ILLINOIS ENERGY INFORMATION

Illinois Electricity History

- **Early 1900s**
  Regulated (for profit) utility monopolies provide electricity (generation, delivery, pricing bundled)

- **1970s–1980s**
  Major nuclear build-out makes Illinois a national leader in nuclear power and a net electricity exporter with **7 nuclear plant sites and 13 reactors**

- **1997**
  Illinois passes the *Electric Service Customer Choice and Rate Relief Law*, beginning electricity deregulation (for-profit utilities)

- **2000s**
  Competitive wholesale markets expand; Illinois integrates into **PJM** and **MISO** regional grid systems

- **2010s**
  Coal generation declines; natural gas and wind increase; nuclear remains central to reliability

- **2021**
  Climate and Equitable Jobs Act (CEJA) sets path to 100% carbon-free electricity by 2045

Electricity Distributors vs Power Producers

Distributors (Utilities)

Ex: ComEd, Ameren Illinois, MidAmerican

Role: *Delivery & system reliability*

- Own and maintain **poles, wires, substations, meters**
- Responsible for **physical delivery of electricity**
- Rates are **regulated by Illinois Commerce Commission (ICC)**
- Do **not** choose generation resources
- Do **not** control wholesale energy or capacity prices
- Required to serve all customers in their territory

Producers (Generation)

Ex: Constellation, Vistra, Invenergy, Earthrise, NRG

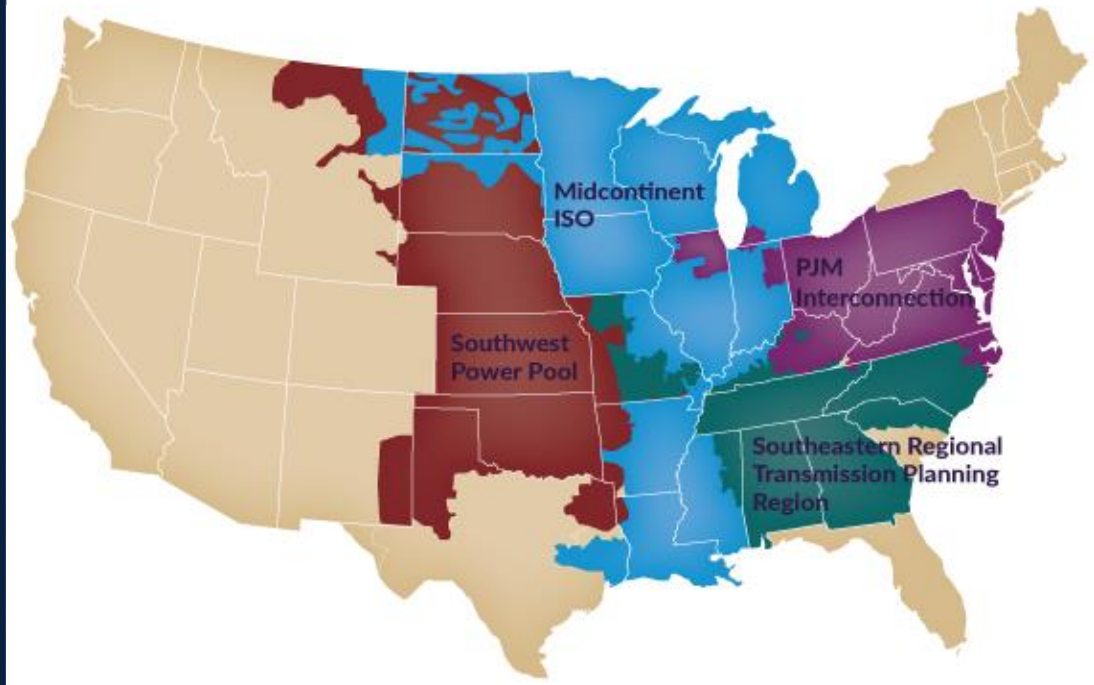
Role: *Electricity production and pricing*

- Own or contract with **power plants**
- Sell electricity into **PJM and MISO wholesale markets**
- **Prices set by**
  - Energy markets
  - Capacity auctions
  - Transmission congestion

What is PJM and MISO?

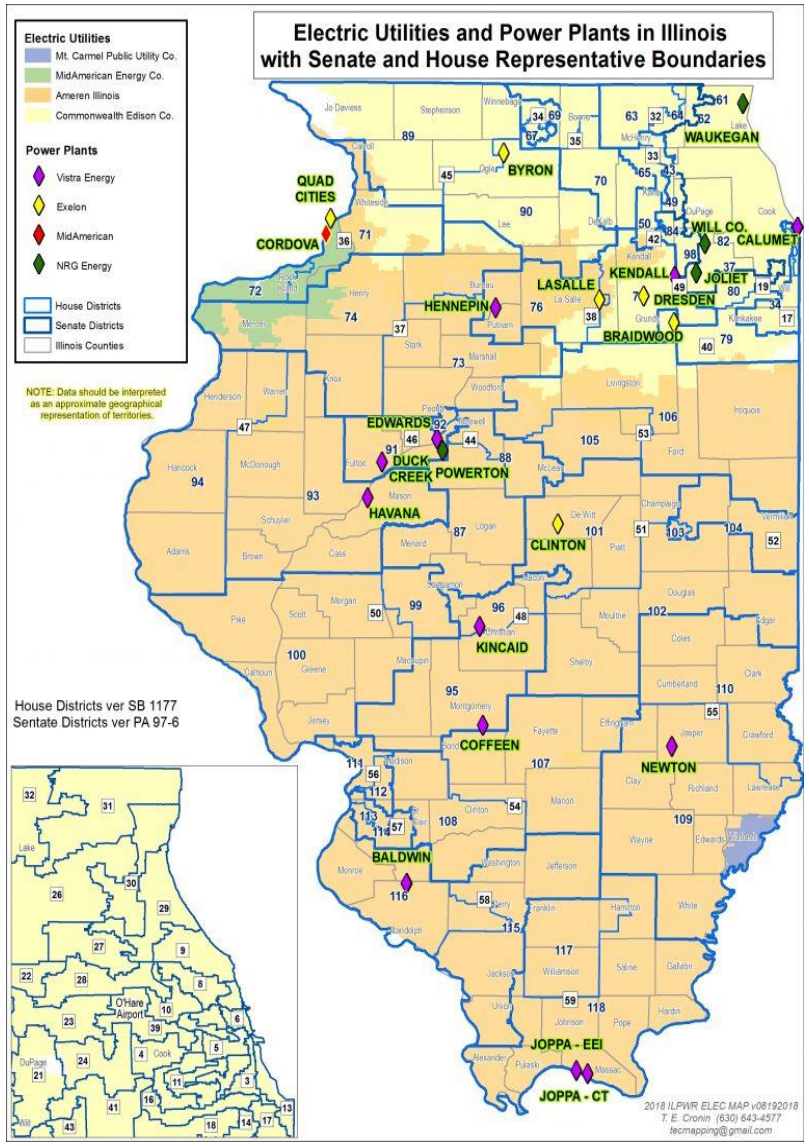
Illinois participates in two regional transmission markets that ensure reliability in different strategies:

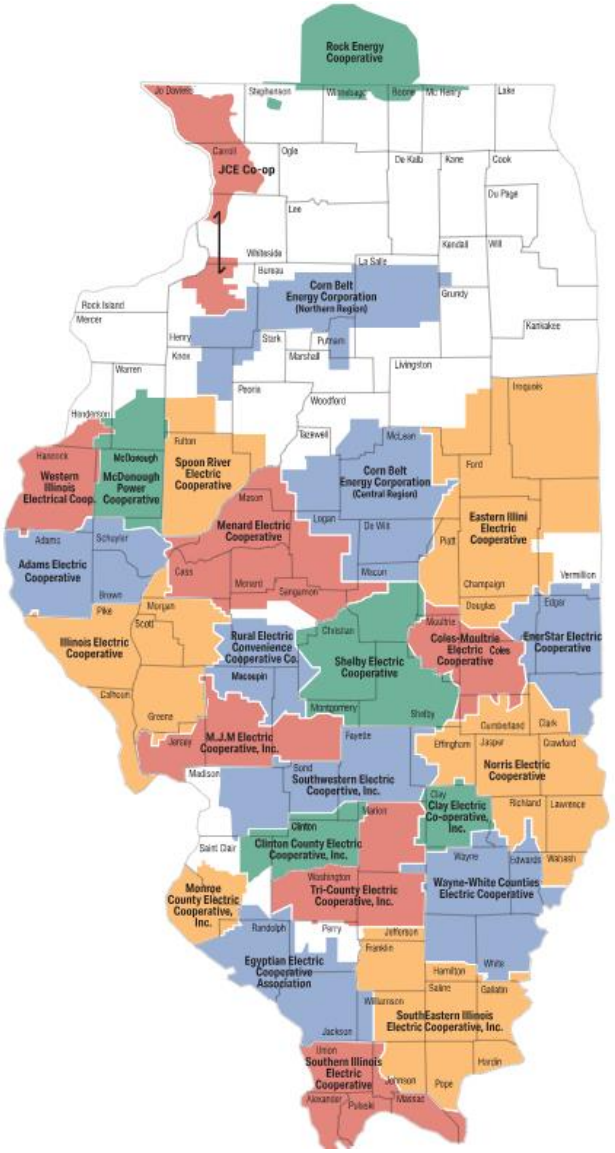
MISO emphasizes grid operations and planning, while PJM relies heavily on forward capacity markets.



	MISO (Ameren Territory)	PJM (ComEd Territory)
What it is:	Regional Transmission Organization (RTO)	Regional Transmission Organization (RTO)
Primary role:	Operates the grid, transmission coordination and energy markets	Operates the grid, reliability and transmission planning, energy markets, **and capacity markets**
Market emphasis:	**Energy markets & transmission coordination**	**Energy markets and forward capacity auctions**
Illinois zone:	**LRZ 4 (Ameren)**	**ComEd**

Utility Territories and Electric Co-ops





Deregulated Illinois Energy Over Last 30 Years

- **Carriers do not control electricity supply prices**
  In deregulated states, carriers do not generate or price electricity for customers.

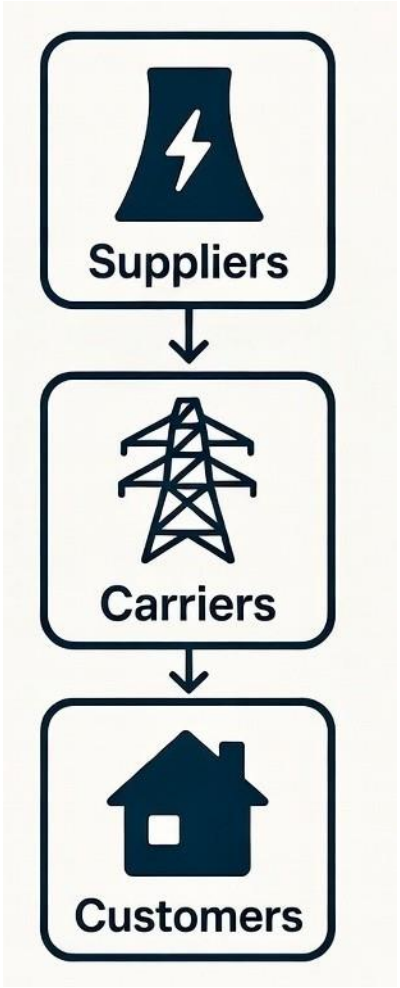
- **Utilities required to join RTOs/ISOs** ComEd joined PJM for wide territory including deregulated states, Ameren Illinois joined Ameren Missouri in MISO

- **Customers get to choose their electricity supplier**
  Competitive suppliers sell electricity at market-based prices, while customers continue to receive delivery service from their local utility.

- **Carriers remain responsible for delivery and reliability**
  Local carriers still own and maintain poles, wires, substations, meters, and respond to outages.

- **Electricity supply prices are set through competition**
  Suppliers compete in wholesale markets and retail offerings, which can lead to price variation over time.

- **The physical delivery of electricity does not change**
  Even if a customer switches suppliers, electricity is delivered over the same utility infrastructure.



*only applies to for-profit utilities

Public Utilities Act

The Public Utilities Act (220 ILCS 5) consists of compiled statutes that govern Illinois Utilities infrastructure going back to the 1980s

- **Creation and Authority of the Illinois Commerce Commission**
- **The Act defines essential terms such as** public utility, electric utility, retail customer, and electric cooperative
- **Utilities are required to provide adequate, efficient, just, and reasonable service** to their customers, maintain infrastructure, and operate without discrimination.
- **Retail customer choice** for electric supply and rate structures, allowing customers to select Alternative Retail Electric Suppliers (ARES)
- **Electric Utilities cannot profit from wholesale prices,** only earn profit on distribution charges

CEJA

The Climate and Equitable Jobs Act (CEJA), Public Act 102-0662, was passed by the General Assembly and signed into law by Governor Pritzker on September 15, 2021

- Requires phased **decarbonization of fossil-fuel electric generation**, including:
  - Closure of **private coal and oil plants by 2030**
  - Tiered emissions reductions for **natural gas plants**, including peaker-only operation for higher-emitting units
  - A **45% emissions reduction by 2035** for municipal and cooperative coal plants
  - **Full repowering or closure of all remaining fossil-fuel plants by 2045**
- Establishes a formal **reliability review process**
- Defines **nuclear energy as zero-emission** and necessary to achieving Illinois' clean-energy goals
- Funds a statewide **clean-energy workforce development system**, including:
  - 13 regional workforce hubs
  - Training and grant programs to prepare workers for clean-energy jobs

CRGA

The Cean and Reliable Grid Affordability Act (CRGA), Public Act 104-0458, was passed by the General Assembly and signed into law by Governor Pritzker on January 8, 2026

- Grants ICC new authority to review utility plans and direct state energy investments, requires greater access to utility system data, and increases reporting requirements
- Creates a large, state-directed and subsidized battery storage build out and directs state agencies to integrate storage into electricity planning for 20 years
- Texas has driven the fastest growing battery-storage market in the country through federal incentives and private investment, not state subsidies
- Lifts prohibition on new large-scale nuclear generation
- Integrated Resource Plans and Studies will give ICC/IPA tools to extend the closure dates, if necessary, due to study data and power shortages. Takes the power generation issue out of the General Assembly.

Energy Authorities in Illinois...

Illinois energy authorities have expanding power over the energy market because of CEJA and CRGA legislation, moving Illinois towards re-regulation...

Mission Statements

"The ICC's mission is to balance the interests of consumers and public utilities to ensure adequate, efficient, reliable, safe, and least-cost utility services, while promoting the development of an effectively competitive energy supplier market." - ICC Mission Statement

"The Illinois Power Agency is committed to the planning and procurement of reliable, efficient, and cost-effective electricity for residents and businesses in an ethical and objective manner, insulated from improper influence. The IPA also administers incentive programs and procurements to promote renewable and zero-carbon energy generation, while building an equitable clean energy future for all Illinoisans." - IPA Mission Statement

Re-Regulating Energy in IL?

Illinois formally deregulated electricity supply in the late 1990s, recent legislation reflects a clear shift toward ***greater state control, centralized planning, and utility regulation***

What changed?

SB25 – Clean and Reliable Grid Affordability Act

- *Expands ICC authority over utility planning*
- *Establishes subsidized* ***state-directed battery storage build out***
- *Integrates storage and reliability planning into state energy policy*

What this signals…

- Movement away from market-only outcomes
- Increased **state-directed safeguards**
- Regulated planning on top of wholesale markets (PJM & MISO)

Capacity vs Generation

Generation measures energy produced over time, while capacity measures the maximum power available at any given moment. Both are necessary to understand electricity supply and reliability. Fossil fuel and nuclear plants have higher capacity rates than most renewable power plants (think instantly on-demand power).

	Capacity (Amount of Reliable Energy)	Generation (Total Supply)
What it is:	Maximum power output at full power	Total electricity produced over time
Unit of Measure:	Megawatt (MW)	Kilowatt Hour (KWh) Megawatt Hour (MWh) Terawatt Hour (TWh)
Time Scope:	Instantly	Hours, Days, or Years
What it answers:	**How much could be produced right now?**	**How much was produced?**
Policy focus:	Reliability, Resource adequacy, peak demand,	Annual supply, emissions, clean-energy share

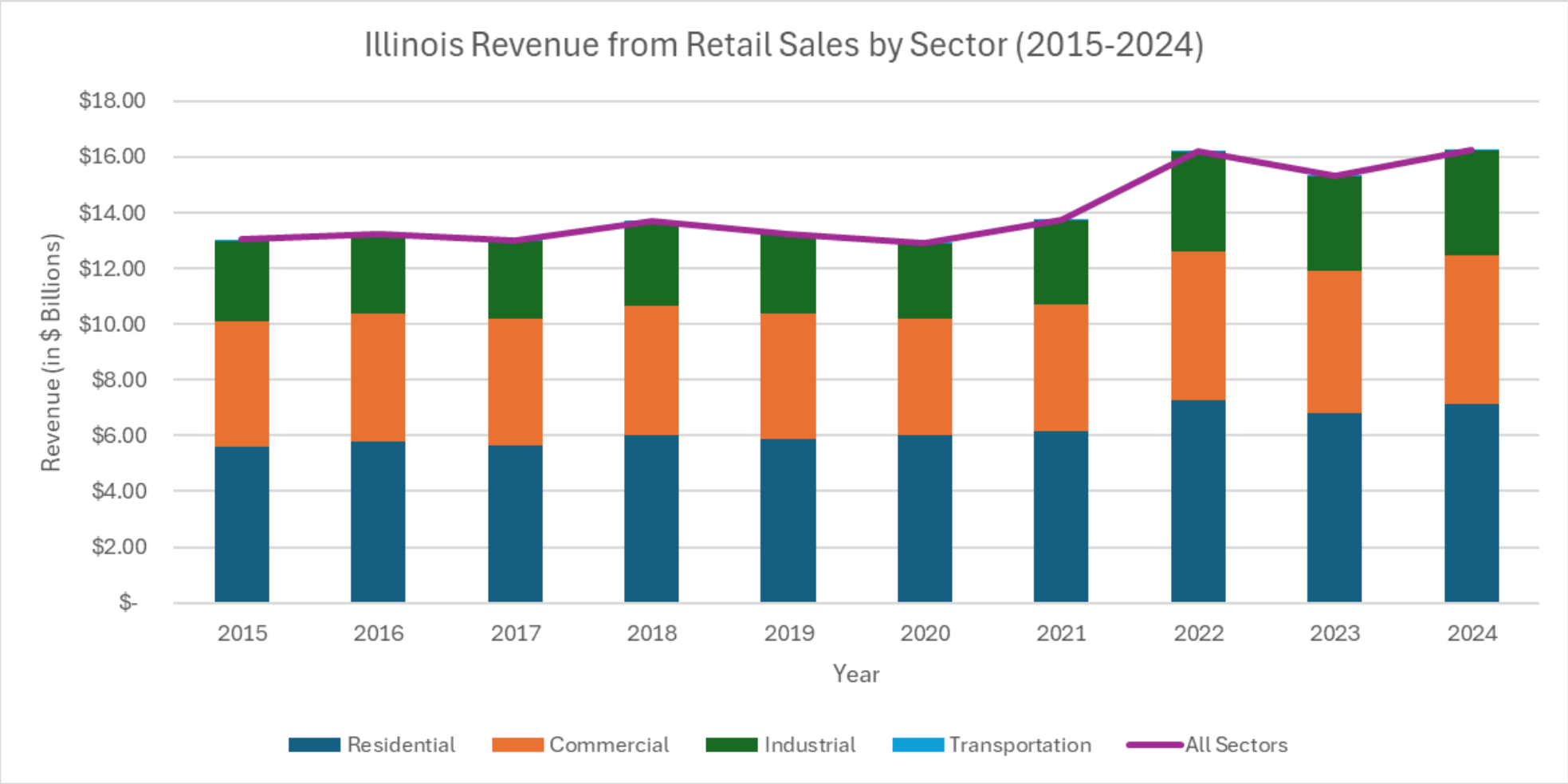
Accreditation Rates

PJM and MISO have different methodology for assessing accreditation rates for electricity resources. Renewable like wind and solar tend to have much lower accreditation rates because they are not as reliable during peak load times based on historical performance. The chart below shows the accreditation rates by both RTOs in 2026.

Resource Type	MISO Accreditation Rate (2026)	PJM Accreditation Rate (2026)
Coal	88%	83%
Oil	76%	78%
Nuclear	93%	95%
Gas	89%	70%
Other	86%	50%
Hydro	89%	40%
Pumped Hydro	98%	74%
Battery Storage	61%	50%
Wind	8%	41%
Solar	33%	11%

Revenue from Retail Sales (2015-2024)

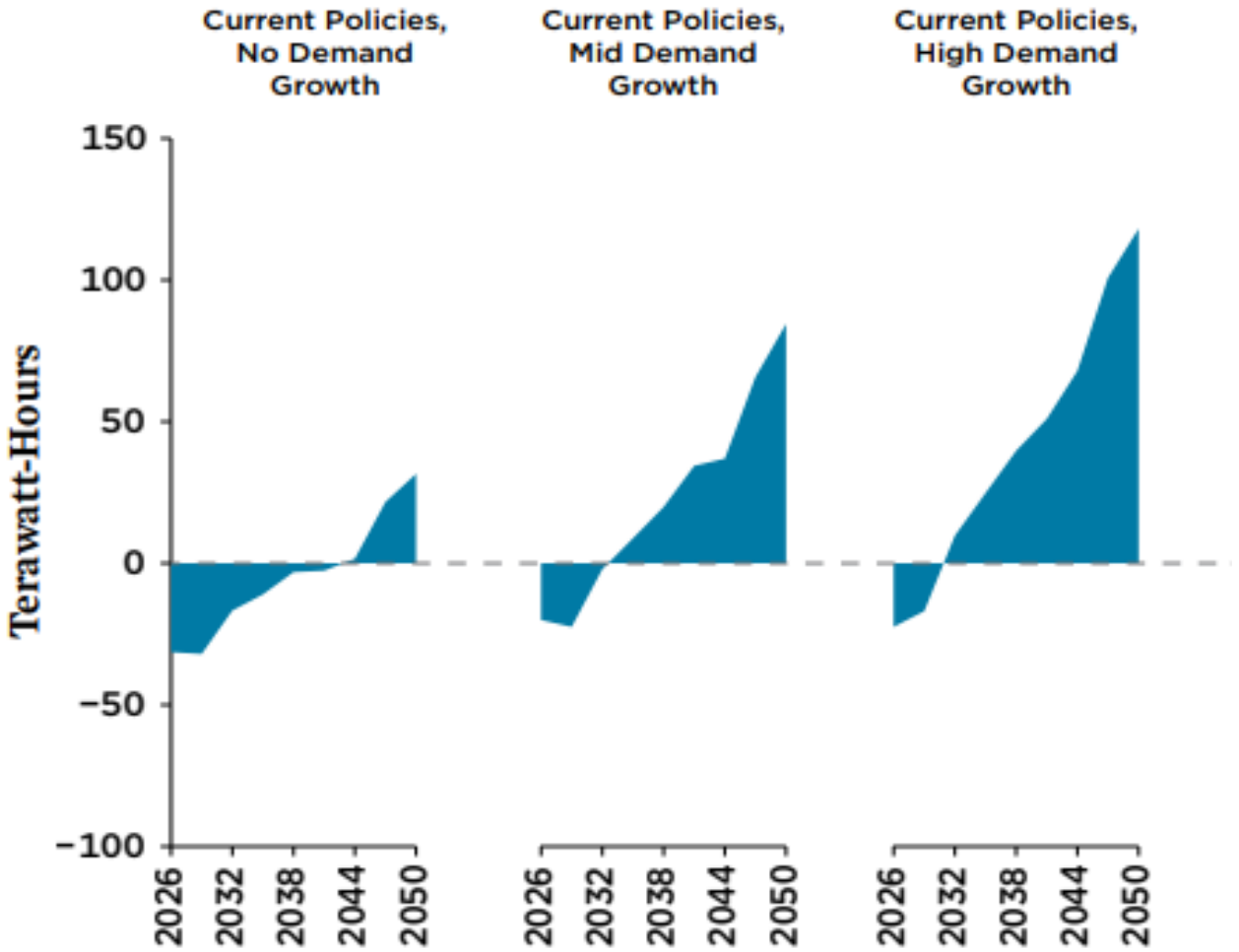
Illinois has historically earned between $13-17 billion in revenue from retail sales (in state consumption) of its electricity generation.



Net Electricity Import Scenarios

Although Illinois has historically been a net exporter of electricity, modeling indicates that plant retirements under existing policies would gradually push the state toward net imports by the 2040s.

As Illinois becomes unable to export surplus electricity, it loses out on billions in revenue and instead begins to spend even more on importing to meet demands.



IPA Resource Adequacy Study

PJM

- Current Capacity 182 GW (1/14/26)
- Nearly 88 GW of new capacity in development by 2030
- Reduced to 27 GW when adjusted for accredited capacity
- Retirements reach ~15 GW
- Total 12 GW of new accredited capacity by 2030 (~6% increase relative to currently installed capacity)
- Load growth in IL Zone drives a 24% adequacy requirement increase by 2030

MISO

- Current Capacity ~147 GW (Winter 2025)
- Over 70 GW of new capacity in development by 2030
- Reduced to 28 GW when adjusted for accredited capacity
- Retirements reach ~18 GW
- Total 10 GW of new accredited capacity by 2030 (~7% increase relative to currently installed capacity)
- Load growth in IL Zone drives an 11% adequacy requirement increase by 2030

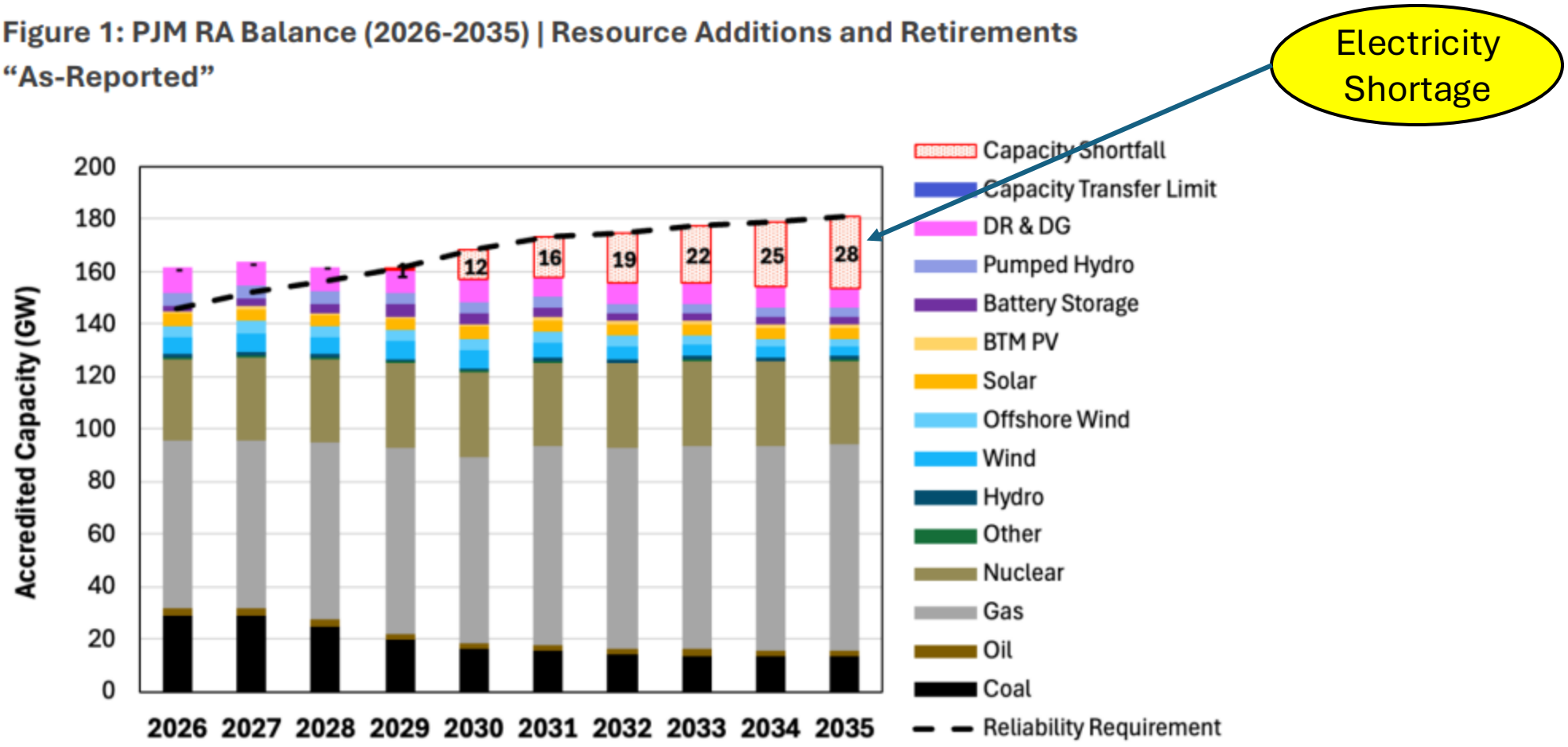
Modeling Cases	New Illinois Gas Allowed	CEJA Retirement Extension	Illinois Net Zero Emissions	Battery Costs
Base Case	Yes	No	No	Base
CEJA Extension	Yes	Yes	No	Base
No New Illinois Gas	No	No	No	Base
CEJA Extension, No New Illinois Gas	No	Yes	No	Base
Illinois Net Zero	Yes[13]	Yes	Yes	Base
Low Battery Costs	Yes	Yes	No	Low

Figures on slides 19-23 illustrate the "Base Case" in IPAs Resource Adequacy study and their data (includes local municipalities and co-ops for generation and load data). This scenario reflects continuation of current laws, policy, and development trends. "Data inputs included existing generation resources and characteristics, load shapes, renewable generation profiles, generator retirements, new resources in development, new resource costs, load projections, and transmission limits by modeled zone."

PJM 2025-2035 Capacity

PJM is expected to experience a capacity shortfall beginning in 2029, with the deficit projected to widen in subsequent years if left unabated. Limited retirements do not meaningfully change outcomes.

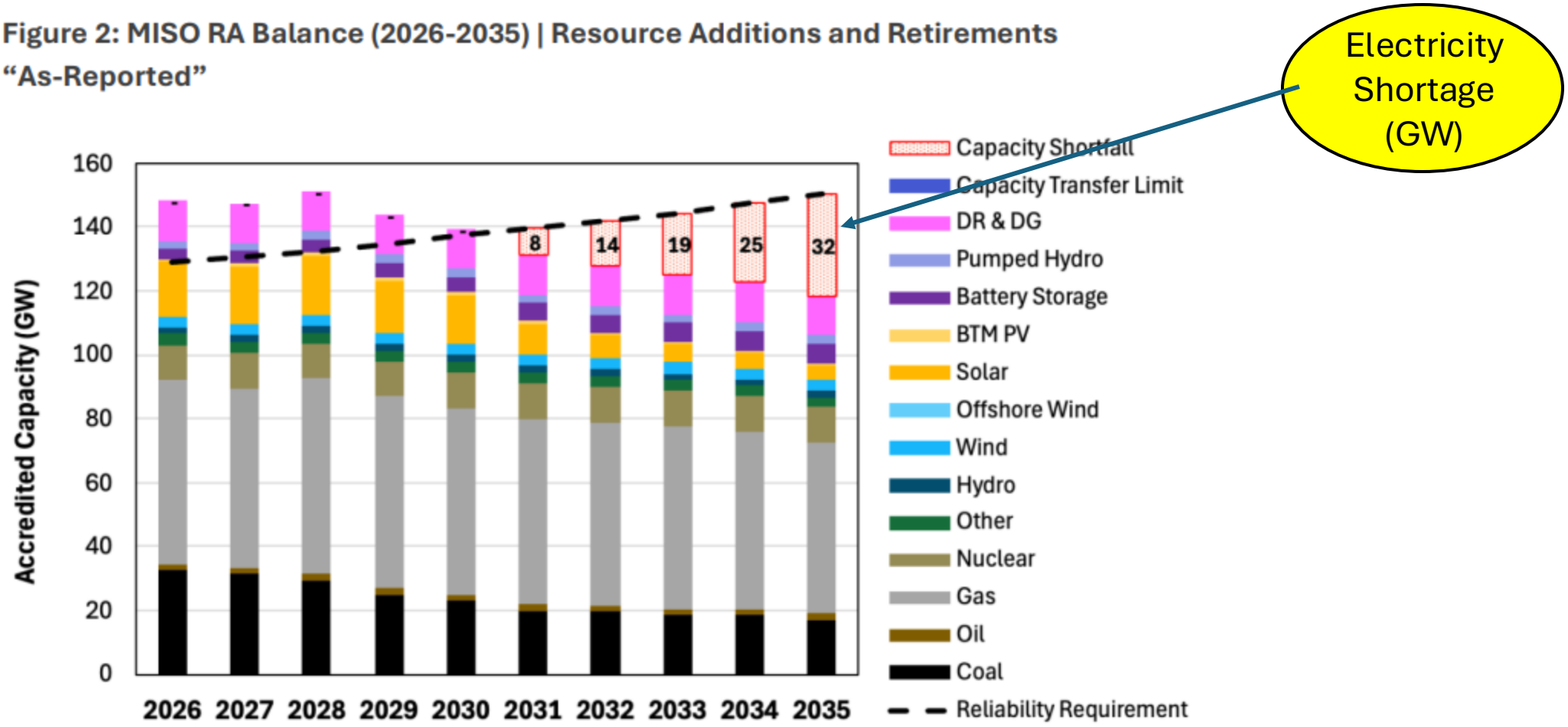
Figure 1: PJM RA Balance (2026-2035) | Resource Additions and Retirements "As-Reported"



MISO 2025-2035 Capacity

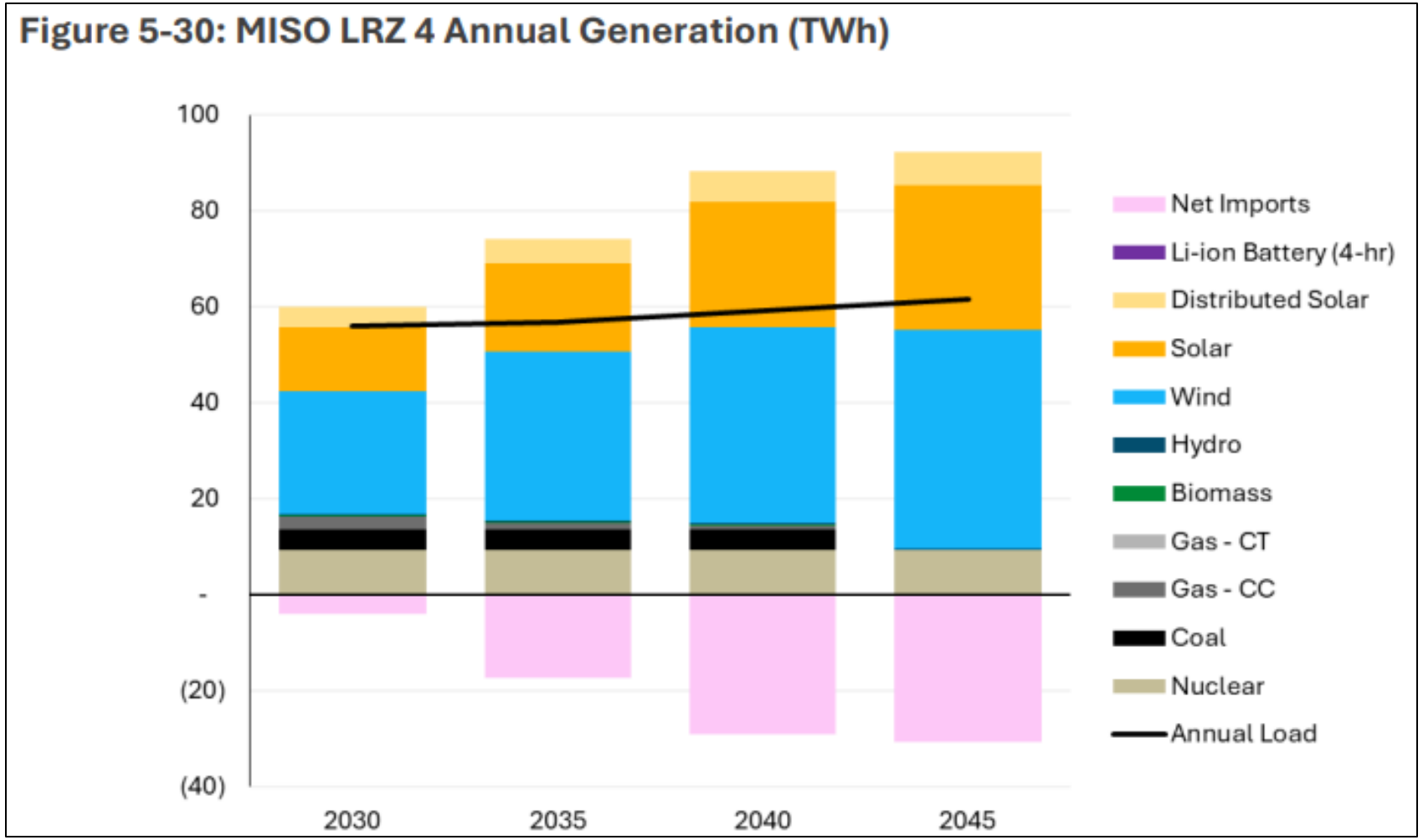
The 2025 Resource Adequacy Report from IPA found that MISO remains resource adequate through 2030, but a shortfall is projected to emerge in 2031 and grow thereafter. Resource adequacy "fundamentally constrained by capacity scarcity"

Figure 2: MISO RA Balance (2026-2035) | Resource Additions and Retirements "As-Reported"



Projected Generation (Ameren)

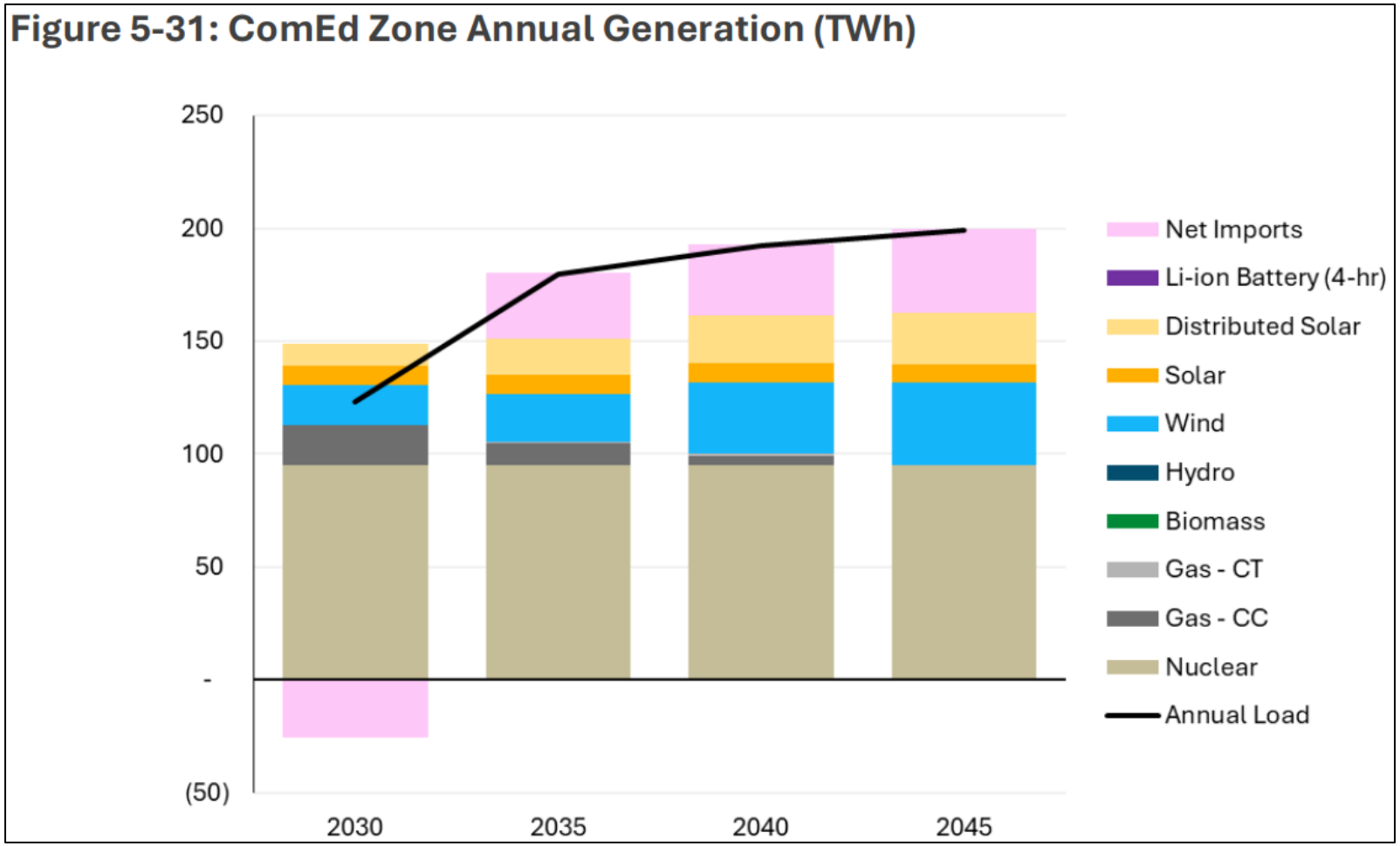
In generation, the MISO-Ameren region can replace its coal and gas resources with wind and solar development, even to the point of growing it's net exporting status. This happens because the demand does not grow much and is mostly already CEJA compliant.



Projected Generation (ComEd)

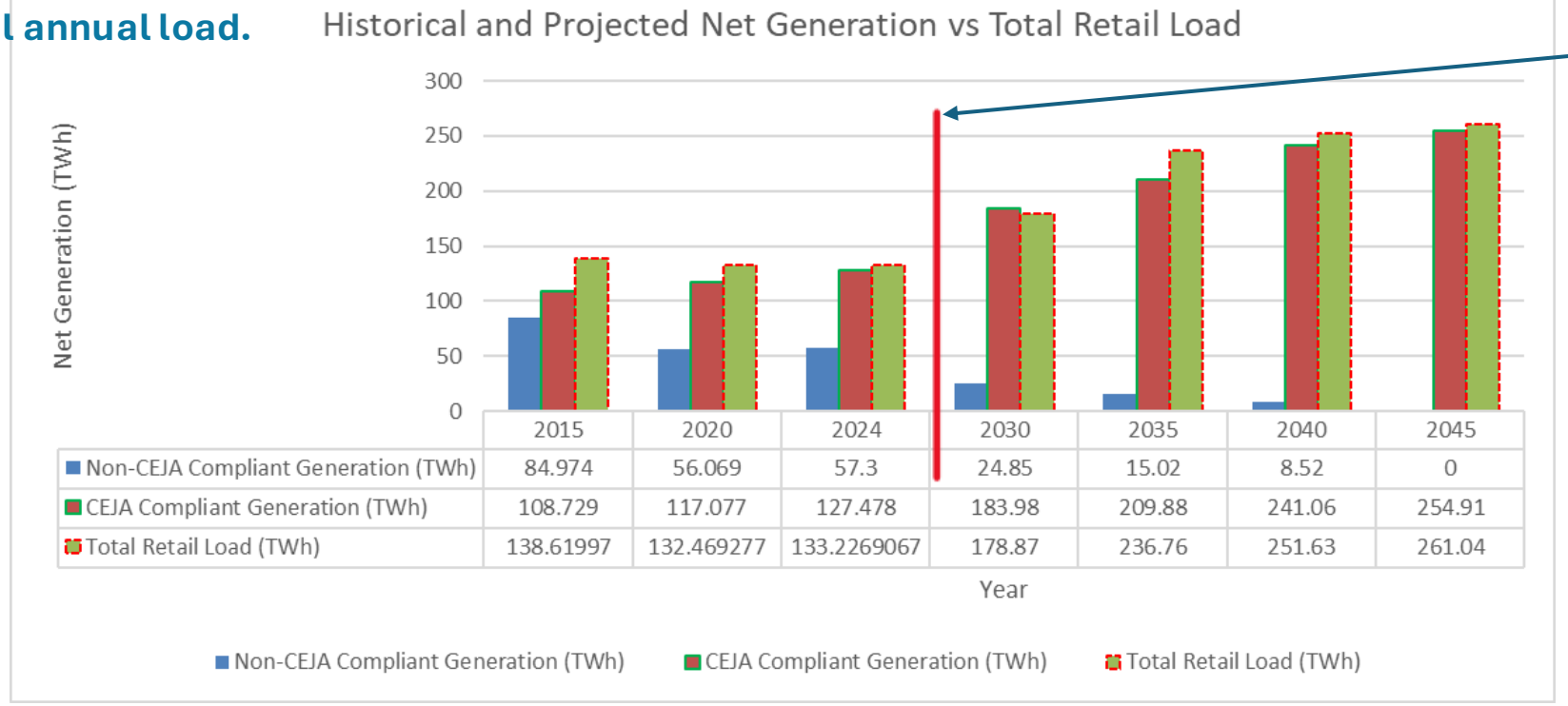
In the ComEd region, demand grows tremendously as the region hosts the largest data-center growth in the world. The region only slightly grows its renewable resources and becomes a net importer of electricity by 2035.

Figure 5-31: ComEd Zone Annual Generation (TWh)



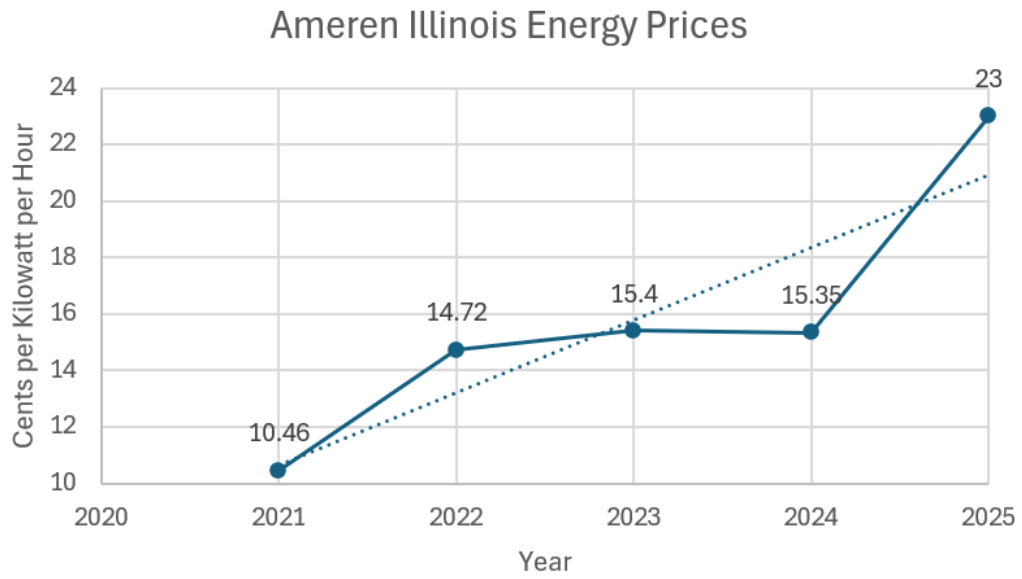
2015 to 2045 Supply and Demand

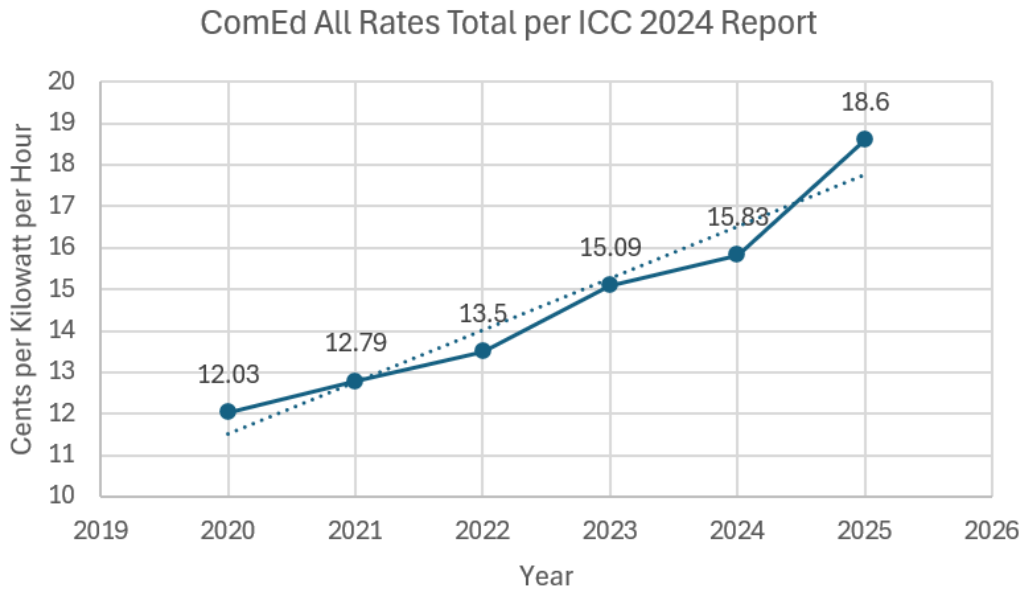
While Illinois achieves near-zero in-state emissions by 2045, fossil generator retirements cause Illinois to become a net importer of electricity starting in 2035, and the emissions burden has largely shifted from in-state to out-of-state generation. On a net basis, Illinois is projected to import roughly 7 TWh per year in 2045, when adding together the net imports of MISO LRZ 4 (-30) and the ComEd zone (37), roughly 3% of the State's total annual load.



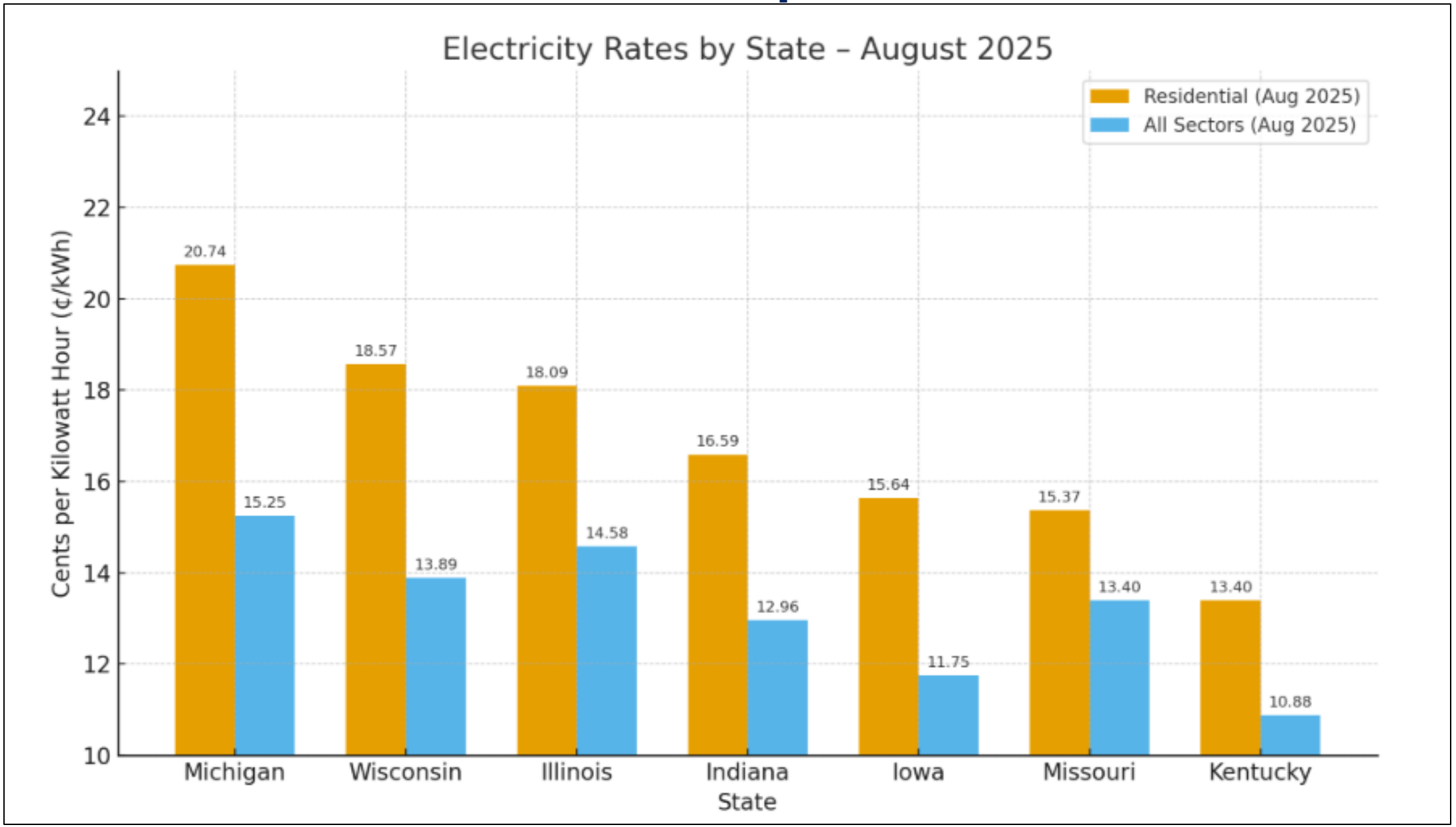
Projected data from IPA Resource Adequacy Study Data, Base Scenario. For Illinois to keep up with projected load growth and still hit carbon emission deadlines set in CEJA, total generation must be made up entirely of renewables, CT Gas, or nuclear energy sources by 2045. This would mean a 127TWh (or 100%) growth in clean energy generation from 2024, an almost 5% yearly growth rate. This would also require Illinois to lose its status as a net-exporter (costing billions in state revenue), instead relying on imported electricity beginning in the 2030s.

Historical Electricity Rates





Midwestern State Rate Comparison



Rising Energy Rates

- **Electricity demand growth has sharply accelerated**, with U.S. demand now projected to increase **25% by 2030** and **78% by 2050** relative to 2023 levels, driven primarily by data centers, industrial growth, electrification, and AI-related computing loads

- **Rapid demand growth is expected to push up wholesale and capacity prices**, which utilities pass through to customers, creating sustained upward pressure on retail electricity rates

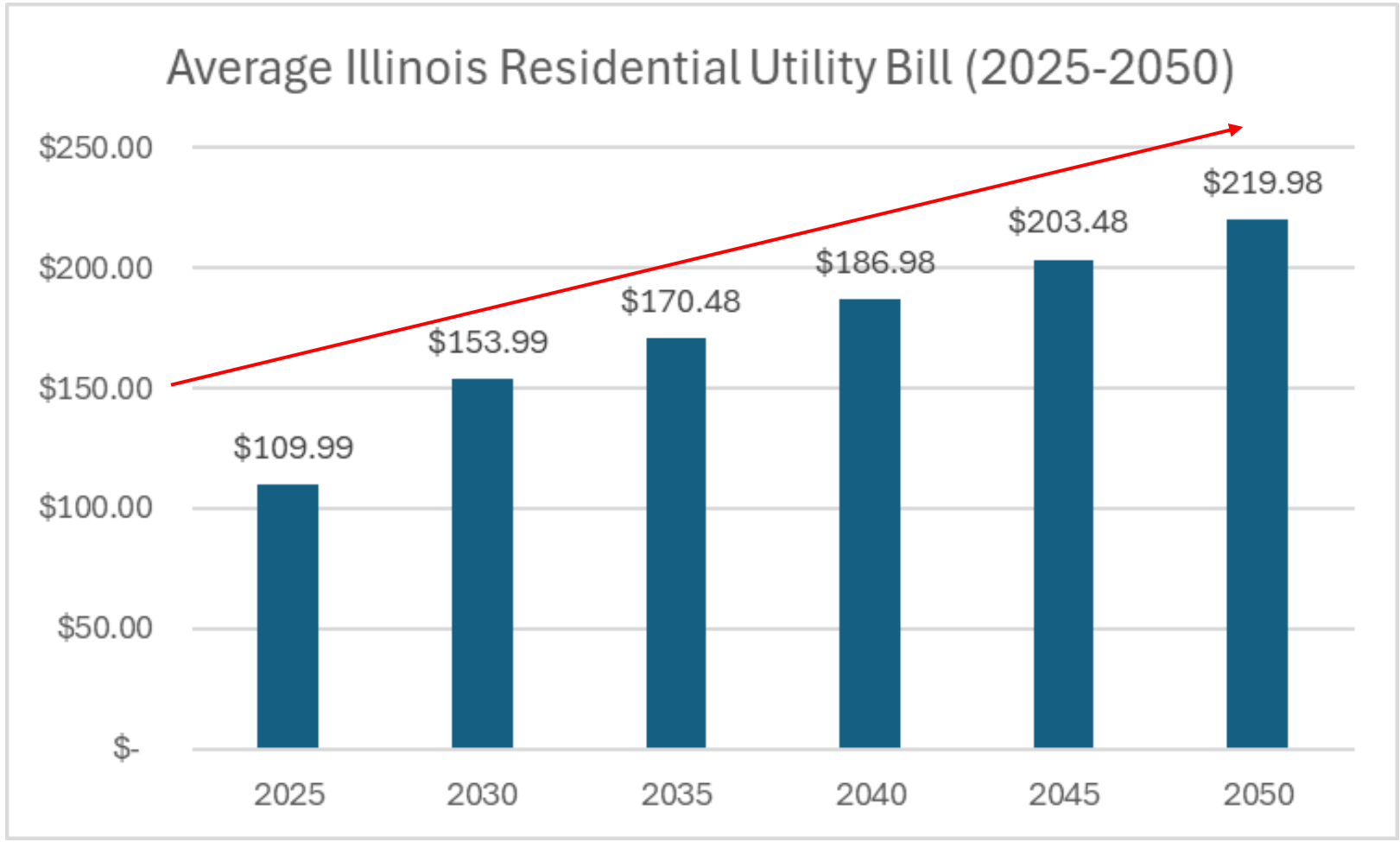
- **Residential electricity rates are projected to rise 15%–40% by 2030** (relative to 2025 levels), depending on market conditions, with some utilities facing the possibility that **rates could double by 2050**

- **Reliability-driven investments increase costs**, as reserve margins fall below target levels in many regions by 2030 without significant new generation, requiring accelerated capacity additions and grid upgrades

- **New generation and grid infrastructure are unavoidable**, with required annual capacity additions rising to **~80 GW per year from 2025–2045**, roughly double recent historical build rates, further contributing to long-term rate impacts

Utility Bill Scenario

According to EIA, the average residential utility bill in Illinois in 2025 was $109.99, this is projected to increase up to 40% by 2030 and 100% by 2050 under current conditions according to ICF analysts



How This Affects Illinoisans

AVAILABLE ENERGY

- CEJA emissions limits
- Interconnection delays
- Retirement of coal and gas plants

+

ENERGY DEMAND

- Rapid Load Growth
- Data Centers
- Increased Manufacturing
- Low-capacity rating for renewables
- Higher load peaks from heating and transportation

=

OUTCOMES

- Higher Capacity & Energy Prices
- Rising Consumer Bills
- Reliability Risk & Shortfalls

Proposed Legislation to Open Capacity

Senate Bill 2727, 104th General Assembly, filed October 28, 2025

- Directly addresses reliability risks created by CEJA constraints and insufficient storage deployment

- Requires **IEPA to establish rules** to implement CEJA decarbonization

- Delays emission compliance enforcement when battery storage falls **below 10% of the total installed capacity**

- Provides reliability exemptions for peak shaving gas units during emergency, pre-emergency, conservative operations, or reliability-critical run hours

Additional Illinois Legislation…

- **SB 1234** – Creates the *Illinois Regional Generation Reliability Task Force* to study how state energy laws, including CEJA, affect electricity prices and grid reliability.
- **SB 1235** – Repeals CEJA's mandatory 2030 and 2045 coal and natural-gas plant closure dates and authorizes construction of new natural-gas peak plants to bolster reliability and reduce price pressures.
- **SB 2681 / SB 2686** – Streamlines and enforces timelines for permitting new and repowered generation facilities, including nuclear, by requiring state agencies and local governments to approve or automatically grant permits if deadlines are missed. (Wisconsin implemented this)
- **SB 2687 (Home Utility Relief Act)** – Establishes a $500 million fund in FY2026–FY2027 to provide energy bill rebates to lower- and middle-income households to offset rising electricity costs.

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THANK YOU!