), the estimated value over a 20-year term could be around $2 billion ($80.68/MWh × 1,200,000 MWh × 20 years).

Member communities pay for energy, capacity, and ancillary services (including transmission), as well as shared agency costs. For reference, the agency's administrative and general costs represent about 3.5% of total expenses.

Illinois Municipal Electric Agency

New Power Sales Contract Discussion Items

Overview of Substantive Terms

January 25, 2024

Overview of Substantive Terms

New Contract – Form and Term/Length

- **<u>Contract Form:</u>** Same form and structure as the existing contract - Functionally the same arrangements, with dates changed to reflect forward timelines and limited new concepts and updating
- **<u>Term of Contract/Contract Length:</u>** 20-Year Agreement with the term beginning at the expiration of the current contract (2035-2055)
  - ✓ The stated term of the existing Contracts and the outstanding bonds go through September 30, 2035; most started in 1990
  - ✓ Statute authorizes Member power contracts with IMEA up to 50 years in length
  - ✓ New contract is being completed now to ensure long term resources are in place up to and beyond 2035
    - <u>Runway Issue</u> – developers cannot finance and build new generating facilities without financial commitment from off-taker – typical financing by developers is 20 or 25 years - without a firm contract commitment from Members to IMEA for at least that 20 or 25 year period, IMEA cannot sign contracts with developers that go out the full 20 or 25 years

Overview of Substantive Terms

New Contract – Term/Length (continued)

- if Vendors don’t have surety that IMEA will be needing (and paying for) new resources beyond 2035, they have to collect the full development costs of the new facilities over the remaining 10+ years of IMEA’s existing contracts with its Members – this would mean higher costs to IMEA and the Members for any new generating resources added in the near future
- if IMEA does not start contracting to add new resources soon, we face the likelihood that new resources will cost more in the future when we do contract, and we face market risk that the price of power will be higher for any load that is not hedged with ownership or long-term contracts

✓ A new IMEA agreement with a 20-year term starting in 2035 provides the ability for IMEA staff to negotiate and, with Board input, procure the needed resources for the long-term needs of members that will supply your community for the next 30+ years

Overview of Substantive Terms

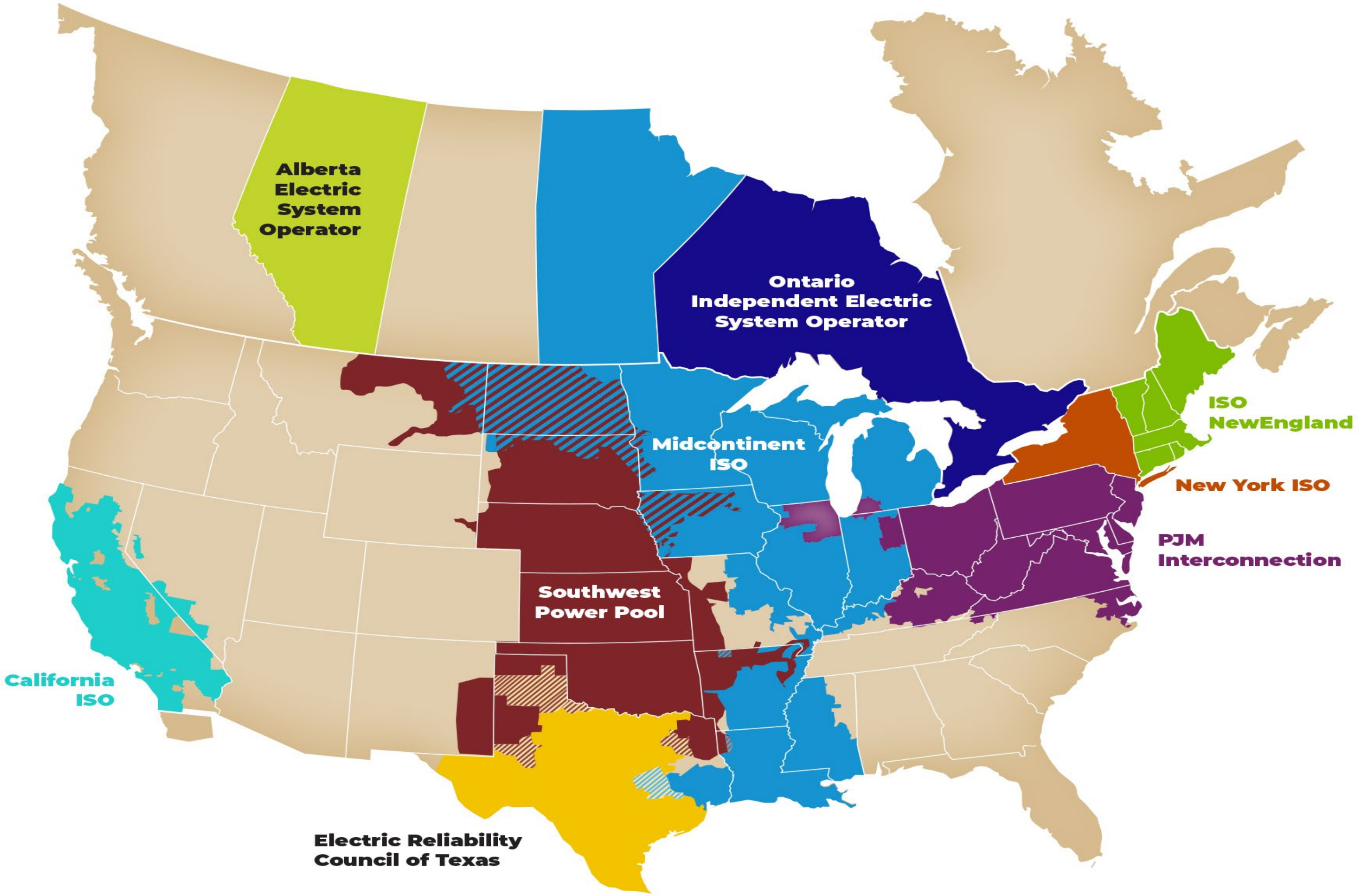
New Contract – Full Requirements

- **<u>Full Requirements:</u>** The Contract will continue to be a full requirements contract – same as it is now
  - ✓ IMEA agrees to procure resources to provide and the Members agree to pay for the Members' full loads – this means no power supply peak shaving by Members except through programs approved by the Board of Directors
    - 2 Members who installed hydro-electric facilities under existing contract will be grandfathered
    - IMEA Member Small Renewable Generation Resource Policy expected to continue as an exception
    - Member net metering/net billing polices expected to continue as an exception
    - New Member Directed Resource Option will not be netted out, not an exception to full requirements
    - New language clarifies treatment of Batteries or other energy storage devices
    - New language about extending or implementing PURPA waiver
  - ✓ In order to ensure full and fair cost recovery of IMEA's costs, the Members each need to commit to purchase and pay for the full requirements of all electric consumed by the Members' customers.
  - ✓ Regional Transmission Organizations (RTOs)/Transmission Owners (TOs) impose capacity and transmission costs based on full load of the Member's service area – IMEA stands in the shoes of the Member as the Load Serving Entity under the RTO Tariffs

IMEA

Overview of Substantive Terms

New Contract – RTO Map



Overview of Substantive Terms

New Contract – Rates and Charges

- **<u>Rates and Charges:</u>** The Board of Directors still sets rates and charges on an annual basis, based on detailed review by staff
  - ✓ Existing rate structure remains the same – "postage stamp" rates continue – meaning all Members pay same rates and charges based on load ratio portion of the entire agency costs with limited exceptions where necessary
  - ✓ All rates are cost-based, and any overcollection is returned to the members
    - ▪ Past several years, IMEA has performed 5-7% below the budget, saving your municipality and customers
    - ▪ This year, our projections show ≈3.5% cost below the annual approved budget
  - ✓ Transmission charges remain socialized the same as they are now with charges differing based on delivery voltage level and the Member's share of the overall system peak load
  - ✓ New exceptions to "postage stamp" rates and charges (1) Member self-directed resource option (MDR) and (2) cost causer responsibility for extra-ordinary costs

IMEA

Overview of Substantive Terms

New Contract – Other Notable Matters

- Other Notable Matters remain the same or similar:
  - ✓ Delivery Conditions and Metering (Section 6) mostly the same – updated for changes in industry
    - New language granting limited agency relationship to IMEA for dealing with RTOs and Transmission Owners (TOs)
  - ✓ IMEA covenants (Section 7) stay the same with small clean up
  - ✓ Member Covenants (Section 8) remain the same with small clean up
    - Rate Covenant – set rates sufficient to ensure adequate funds to pay IMEA invoices
    - No Sale or Lease of municipal utility during term (Member contracts are collateral for resource cost obligations)
    - Tax Exempt Bond status preservation (Can't jeopardize Agency or other Member status)
  - ✓ No Adverse Distinction clause (Section 15) remains the same with small clean up
  - ✓ No specifics on resources or CO_2 programs will be specified in the contract document - Resource decisions will continue to be discussed and voted on by IMEA Board
    - Goals are set and reflected in IMEA Sustainability Plan that IMEA Board approved at its December 2023 Board Meeting
  - ✓ Member Services remain as part of the rate, IMEA Board reviews and decides which programs to add/ remove/ change as they deem necessary and relevant

Illinois Municipal Electric Agency

Resource Planning to Meet IMEA’s Sustainability Goals

October 2024

Resource Planning to Meet IMEA's Sustainability Goals

SEAT AT THE TABLE

Each member municipality is represented on the IMEA Board making resource decisions in open and public meetings. Decisions are based on resource and energy needs, load forecasts, capacity requirements, and environmental considerations.

POWER IN NUMBERS

Joint planning allows members to benefit from collective strength in numbers for increased buying power, lower costs, and increased efficiencies.

AFFORDABILITY

Ownership of generation and long-term resource contracts shield municipal systems from sudden and dramatic market swings, keeping residents' electric rates affordable and predictable.

Proven Success Powered by Planning for Today, Tomorrow, and Beyond

IMEA employs a full-time staff of highly experienced power industry professionals who analyze market conditions and resource availability with the aim of procuring affordable, reliable, and sustainable power to meet today's needs and to support our municipalities' futures. IMEA plans to meet projected peak demand and energy requirements of its municipalities in a cost-effective, reliable manner.

IMEA Resource Planning

Highlights

Short-Term Immediate Future (2025-2030)

- IMEA's existing and contracted low-cost resources have been adequately planned for. Thus, they are largely already in place for this time frame. This planning foundation allows IMEA to maximize the value of existing generating assets and ensure continued reliable and affordable energy, while also continuing to diversify the portfolio with renewable resources as new sources are needed. In order to pursue utility scale solar, which IMEA is currently negotiating a 20-year 150MW contract, it was necessary for the IMEA to secure a certain threshold of needed load beyond the year 2035, this was done via an extension of members' wholesale power supply contracts with the agency.

Mid-Future (Early 2030s)

- This time frame provides an increased range of options. IMEA has all the resources it needs to reliably serve members needs in the short-term, but several existing generation resource terms expire in this mid-future time frame. Therefore, it is critical to begin preparing as quickly as possible to better establish a full strategy for transitioning to carbon-free resources by continuing to increase renewables, add battery storage, and ensure IMEA is able to meet customer loads reliably, affordably and sustainably. IMEA is in the midst of extending power supply agreements with its member municipalities, currently scheduled to expire in the year 2035. Finalizing these member contract extensions is necessary to ensure the agency's future resource planning matches members' load requirements. IMEA needs to know how much power to supply beyond 2035 in order to fully begin planning for this mid-future time frame. This protects the IMEA membership by ensuring IMEA is not needlessly securing excess resources that may not be necessary beyond the year 2035. Future planning cycles will allow for analyzing multiple options, modifying and adjusting these resource decisions with the IMEA Board of Director's review and approval.

Latter Half of Planning Period (2035 – 2050)

- This latter planning time frame includes more available options with the ability to adjust to changes in state and federal policy and changes in dynamic energy market conditions. There may also be more opportunities to benefit from enhanced clean energy technologies that are developing. Therefore, this latter-half timeframe includes uncertainty around planning factors, particularly including whether all members extend contracts beyond year 2035. It is important to monitor technology improvements and breakthroughs that may substantially influence the energy transition so that IMEA members can benefit from new proven technologies. Long-range planning allows for multiple planning cycle opportunities to check and adjust the plan based upon the best overall available resources, cost of resource options, and market conditions with the IMEA Board of Director's review and approval.

IMEA Resource Planning

Key Assumptions

- All members extend contracts to 2055
- Big River contract (25MW solar) extends to 2050
  - Contingent on 667MW of member contract extensions
- Historic load growth assumed
- Prairie State and Trimble County potentially subject to US EPA compliance dates (2032/2039)
- Prairie State and Trimble County MWH based on historical
- Prairie State CEJA reductions are implemented and retires in 2045
- Trimble County 1 retires in 2045, Trimble County 2 retires in 2050
- Member generation MWH normally called upon only during extreme grid operations or volatile market prices
- Future resources will be purchased or acquired to meet member load obligations over time
- Energy Efficiency and Demand Response program impact included in member load projections (anticipated continued reduction of electricity demand and usage through energy efficiency and demand response programs)

IMEA Resource Planning

Nameplate vs. Accredited Capacity

- PJM and MISO, as the Regional Transmission Organizations (RTOs), impose capacity obligations on utilities. The amount of capacity obligation a utility must meet is based on a utility's peak load, plus reserves determined by the RTO. This capacity obligation is satisfied with qualified generating resources.

- RTO's do not base the value of a resource on its nameplate capacity. Instead, they value it based on their calculated Accredited Capacity (for example PJM calls it Effective Load Carrying Capability (ELCC) and MISO calls it Direct Loss of Load (DLOL)). RTOs determine accreditation values based upon the resource performance and availability during the most critical hours of system need.

- This chart shows the difference between the nameplate value of IMEA's resources versus the projected accredited capacity value. The next slide shows the projected accredited value of all resources in PJM. These accredited resource values are relevant for planning purposes to ensure IMEA's portfolio meets all requirements. These charts demonstrate how the discounted value of intermittent resources becomes critical over time.

- As utilities transition their portfolios into the future and increase intermittent resources, they will need to purchase a greater number of nameplate MWs than peak load to meet capacity obligations.

Nameplate vs Projected Accredited Capacity

Projected PY25/26*	Nameplate Capacity (MW)	Summer Accredited Capacity (MW)
Prairie State	246	224
Trimble County	153	145
Member Generation**	296	290
Wind	120	30
Solar	33	16
Hydro**	10	10
Bilateral Purchases	100	100
Total	957	815

Totals may not sum due to rounding
Accreditation in PJM and MISO are different,
PJM's is ELCC, MISO's is DLOL
*Final accreditation values are subject to the determination of each RTO prior to the delivery year.
**Behind The Meter resources get a higher accreditation based on the current RTO rules that allow for adjustments (losses and reserves).

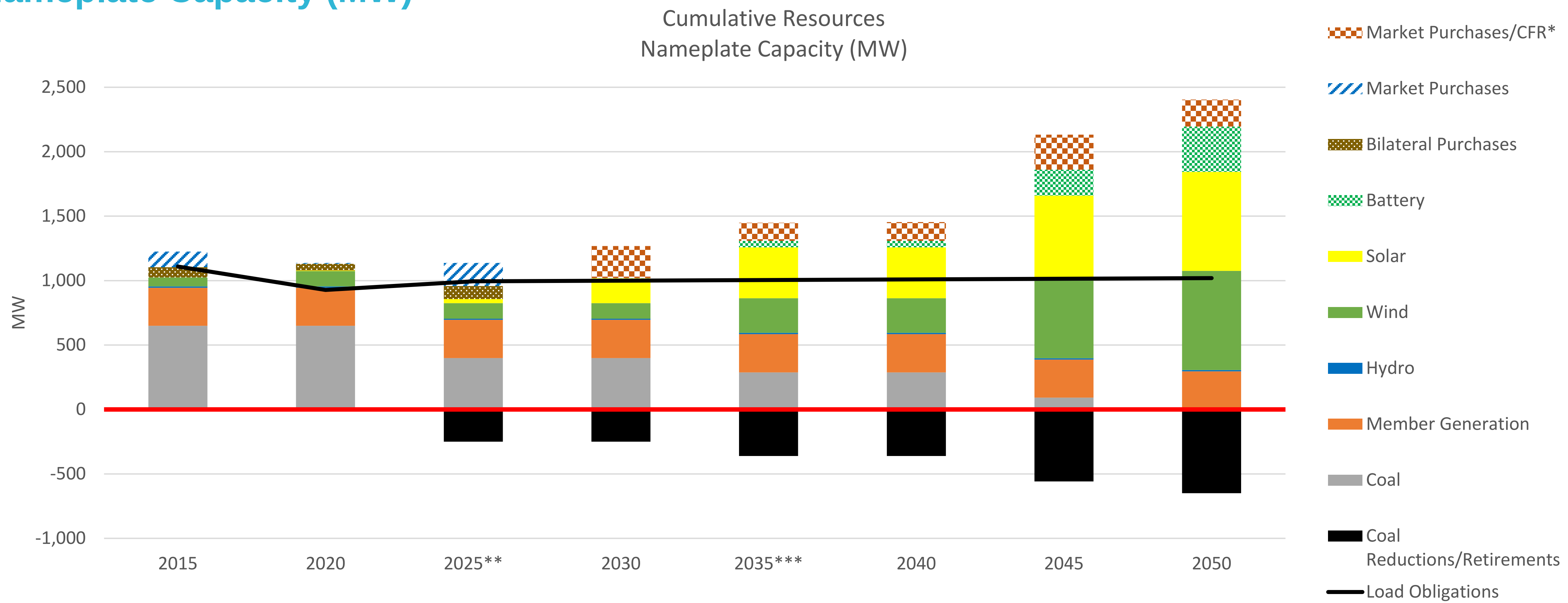
IMEA Resource Planning

Preliminary ELCC Class Ratings – DY 26/27 through DY 34/35

ELCC Class	2026/ 27	2027/ 28	2028/ 29	2029/ 30	2030/ 31	2031/ 32	2032/ 33	2033/ 34	2034/ 35
Onshore Wind	35%	33%	28%	25%	23%	21%	19%	17%	15%
Offshore Wind	61%	56%	47%	44%	38%	37%	33%	27%	20%
Fixed-Tilt Solar	7%	6%	5%	5%	4%	4%	4%	4%	3%
Tracking Solar	11%	8%	7%	7%	6%	5%	5%	5%	4%
Landfill Intermittent	54%	55%	55%	56%	56%	56%	56%	56%	54%
Hydro Intermittent	38%	40%	37%	37%	37%	37%	39%	38%	38%
4-hr Storage	56%	52%	55%	51%	49%	42%	42%	40%	38%
6-hr Storage	64%	61%	65%	61%	61%	54%	54%	53%	52%
8-hr Storage	67%	64%	67%	64%	65%	60%	60%	60%	60%
10-hr Storage	76%	73%	75%	72%	73%	68%	69%	70%	70%
Demand Resource	70%	66%	65%	63%	60%	56%	55%	53%	51%
Nuclear	95%	95%	95%	96%	95%	96%	96%	94%	93%
Coal	84%	84%	84%	85%	85%	86%	86%	83%	79%
Gas Combined Cycle	79%	80%	81%	83%	83%	85%	85%	84%	82%
Gas Combustion Turbine	61%	63%	66%	68%	70%	71%	74%	76%	78%
Gas Combustion Turbine Dual Fuel	79%	79%	80%	80%	81%	82%	83%	83%	83%
Diesel Utility	92%	92%	92%	92%	92%	93%	93%	93%	92%
Steam	74%	73%	74%	75%	74%	75%	76%	74%	73%

IMEA Resource Planning

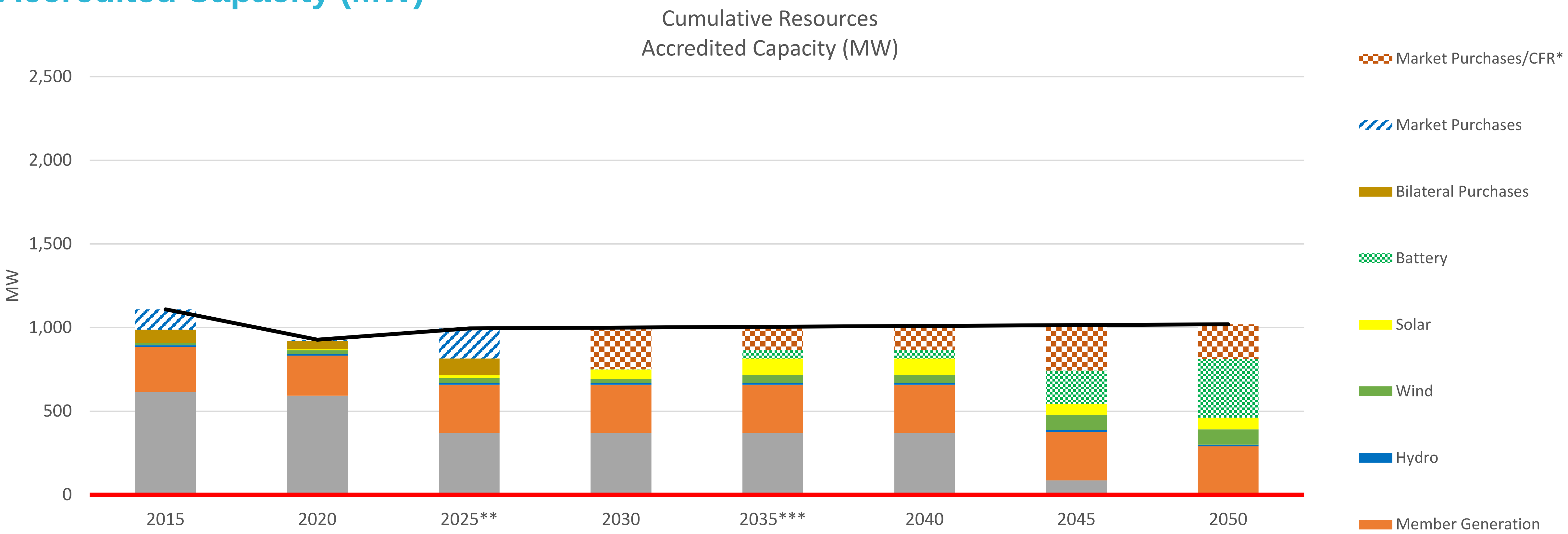
Nameplate Capacity (MW)



*Market Purchases or Potential Carbon Free Resources
**Vistra Cost-Based Coal Contract Ended May 31, 2022
***2035 Coal Nameplate Reduction is Equivalent Representation Per CEJA
Resource Plan will be impacted based on future load obligation, resource availability and cost, technology, and other factors.

IMEA Resource Planning

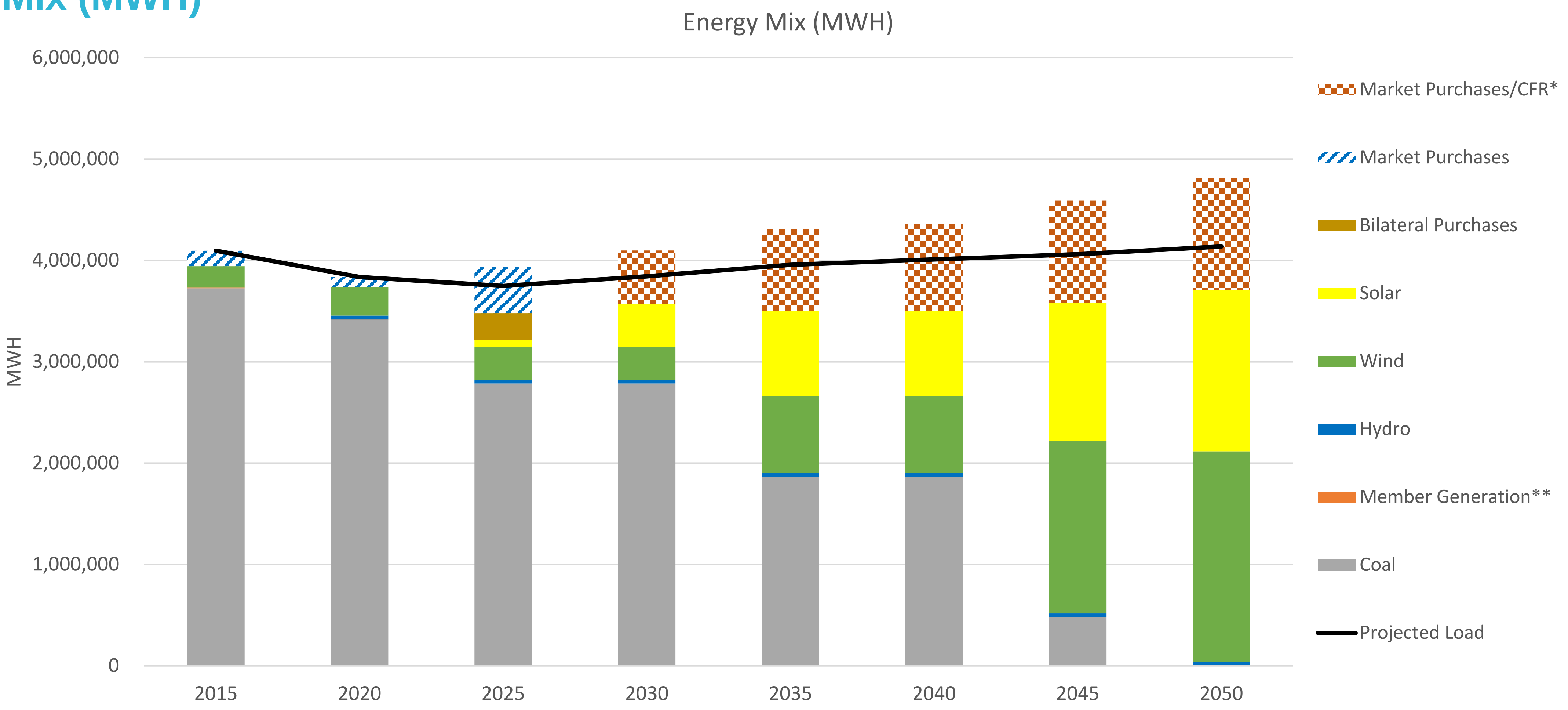
Accredited Capacity (MW)



*Market Based Purchases or Potential Carbon Free Resources
**Vistra Cost Based Contract Ended May 31, 2022
***Assumes flexibility in the RTO rules to allow compliance with CEJA and get full capacity accreditation for Prairie State
Load obligations, resource accreditation values are set by MISO & PJM, preliminary outlook (subject to change)

IMEA Resource Planning

Energy Mix (MWH)



*Market Based Purchases or Potential Carbon Free Resources
**Member Generation is normally less than 1%
Note: Battery charging/discharging actions reducing market exposure

Sustainability: Transitioning to OUR Energy Future

IMEA

2024

2050 Net-Zero Vision

The Illinois Municipal Electric Agency (IMEA) Board of Directors sets forth this organizational vision for reducing to net-zero our power supply carbon emissions delivered to our Member municipalities by 2050.

IMEA's Member communities are committed to working together in the coming years as the transitional journey progresses, while also holding paramount the Agency's mission of providing a reliable and affordable wholesale power supply to Members' residents.

ROADMAP FORWARD:

- Target reductions in greenhouse gases
- Increase our renewable generation resources to replace current resources
- Allow the flexibility needed to embrace changes in technology, such as battery storage
- Continue and expand energy efficiency program incentives to our communities and their residents
- Reduce resource capacity needs by accelerating our demand response options
- Advance electric vehicles and EV infrastructure

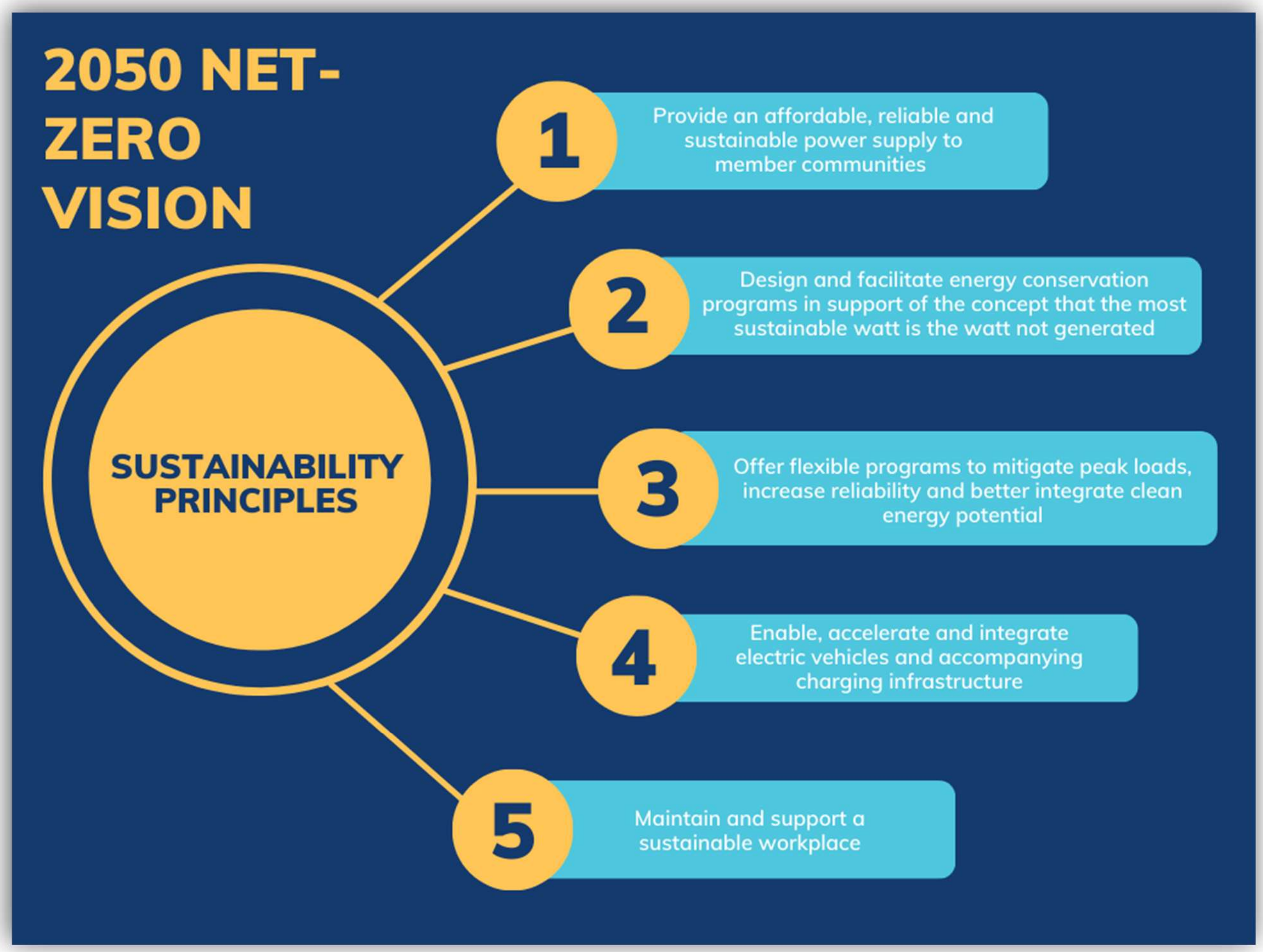
The Board acknowledges that to attain its 2050 vision of a net-zero portfolio, industry innovation, developments, commercialization, and implementation must occur. Examples include the development of dispatchable emission-free resources, increased availability of economic energy storage solutions or similar new technologies, transmission upgrades to deliver new renewable generation to residents, increased integration of distributed generation, and economic exit strategies or emission reduction technologies for existing fossil-fueled resources.

SUSTAINABILITY PRINCIPLES

As we transition to our net-zero vision, we will rely on a member-driven set of sustainability principles.
Illinois Municipal Electric Agency (IMEA) and its member communities are committed to the balance of being responsible governmental entities, employers and environmental stewards, while providing affordable and reliable electric power. The best way to achieve balance is through the consistent application of sustainability as a business practice.

IMEA defines sustainability as a business approach that creates long-term member value by embracing opportunities and managing risks derived from economic, environmental, and societal developments.

This document captures a snapshot of our current portfolio and future targets for the next three to four years. As conditions warrant, this document will be reviewed and updated to reflect progress and future strategies and targets.



1 Provide an affordable, reliable and sustainable power supply to member communities

IMEA's vision is to continue to work towards reducing to net-zero our wholesale power resource portfolio by 2050. Renewable energy is a larger portion of our portfolio than ever before, and we are not stopping there. Going forward, IMEA will use this vision to work in collaboration with our member communities to construct decisions around resource planning, portfolio optimization and emissions reductions. This is part of our overall strategy to diversify resources while balancing our public-service obligation to serve customers and member communities reliably and affordably.

IMEA efforts to combat climate change create many opportunities through innovative and transformative solutions. IMEA believes that our nation's power grid requires a combination of many types of generation sources to ensure reliability. Renewable resources play an increasingly important role in supplying our customers with the reliable and sustainable power supply we all depend on.

Overall, IMEA is transitioning our generation to a cleaner, more diverse portfolio in a responsible fashion. Electricity keeps our communities and businesses thriving, and IMEA will do its part to sustain the prosperity and quality-of-life that affordable, reliable electricity brings to member communities.

Leadership to Date: Building on the success of recent carbon-free milestones

IMEA has taken strides towards transforming our electricity portfolio with current renewable projects totaling 125 megawatts of aggregate solar and wind capacity at the end of 2023.

- **Investing in clean power:** IMEA has advanced carbon-free resources with 11% of our current energy coming from non-carbon emitting generation resources that include solar, wind, and municipally owned hydro.

IMEA Municipal Solar Program: Power agreements for nine solar arrays in our member communities of Altamont, Oglesby, Princeton, Marshall, Naperville, Rantoul (2 projects), Rock Falls, and St. Charles.

Wind: Wind-powered generation contracts with Lee-DeKalb Wind Farm and Green River Wind Farm in Lee and Whiteside counties.

Hydro: Two municipally owned hydro power plants in Peru and Rock Falls.

- **Accelerating Towards a Greener Future:** Along with increasing and adding new renewable generation resources, IMEA has recently reduced our reliance on coal generation, successfully negotiating an early contract exit to reduce our total reliance on coal by more than 40% from a capacity perspective. The reduction was nearly 24% from an energy perspective based on the 2021 level of energy production.

- **Balancing a Reliable Portfolio:** With today's technologies, a diverse electricity mix ensures that the lights come on around the clock when customers flip the switch. This is where our baseload resources currently play a role to help ensure a reliable electric grid. Our predictable, controllable, and economic base-load generation resources all include the best available state-of-the-art environmental controls, helping to minimize the environmental footprint of our portfolio.

- **Pursuing New and Emerging Technologies:** IMEA supports technological innovation necessary to shape the energy system of the future for a decarbonized economy. That is why IMEA participated in a Department of Energy Study on Carbon Capture at one of our coal-fueled facilities. That study was completed in 2022, and, coupled with changes in federal legislation, there is a potential that a third-party developer could pursue a future carbon capture project. As technologies evolve, IMEA will continue to support innovation and technological advancements that contribute to reducing overall emissions from the energy sector to achieve a stable electric grid that reliably delivers carbon-free energy.

- **Supporting Reliable Local Generation Back-up Resources:** Several of IMEA's member municipalities have local generation units within their communities as a fall back if the main grid has an issue. During extreme weather events or other emergencies, these resources deliver high system reliability to our members and end-use customers.

- **Providing Local Green Power Choices.** As we transition our resource portfolio towards a lower-carbon future, IMEA has created Green Power Choices, a renewable energy credits program to help municipal retail customers and member municipalities reach their individual environmental goals, in addition to the overall resource changes that IMEA will be completing.

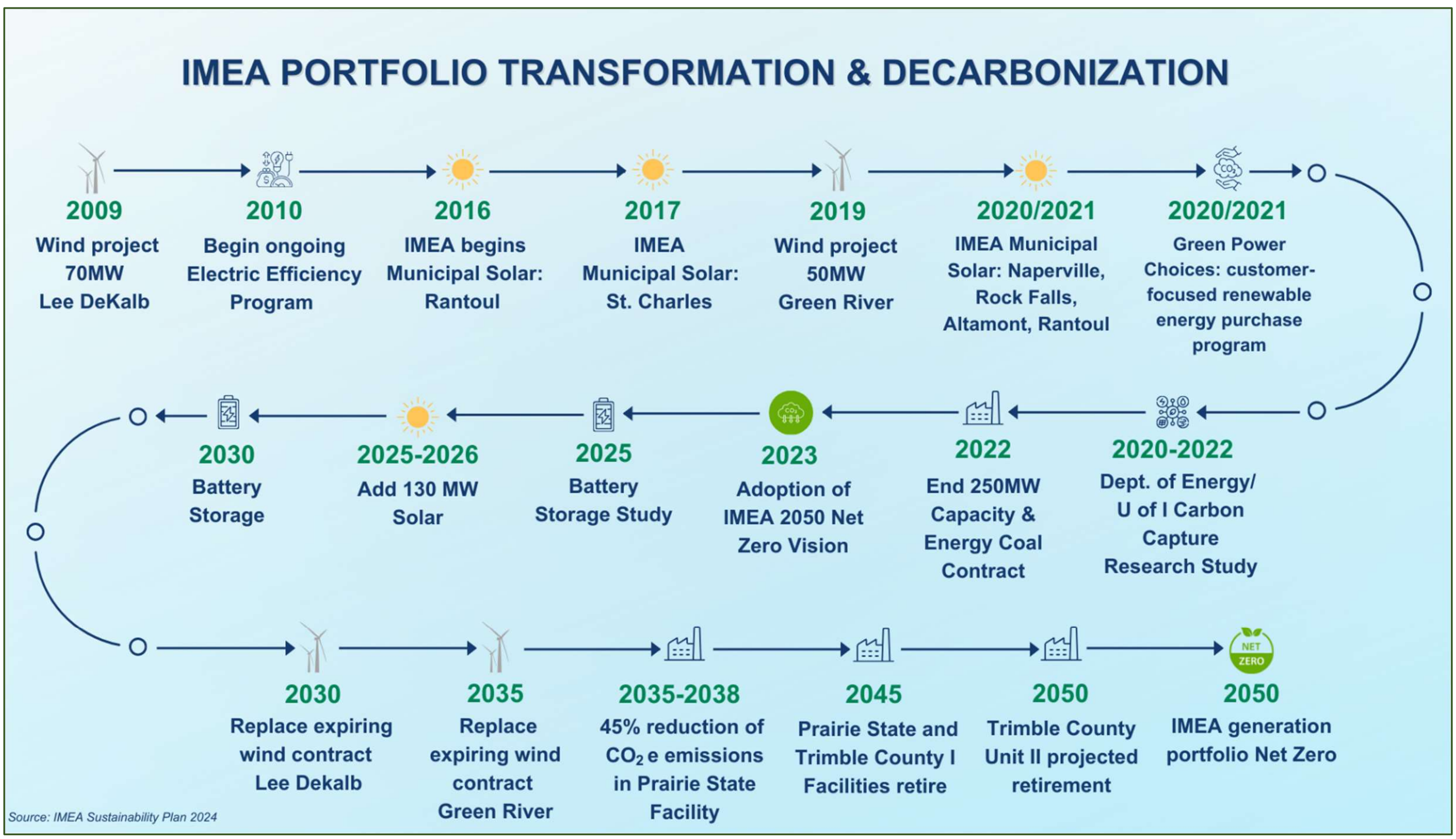
Future Targets & Strategies: Transitioning more of our portfolio to carbon-free generation resources.

- We **seek to add 130 megawatts** of solar as follows:
  - IMEA has **contracted to add 25 megawatts of utility-scale solar starting in 2025.** IMEA reached an agreement to purchase solar-generated electricity from the Big River Solar Farm located in White County, Illinois;
  - IMEA will pursue **adding 100 megawatts of new utility-scale solar** to our portfolio to be energized over the time frame of 2025-2026;
  - IMEA seeks to **add 5 megawatts of behind the meter solar projects to our IMEA Municipal Solar Program** in our member communities by 2025**.**

- By the end of 2025, IMEA will study the feasibility of **installing utility-scale behind-the-meter battery storage on member distribution systems.** If deemed economically feasible**,** implementation would occur no later than 2030.

- **IMEA commits to researching and exploring new and innovative technologies to reduce our current resource carbon footprint.** IMEA and our power resource partners will regularly review our options to cost effectively improve system efficiencies.

- **IMEA will utilize a member governing body stakeholder process on a three-year review cycle and update the sustainability plan.** On an annual basis, IMEA staff will report to the Board on the progress of the Sustainability Plan and provide any recommended revisions to the Board of Directors.



Design and facilitate energy conservation programs in support of the concept that the most sustainable watt is the watt not generated

IMEA recognizes that electricity not generated – because it is not needed – yields the greatest environmental benefit and is essential for improving system cost effectiveness, customer retention and business development.

Reducing electricity demand and usage through innovative conservation efforts and customer efficiency improvements offered to IMEA member communities results in conservation of natural resources and emissions reductions. Our energy efficiency program has provided significant reductions in greenhouse gas emissions by harnessing technology to use less energy and reduce reliance on fossil fuel generation.

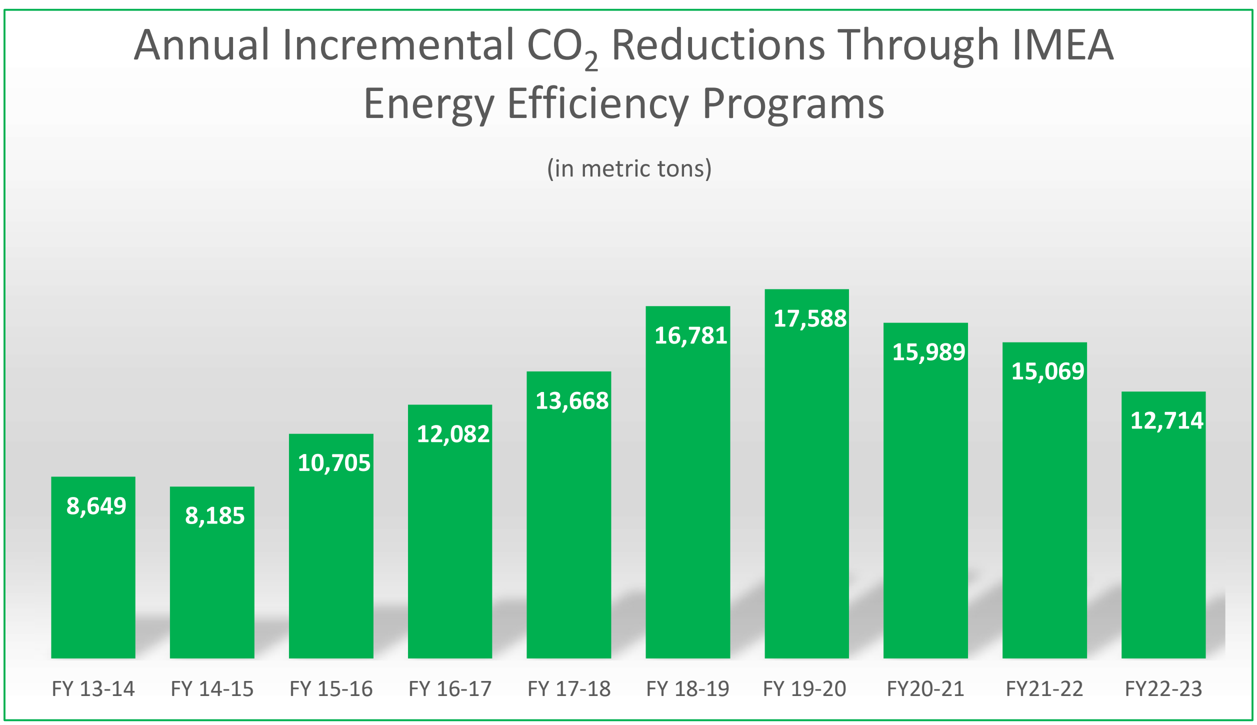
Leadership to Date

- IMEA has had a successful electric energy efficiency program in place since 2010.
- Since the beginning of the program, we have provided more than $11 million in direct customer incentives toward the installation of energy efficient technologies and the reduction of peak loads and energy consumption by IMEA members and their commercial and industrial electric customers.
    - More than 1,100 commercial/industrial electric efficiency projects have been completed.
- In FY2021-2022[1], our program resulted in more than 39 million kWh in deemed savings delivered to businesses.
- The agency estimates that IMEA-incentivized electric efficiency projects reduced carbon emissions by 15,069 metric tons in IMEA's fiscal year 2021-2022[2].
- We have given away more than 100,000 LED lightbulbs to our residents and commercial customers to encourage even more home-based and small business energy savings choices.
- IMEA offers and will continue to offer energy audits, infrared scanning services, technical assistance and usage analysis to our member communities and businesses.

[1] The last year for which there is complete data.
[2] The last year for which there is complete data.

Future Targets & Strategies

- IMEA recently expanded our electric efficiency program to allow municipal members to include new residential options. These options include incentivizing smart thermostats and the installation of higher efficiency central air conditioning and air source heat pumps. Thus far, we have incentivized nearly 1,700 thermostats. **We seek to encourage more members to offer these local options.**
- IMEA's board **will regularly review technology developments to determine whether new energy saving measures can be added** to our energy efficiency programs.
- By the end of 2025, **IMEA commits to explore a Conservation Voltage Reduction (CVR) program** to achieve energy and demand reductions for customers.
- As technology evolves, IMEA will continue to **review the potential of the appropriate additions and increased funding** for our energy efficiency program.



NOTE: As of 7/31/23, 91 out of 141 (65%) FY2022-23 projects were complete. Only completed projects are reflected in this chart.

3 Offer flexible programs to mitigate peak loads, increase reliability and better integrate clean energy potential

> IMEA does our part by working to make power grids more efficient, environmentally friendly and reliable. IMEA supports flexible programs that give customers the opportunity to help manage electricity demand.

Demand response (DR) programs improve grid efficiency and reliability. They help create long-term grid stability by giving consumers the opportunity to voluntarily reduce or shift their electricity usage when called upon by the grid operator to relieve stress when the demand for electricity outpaces the grid's ability to supply it. This is typically during heat waves or harsh winter cold snaps. With these DR programs, the grid operator is essentially creating an electricity "resource" to be called on in times of need to ensure reliable supply. In the future, effective DR programs can ensure that additional power supply resources may not be required and current resources may operate less often.

Leadership to Date

- IMEA recently revamped its DR program for IMEA member commercial/industrial customers in the PJM (northern Illinois) regional transmission organization. This program ensures that customers can voluntarily reduce their electric usage during a peak period in a planned fashion in exchange for a financial incentive paid directly to the end-use customer through the municipal utility.

Future Targets & Strategies

- **Expand our current DR program by offering more options to commercial/industrial customers in the MISO (central and southern Illinois) regional transmission organization territory.** This will provide additional opportunities to reduce peak loads and avoid high-cost market purchases.
- Pursue federal grant opportunities to **deploy an Optimized Charging Operations Center** (OCOC) to complement the growing level of energy management sophistication within member utilities and the communities they serve. The OCOC would seek to develop a methodology to provide visibility into times of grid congestion and establish effective real-time consumer communications, **enabling informed customer consumption decisions**. The grant could also offer the opportunity for effective customer enrollment incentives to encourage end-use customer participation in the program.
- Explore **residential demand-side management measures**, potentially using the platform developed by the OCOC.

Enable, accelerate and integrate electric vehicles and accompanying charging infrastructure

The IMEA is working closely with our municipal partners to promote the use of EVs, reducing negative environmental impacts and helping customers save money.

Another arena to realize clean energy potential is with the increasing numbers of electric vehicles (EV). EVs produce fewer emissions that contribute to climate change and smog than do conventional vehicles. With newer options for EV infrastructure and integration, EV ownership will become more convenient and the numbers of EV owners will increase, subsequently yielding a reduction in total U.S. carbon emissions.

The Illinois Municipal Electric Agency has been working closely with our municipalities to expand our Electric Vehicle Charging Station Initiative. Through this program, we provide funds so that our member municipalities can offer incentives to install, own or lease electric vehicle charging infrastructure in a way that best serves their communities. Electric vehicles play an important role in reducing the carbon footprint, and we remain committed to helping our communities realize the benefits while working closely with local, state and national partners as the infrastructure and policies develop.

Leadership to Date

- In 2020, IMEA introduced its EV Charging Station Initiative. In one of our member municipalities alone, more than 100 retail customers have installed EV charging stations with the help of IMEA incentives.

Future Targets & Strategies

- In late 2021, the IMEA Board of Directors voted to significantly increase the scope and funding of the EV Charging Station Initiative. Over the ensuing three years, the Agency will make a total of $750,000 available for municipal members to:
  - ✓ Own or lease EV charging stations for public use,
  - ✓ Own or lease electric vehicles for city use, or
  - ✓ Incentivize retail customers to install EV charging stations.
- IMEA, through our affiliate Illinois Municipal Utilities Association (IMUA), is working to support the Illinois Department of Transportation (IDOT) National Electric Vehicle Infrastructure Formula Program (NEVI). This plan is required for the State to access Federal EV charging station grants. IMEA and IMUA will continue to **work with regulatory agencies to pursue funding opportunities to increase the number of EVs and charging infrastructure in our member communities.**
- IMEA, through our affiliate (IMUA), will **pursue federal grant opportunities to seek to implement a newly developed Optimized Charging Operations Center (OCOC) to establish an effective agency, and member-managed electric vehicle charging program.** This program could provide signals to Level 2 charging customers to **shift patterns of demand in ways that provide grid operations and stability benefits.** The grant may provide the opportunity for enrollment incentives and on-going rewards to participants with verified performance. If this grant opportunity becomes available, IMEA will target an implementation date of the program within 3 to 5 years.

Maintain and support a sustainable workplace

IMEA strives to be a leader in the region by making our facilities a model for other green businesses. We want to provide a workplace demonstrating our long-term commitment and vision to a sustainable culture.

Leading by Example

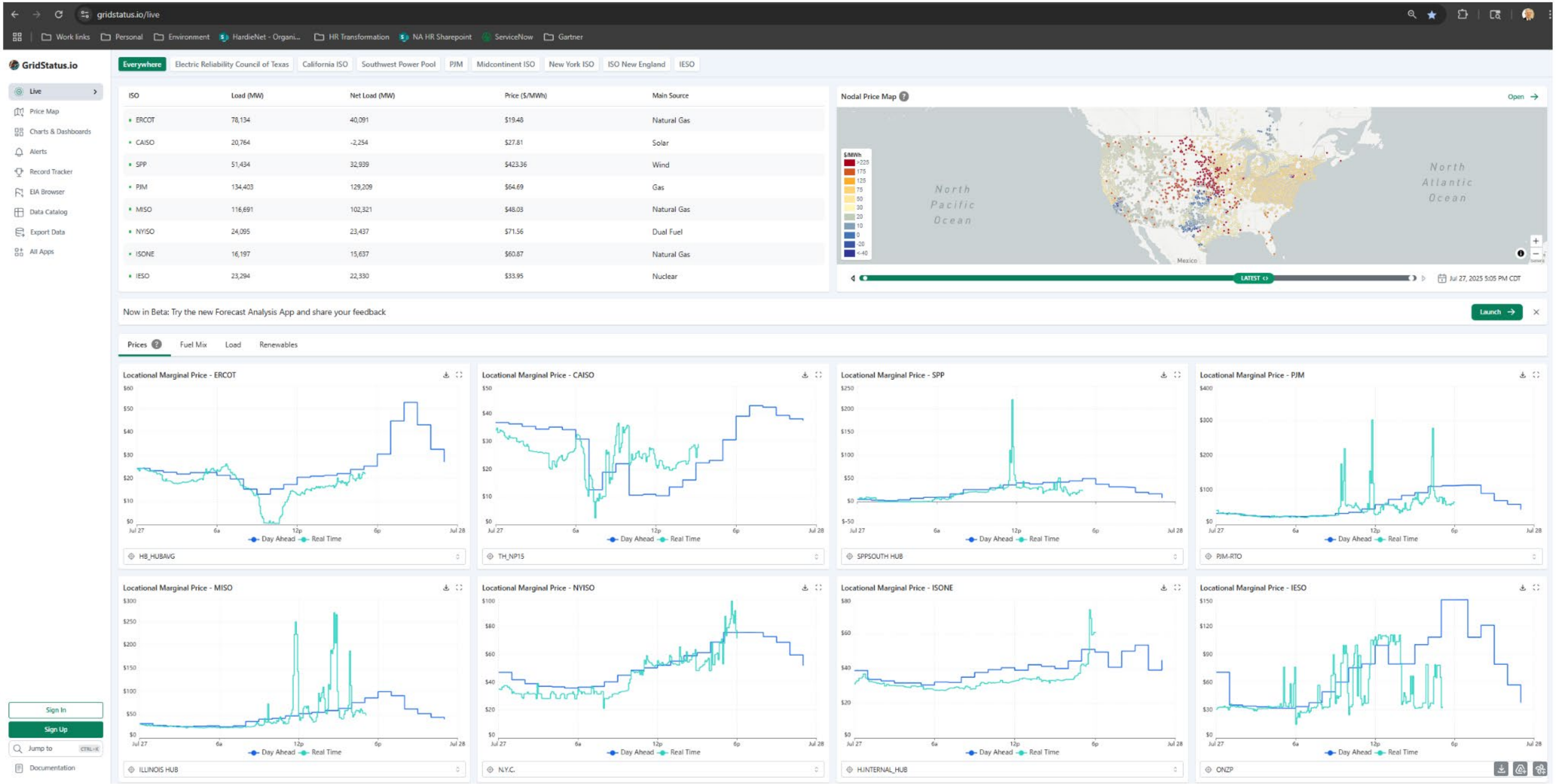
- The IMEA office building was the first commercial building built in the Springfield region to receive the United States Green Building Council's Silver Certification for Leadership in Energy and Environment Design (LEED) in 2008. Our building was constructed in an eco-friendly manner to achieve a top level of design and execution with energy efficiency and sustainability in mind.
- Our facility is heated and cooled with a 100% high efficiency geo-thermal heat pump system with no natural gas.
- IMEA invested in Low-E windows to reduce infrared and ultraviolet light.
- We updated our facility with all LED motion activated lighting.
- IMEA installed a 10 kilowatt solar array at our headquarters to reduce our environmental footprint.
- IMEA installed an electric vehicle charging station at our headquarters for employees, board members and visitors.
- IMEA will continue to convert our small fleet of vehicles to electric vehicles as it becomes cost effective and practical.

IMEA is committed to efforts to combat climate change and create a sustainable energy future by providing stable-priced, reliable and cleaner power that ensures our members and their residents a higher quality of life for future generations.

For further information about IMEA's programs, contact us at 217-789-4632 or visit our website at www.imea.org.

Municipal Electric Systems of IL		2021 Population
Altamont		2,216
Bethany		1,255
Breese		4,641
Bushnell		2,718
Cairo		1,733
Carlyle		3,253
Carmi		4,865
Casey		2,404
Chatham		14,377
Fairfield		4,883
Farmer City		1,828
Flora		4,803
Freeburg		4,582
Greenup		1,365
Highland		9,991
Ladd		1,263
Marshall		3,947
Mascoutah		8,754
Metropolis		5,969
Naperville		149,540
Oglesby		3,712
Peru		9,896
Princeton		7,832
Rantoul		12,371
Red Bud		3,804
Riverton		3,532
Rock Falls		8,789
Roodhouse		1,578
St. Charles		33,081
Sullivan		4,413
Waterloo		11,013
Winnetka		12,744
	Total	347152

Market Scheduling Functions (e.g. CES, or 3-5 FTE if internal to Naperville)	Longer-Term Planning (Naperville in-house, can outsource PPA procurement, 4-7 FTE)	Regulatory Compliance (compliance firms)	Energy Efficiency Program Management (e.g. EE provider)
• Securing capacity as required by PJM. • Securing ancillary services as required by PJM. • Load Scheduling and adjustments 24x7 x365 • Generation Scheduling and adjustments 24x7x365. Including PURPA Qualifying Facilities wi thin the City of Naperville. • Transmission usage and charges • Short-term load forecasting • Ancillary Services Scheduling and Compliance • Settlement and Billing • Load Shed Response • Actions in the Day Ahead and Real Time markets • Demand response opportunity identificat ion (market based and cost based) • Perform required reporting to authorities within the region, ComEd, FERC, etc. • Including all metering and telemetry values required for billing and settlements. • Representation and documentation support for all required audits.	• Long-term load forecasting • Forecasting and other market planning functions • Securing energy supply, negotiating terms, and managing the energy supply portfolio of the City of Naperville for a firm service level without interruptions for all hours of all days in the year. • Drafting, negotiating and enforcing of power supply contracts for all resource types including renewable and emerging technologies.	• Compliance with all rules and regulations. • PURPA Advice and Regulatory Review • Advice and assistance in electric utility policy creation that is in compliance with all applicable rules and laws. • Legal representation with advanced knowledge of electric industry including power supply, transmission, transmission rate formulas and wholesale distribution in PJM interconnection and before FERC. • Continual monitoring and participation in stakeholder process at PJM, FERC, NERC, Illinois General Assembly, US Congress, state regulatory agencies, etc. • Familiarity with and advise on compliance with NERC and Reliability First Corporation reliability standards and compliance with same standards. Monitoring of both entities for new standards. • Monitoring of and advocacy before FERC on filings by various providers regarding rate changes, formula rates and market rules.	• Design and administer rate-based Electric Energy Efficiency Programs, e.g. Thermostats, LED lighting, HVAC, Refrigeration.


gridstatus.io/live
Work links
Personal
Environment
HardieNet - Organi...
HR Transformation
NA HR Sharepoint
ServiceNow
Gartner
GridStatus.io
Everywhere
Electric Reliability Council of Texas
California ISO
Southwest Power Pool
PJM
Midcontinent ISO
New York ISO
ISO New England
IESO
Live
Price Map
Charts & Dashboards
Alerts
Record Tracker
EIA Browser
Data Catalog
Export Data
All Apps
ISO Load (MW) Net Load (MW) Price ($/MWh) Main Source
ERCOT 78,134 40,091 $19.48 Natural Gas
CAISO 20,764 -2,254 $27.81 Solar
SPP 51,434 32,939 $423.36 Wind
PJM 134,403 129,209 $64.69 Gas
MISO 116,691 102,321 $48.03 Natural Gas
NYISO 24,095 23,437 $71.56 Dual Fuel
ISONE 16,197 15,637 $60.87 Natural Gas
IESO 23,294 22,330 $33.95 Nuclear
Nodal Price Map
Open
North Pacific Ocean
North Atlantic Ocean
Mexico
LATEST
Jul 27, 2025 5:05 PM CDT
Now in Beta: Try the new Forecast Analysis App and share your feedback
Launch
Prices
Fuel Mix
Load
Renewables
Locational Marginal Price - ERCOT
HB_HUBAVG
Locational Marginal Price - CAISO
TH_NP15
Locational Marginal Price - SPP
SPPSOUTH HUB
Locational Marginal Price - PJM
PJM-RTO
Locational Marginal Price - MISO
ILLINOIS HUB
Locational Marginal Price - NYISO
N.Y.C.
Locational Marginal Price - ISONE
.H.INTERNAL_HUB
Locational Marginal Price - IESO
ONZP
Day Ahead
Real Time
Jul 27
6a
12p
6p
Jul 28
Sign In
Sign Up
Jump to
Documentation

1 Reflects the LCOE for a system composed of standalone generation plus standalone storage less the combined system-level synergies (assumed to be 10% of storage capital costs and 25% of inverter costs). The synergies capture potential cost reductions or efficiency gains from integrating generation and storage, such as shared interconnection infrastructure, improved energy dispatch, enhanced capacity utilization and operational efficiencies.

2 Given the limited public and/or observable data available for new-build geothermal, coal and nuclear projects, the LCOE presented herein reflects Lazard's LCOE v14.0 results adjusted for inflation and, for nuclear, are based on then-estimated costs of the Vogtle Plant. Coal LCOE does not include cost of transportation and storage.

3 The fuel cost assumptions for Lazard's LCOE analysis of gas-fired generation, coal-fired generation and nuclear generation resources are \$3.45/MMBTU, \$1.47/MMBTU and \$0.85/MMBTU, respectively, for year-over-year comparison purposes. See page titled "Levelized Cost of Energy Comparison—Sensitivity to Fuel Prices" for fuel price sensitivities.

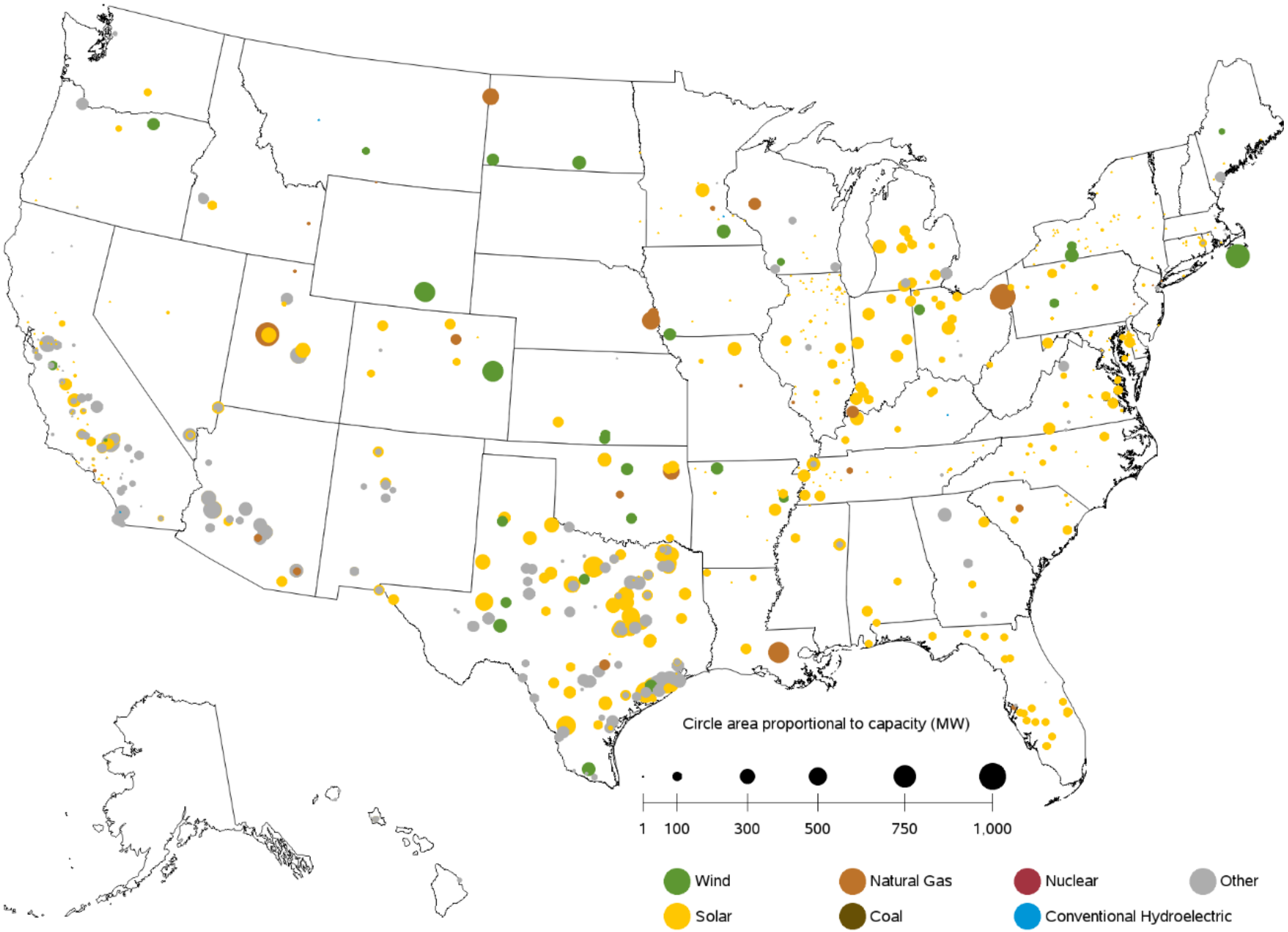
4 Represents the illustrative midpoint LCOE for Dominion's Coastal Virginia Offshore Wind ("CVOW") project, based on the publicly disclosed capital cost of ~\$8.7 billion (excluding onshore transmission costs) and offshore wind estimates from Lazard. Dominion's projected LCOE for CVOW as of February 2025 is \$91/MWh in 2027 dollars, with an expected COD in 4Q 2026.

5 Reflects the average of the high and low LCOE marginal cost of operating fully depreciated gas peaking, gas combined cycle, coal and nuclear facilities, inclusive of decommissioning costs for nuclear facilities. Analysis assumes that the salvage value for a decommissioned gas or coal asset is equivalent to its decommissioning and site restoration costs. Inputs are derived from a benchmark of operating gas, coal and nuclear assets across the U.S. Capacity factors, fuel, variable and fixed operating expenses are based on upper- and lower-quartile estimates derived from Lazard's research. See page titled "Levelized Cost of Energy Comparison—New Build Renewable Generation vs. Marginal Cost of Conventional Generation" for additional details.

6 Represents illustrative LCOE values for Vogtle nuclear plant's units 3 and 4. The analysis is based on publicly available estimates and suggestions from selected industry experts, indicating a cost "learning curve" of ~30% between Vogtle units 3 and 4. Analysis assumes total operating capacity of ~2.2 GW, total capital cost of ~\$32.3 billion, capacity factor of ~97%, operating life of 70 years and other operating parameters estimated by Lazard's LCOE v14.0 results, adjusted for inflation.

7 Illustrative high case reflects elevated capital costs (\$2,400/kW – \$2,600/kW) based on recently observed market quotes for CCGT projects in early stages of development (post-2028 COD).

Figure 6.1.C. Utility-Scale Generating Units Planned to Come Online from June 2025 to May 2026



Sources: U.S. Energy Information Administration, Form EIA-860, 'Annual Electric Generator Report' and Form EIA-860M, 'Monthly Update to the Annual Electric Generator Report.'