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Future Energy Legislation: From *A*(Amortization) to *Z*(Zero Emission Credits)

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Introduction

- **FEJA**: Massive energy/climate law, began as separate Clean Jobs & Exelon bills. Clean Jobs bill aimed to "fix" the Renewable Portfolio Standard (RPS) and increase energy efficiency (EE) targets. Exelon bill sought $300 m for Byron, Quad Cities & Clinton nuclear power plants.

- Ultimately enacted: FEJB (SB 2814); combined "zero emission credits" (ZECs) for Quad Cities & Clinton plants with major pieces of the Clean Jobs bill.

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Agenda

- Today's discussion will highlight FEJB's 3 core areas:
- ***Zero Emission Credits*** (Mark)
- ***Renewable Portfolio Standard*** (Jason)
- ***Energy Efficiency*** (Katie)
- **Note**: we will discuss cost recovery for each program. Please bear in mind that beyond program-specific rate caps, FEJA also imposes general caps on future-energy costs by customer class.

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Zero Emission Credits

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ZEC Background

- Significance of ZECs to Board? Hard to discern any likely direct effects. But, as we will discuss, there are predictable indirect consequences:
  - ZEC program favors nuclear generation over generation from fossil fuel-fired plants and renewable sources.
  - Greatest impact of this is expected to be on coal-fired power plants – the subject of Board air, water & land pollution regulation.

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ZEC Background: IPA procurement

- In Illinois, the generation of electricity is *deregulated*; the "wires" (T & D) side is *not*. ICC still approves the "delivery service" portion of electric bills.

- Currently, IPA procures energy to meet demand of certain customers of investor-owned utilities. The ZEC program significantly expands IPA's role.

- Delivery yr for such customers begins June 1.

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ZEC Background: FERC, RTOs & ISOs

- FERC has exclusive jurisdiction over wholesale elec. markets; auction-based markets used to set *wholesale* energy prices.

- FERC authorizes ISOs and RTOs to oversee interstate auctions. Most of Illinois is in MISO (incl. all/parts of 15 states & Manitoba); PJM covers the rest, incl. Chicago & N. Ill. (serves all/parts of 13 states & DC)

- ComEd => PJM; Ameren utilities => MISO.

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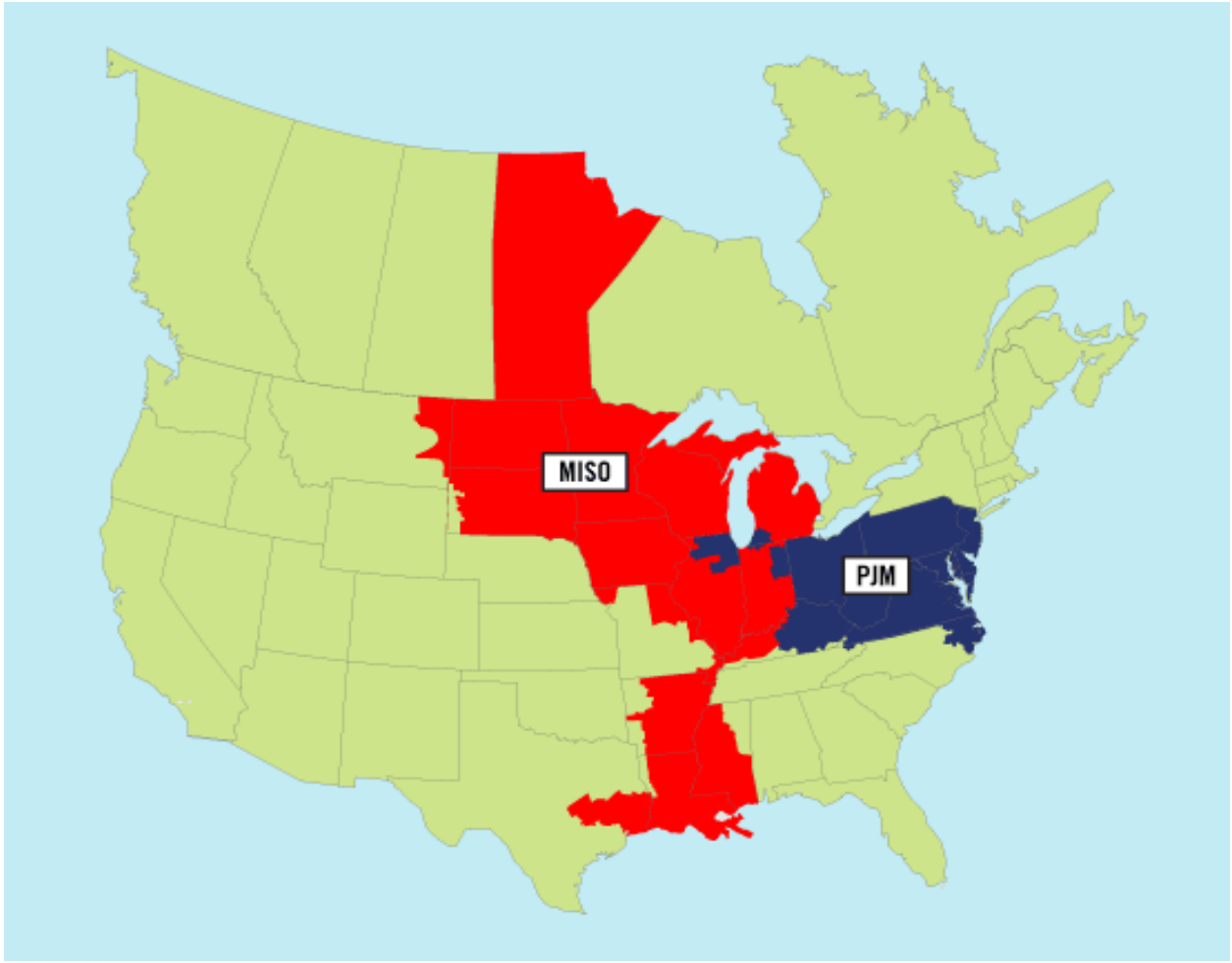
PJM & MISO Map



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ZEC Background: FERC, RTOs & ISOs

- PJM and MISO conduct 2 primary types of auctions:
  - Energy auctions ensure sufficient generation to meet actual load.
  - Capacity auctions trade options to require gen. to produce elec. at given time and location; ensures grid has *ability* to meet forecasted demand; MISO & PJM set capacity for LSEs to meet peak demand.
  - Both auctions begin with lowest bid and stop when demand satisfied; final accepted bid = "market clearing price" => *all* successful bidders.

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ZEC Background: Quad Cities & Clinton

- Quad Cities (800 workers, 2 units), Cordova, mostly in PJM & licensed through 2032; Clinton (700 workers, 1 unit), in MISO, is licensed through most of 2026.

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ZEC Background: Quad Cities & Clinton

- QC failed to "clear" PJM 2019-20 capacity auction; Clinton cleared MISO 2016 one-yr forward capacity auction but unable to avoid continued losses

- In June 2016, Exelon announced intent to close QC and Clinton; plants said to have lost $800 million in 7 years.

- In Aug. 2016, NYPSC adopted Clean Energy Standard to provide $500 m/yr for 12 yrs for 3 Exelon nuclear plants. FEJA's ZEC program developed against backdrop of challenges to NY standard by many of the same generators.

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Key ZEC Provisions of FEJA

- Starting 6/1/17, IPA must purchase– for utilities – ZECs from nuclear plants; winning bidders agree to sell ZECs to utilities during contract terms (which utilities then recover from *all* delivery service customers)

- For first 6 planning years, subsidy = $16.50/mwh, increasing $1 each subsequent yr; *but* reduced if year's "market price index" (proj. energy + proj. capacity prices) exceeds baseline of $31.40/mwh.

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Key ZEC Provisions of FEJA

- ZECs effectively limited to Clinton & QC (alleged): nuclear plants in PJM & MISO = ZEFs, i.e., nuclear plants interconnected with PJM or MISO;
  - "preservation of [ZEFs] is key "public interest" factor in IPA's ZEC procurement; and
  - specified output very close to QC & Clinton's combined output.
  - but…FEJA does not on its face bar procurement of ZECs from other Exelon nuclear plants in PJM (whether in Ill. or elsewhere) in danger of closing.

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Key ZEC Provisions of FEJA

- 10-yr program – *i.e.*, 2017-18 through 2026-27 planning yrs (unless suspended or terminated early) by generators

- Annual procurement of ZECs is capped by formula; max. auth. spending under cap estimated to be *at least* $235 m/yr

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Federal Suits Challenging ZECs

- *EPSA, et al. v. Star, et al*, No. 17-cv-1164 (non-nuclear generators *e.g.*, Dynegy, Calpine), **&** *Village of Old Mill Creek v. Star*, No. 17-cv-1163 (ComEd customers) (both filed 2/14/17)

- Allege subsidies distort wholesale electricity markets, artificially depressing prices and ultimately driving up consumer costs.

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Federal Suits Challenging ZECs

- Claim federal *preemption* and discr. against, & burdening of, interstate commerce.
  - In March, PJM Market Monitor moved to intervene on plaintiffs' side in *EPSA*. And in late March, pls. moved for a preliminary injunction.

- Both suits rely on *Hughes v. Talen Energy* (2016): Sp. Ct. struck down MD new-generator subsidies because they were tied to generator's wholesale market (PJM) participation.

- Oct. 2016 suit pending in NY fed. ct. raises similar claims.

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Potential Implications? Precedent?

- Drop in wholesale energy prices, reducing revenues for non-nuclear generators and drive closure of fossil fuel-fired plants (esp. coal).
- Critics (*see*, *e.g.*, lawsuits) contend subsidies will distort wholesale markets and ratchet up consumer prices.
- Exelon – the largest operator of U.S. nuclear plants – may seek subsidies for its nuclear fleets in PA, NJ, OH, and CT.

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Renewable Energy Standard

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Renewable Energy Provisions

- Illinois' Renewable Portfolio Standard, enacted in 2007, requires 25% of Illinois' energy to come from clean sources by 2025
- Subsequent legislation and rulemakings—particularly municipal aggregation—subverted the RPS goals
- Future Energy Jobs Bill hopes to "fix" the RPS and create more clean energy in Illinois
- What was the problem and what's the attempted fix?

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2007/08: RPS Legislation

- Illinois Power Agency created to procure wholesale power for Ameren and ComEd customers
- 25% of Illinois' power required to come from clean sources by 2025
- Both power providers contracting with IPA and alternative retail electric supplies (ARES) covered by RPS

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Aside: What's a REC?

- Compliance with an RPS is often reached through purchase of Renewable Energy Certificates, commonly referred to as RECs
- Renewable producer gets 1 REC for every MWh generated and fed into the grid and sells it to those who need to comply with an RPS
- RECs can come in different flavors, *e.g.*, solar RECs
- When it comes time to prove compliance with RPS, it is generally shown through purchase of RECs

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2007/08: RPS Legislation

- Three paths to compliance:
  - IPA-contracted power producers send compliance money to IPA-administered fund
  - ARES can buy RECs with up to half of their compliance money
  - ARES send other half of compliance money to a separate IPA-administered fund via “alternate compliance payments”
- Early success: in 2009, $1.3 billion invested in wind power and 632 MW wind installed in-state

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2010: Municipal Aggregation

- 2010 Energy Legislation
  - IPA power became expensive, so most large commercial and industrial customers procured power from alternative retail electric suppliers (ARES)
  - In 2010, municipalities began to aggregate customers and also procured from ARES instead of utilities (via IPA)

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2010: Municipal Aggregation

- Complications for the RPS
  - As customers moved toward ARES and away from utilities, less funds were put into IPA-administered fund
  - Other IPA-administered fund frequently swept by other parts of state government
  - Only remaining funds went to RECs, usually to out-of-state and already-existing projects
  - Uncertainty caused by mobile customer base and fund sweeping undermined efforts to create long-term power purchase agreements with renewable developers

The RPS "Fix" in the Future Energy Jobs Bill

- New bill kept the same target: 25% clean energy by 2025
- Funding mechanisms altered to ensure that money intended for clean energy is spent on clean energy
- Specific mandates for in-state facilities, new facilities, and solar facilities

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The RPS "Fix" in the Future Energy Jobs Bill

- Problem:
  - Funding avenues dried up due to municipal aggregation and fund sweeps
- Fix:
  - Multiple types of funding replaced by a single fund
  - Charge added to distribution of energy and directed into a single fund administered by IPA for purchase of RECs
  - Funds held by utilities until spent by IPA, thus less likely to be swept
  - Begins at $180 million per year and grows to $220 million per year to build in Illinois

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The RPS "Fix" in the Future Energy Jobs Bill

- Problem:
  - RPS funds were spent on out-of-state RECs, usually toward already existing facilities
- Fix:
  - IPA directed to procure 8 million RECs from new facilities, equating to 1,300 MW of wind and 3 GW of solar
  - 50% of solar RECs must come from distributed and community solar
  - 40% for utility-scale solar, 2% brownfield solar, and 8% discretionary

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Other RE features of Future Energy Jobs Bill

- Requires IPA to make a long-term plan for renewable energy development in Illinois
- “Solar for All” directs funds to increase access to solar for low-income customers and nonprofits while funding job training programs
- Net metering—compensating distributed solar generators for energy produced “behind the meter”—continues in Illinois
- Demand charge—assessing fees based on peak energy use—not included

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Open questions

- Will funds created by the fixed RPS be sufficient to meet stated goals?
- Renewable energy prices ultimately determined by market, not legislature

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Energy Efficiency

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New Energy Efficiency Standard

- FEJB amended §8-103 (220 ILCS 5/8-103) will now apply to small investor own utilities (IOUs) only

- Large IOUs (ComEd & Ameren) will now be governed by new §8-103B

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New EE Plans' Timeline

- EE Plans will now run Jan 1-December 31
  - 2014-2017 plan will remain in force through December 31, 2017

- FEJB prescribes provisions for up to 2030, new plans will be:
  - 2018-2021
  - 2022-2025
  - 2026-2030

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New EE Goals 2018-2030

- Separate goals for ComEd/Ameren:
  - 7.8% in 2018 to 21.5% in 2030 - ComEd
  - 7.4% in 2018 to 16% in 2030 – Ameren
- Set as “cumulative persisting annual savings” (vs “incremental annual savings”)
- EE goal is a % of a set number (deemed baseline)
  - Deemed baseline = average sales of electric power during 2014-2016 minus average annual sales from exempt customers
    - 88,000,000 MWhs for ComEd
    - 36,900,000 MWhs for Ameren

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New EE Goals, ComEd Example

	2018	2019	2020	2021
Com Ed Target	**7.8%**	**9.1%**	**10.4%**	**11.8%**
Savings Persisting from 2012-2017 Programs	5.8%	5.2%	4.5%	4.0%
Savings persisting from 2018 program	**2.0%**	1.7%	1.6%	1.5%
Savings persisting from 2019 program		**2.2%**	1.9%	1.8%
Savings persisting from 2020 program			**2.4%**	2.0%
Savings persisting from 2021 program				**2.5%**
Total Savings that Count Towards Target	**7.8%**	**9.1%**	**10.4%**	**11.8%**

Source: EFG

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10 MW+ Customers Exempt from EE Programs

- Large commercial & industrial electric consumers with demand greater than 10MW
- These customers no longer pay into EE programs and are not eligible to participate starting in 2018
  - Estimated about 10% for ComEd and 25% for Ameren

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Additional Provisions

- Utilities will take over DCEO programs
- Public sector: min. 10% ComEd and 7% Ameren of annual portfolio budgets
  - Including Public Housing Authorities, local gov. unit, municipalities, school district, community college
- Low-income: min. $25m ComEd and $8.5m Ameren / year
- Gas/other fuel: not more than 10% of the annual goals
  - Converted on eBtu basis with low-income residential priority

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Cost Recovery

- EE Cost cap % of $/KWh paid by eligible customers in 2015 and varies by plan:
  - 3.50% for each year of 2018-2021 plan
  - 3.75% for each year of 2022-2025 plan
  - 4.00% for each year starting in 2026

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Amortization

- IOUs may defer EE spending as a regulatory asset and amortize over project lifetime
  - Voltage Optimization has 15yrs agreed lifetime and agreed increasing savings (0.17% in 2018 to 1% in 2025)

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Thank you!

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