What utility customers want and what the law demands:

Looking to the future in recognition of the here and now

Presented for Next Grid WG4
by:
Karen Lusson
Asst. Bureau Chief, Public Utilities Bureau
Illinois Attorney General’s Office
Roadmap

I. What does the Public Utilities Act require of utilities and regulators in terms of utility investments and rates?

II. The here and now: What do we know for sure?
   - The recent impact on changes in law on utility service rates
   - There is substantial poverty in Illinois
   - Electric usage is declining but Utility Revenues are Increasing

III. The future: Questions regulators should be asking when faced with new utility proposals
   - Capital investment/New expenses
   - Rate Design

V. Conclusions
I. What does the Public Utilities Act require of utilities and regulators in terms of utility investments and rates?
The General Assembly has prioritized ensuring universal utility service.

- A utility’s obligations include the obligation that “the rates for utility services are affordable and therefore preserve the availability of such services to all citizens.” (220 ILCS 5/1-102(d)(viii)) (emphasis added).
What does the Public Utilities Act say about utility and regulator obligations?

“...It is further declared that the goals and objectives of such regulation shall be to ensure

(a) Efficiency: the provision of reliable energy services at the least possible cost to the citizens of the State; in such manner that:

(i) physical, human and financial resources are allocated efficiently;

(ii) all supply and demand options are considered and evaluated using comparable terms and methods in order to determine how utilities shall meet their customers' demands for public utility services at the least cost;

(iii) utilities are allowed a sufficient return on investment so as to enable them to attract capital in financial markets at competitive rates;

(iv) tariff rates for the sale of various public utility services are authorized such that they accurately reflect the cost of delivering those services and allow utilities to recover the total costs prudently and reasonably incurred;

(v) variation in costs by customer class and time of use is taken into consideration in authorizing rates for each class.”

220 ILCS 5/101(a).
What does the Public Utilities Act say about utility and regulator obligations?

(d) **Equity**: the fair treatment of consumers and investors in order that

(i) the public health, safety and welfare shall be protected;
(ii) the application of rates is based on public understandability and acceptance of the reasonableness of the rate structure and level;
(iii) the cost of supplying public utility services is allocated to those who cause the costs to be incurred;
(iv) if factors other than cost of service are considered in regulatory decisions, the rationale for these actions is set forth;
(v) regulation allows for orderly transition periods to accommodate changes in public utility service markets;
(vi) regulation does not result in undue or sustained adverse impact on utility earnings;
(vii) the impacts of regulatory actions on all sectors of the State are carefully weighed;
(viii) the rates for utility services are affordable and therefore preserve the availability of such services to all citizens.

220 ILCS 5/1-101(d).
What does the Public Utilities Act say about utility and regulator obligations?

The monopoly regulatory compact demands that rates remain affordable for all and least cost.

“The General Assembly finds that the health, welfare and prosperity of all Illinois citizens require the provision of adequate, efficient, reliable, environmentally safe and least-cost public utility services at prices which accurately reflect the long-term cost of such services and which are equitable to all citizens. to ensure . . . that (i) the public health, safety and welfare shall be protected.”

220 ILCS 5/1-102(d)(i) (emphasis added).
Take Away for Regulators: Don’t lose the forest for the trees.

The Forest: Ameren and ComEd are monopoly public utilities.

- That moniker comes with an obligation to ensure universal least cost, reliable utility service.
- Why? Customers have no competitive alternative for the delivery of electricity.
II. The here and now: What do we know for sure?
What we know for sure...

Electric usage is decreasing.

Actual MWH usage is sporadic.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total MWH Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>131,318,667</td>
</tr>
<tr>
<td>2012</td>
<td>132,551,942</td>
</tr>
<tr>
<td>2013</td>
<td>133,445,659</td>
</tr>
<tr>
<td>2014</td>
<td>130,435,568</td>
</tr>
<tr>
<td>2015</td>
<td>126,951,888</td>
</tr>
</tbody>
</table>
| 2016 | 128,766,097    | 1.9% decrease over 6 years

Source: ICC Electric Sales reports
https://www.icc.illinois.gov/publicutility/salesstatistics.aspx
Electric Operating Revenues* are Increasing...

<table>
<thead>
<tr>
<th>Company</th>
<th>2016</th>
<th>2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>AmerenIL</td>
<td>$1,749,597,015</td>
<td>$1,704,531,411</td>
<td>2.64%</td>
</tr>
<tr>
<td>ComEd</td>
<td>$5,261,659,153</td>
<td>$4,917,238,029</td>
<td>7.00%</td>
</tr>
<tr>
<td>MidAm</td>
<td>$162,840,139</td>
<td>$165,312,003</td>
<td>-1.50%</td>
</tr>
<tr>
<td>Mt. Carmel</td>
<td>$1,901,186</td>
<td>$11,621,799</td>
<td>2.40%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$7,185,997,493</strong></td>
<td><strong>$6,798,703,242</strong></td>
<td><strong>5.70%</strong></td>
</tr>
</tbody>
</table>

*Source: ICC Electric Sales reports
https://www.icc.illinois.gov/publicutility/salesstatistics.aspx
# Electric Operating Revenues

<table>
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<th>2014</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ameren IL</td>
<td>$1,704,531,411</td>
<td>$1,590,937,549</td>
<td>7.1%</td>
</tr>
<tr>
<td>ComEd</td>
<td>$4,917,238,029</td>
<td>$4,646,922,698</td>
<td>5.8%</td>
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<tr>
<td>MidAmerican</td>
<td>$165,312,003</td>
<td>$164,295,851</td>
<td>.06%</td>
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<tr>
<td>Mt. Carmel</td>
<td>$11,621,799</td>
<td>$11,528,713</td>
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<tr>
<td>Totals</td>
<td>$6,798,703,242</td>
<td>$6,413,684,811</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

*Source: ICC Electric Sales reports
[https://www.icc.illinois.gov/publicutility/salesstatistics.aspx](https://www.icc.illinois.gov/publicutility/salesstatistics.aspx)
What we know for sure...

The cost of electric delivery service in Illinois has increased significantly over the last 7 years.
Energy Infrastructure and Modernization Act (EIMA) requires utilities, in exchange for annual formula rate adjustments, to invest in resiliency and digital technology.

**ComEd:** complete $1.3 billion of incremental reliability-related investments over a five-year period and $1.3 billion of incremental AMI-related investments over a ten-year period. **Total:** $2.6 billion

**Ameren:** complete $265 million of incremental reliability-related investments over a ten-year period and $360 million of incremental AMI-related investments over a ten-year period. **Total:** $625 million
Utility rate bases have increased significantly since the start of formula rates.

- Ameren 2012 F.R. filing: $2,001,788,000
- 2018 F.R. filing: $2,951,568,000 47% increase

- ComEd 2011 F.R. filing: $6,182,808,000
- 2018 F.R. filing: $9,512,615,000 54% increase
Rate Adjustments since the inceptions of formula ratemaking under EIMA:

- **Ameren Electric**
  - 2012 Initial F.R. filing (1.48%)
  - 2012 F.R. update (1.90)
  - 2013 F.R. update (5.80%)
  - 2014 F.R. update 28.38%
  - 2015 F.R. update 11.44%
  - 2016 F.R. update (1.41%)
  - 2017 F.R. update (1.71%)
  - 2018 F.R. update request 7.2%

- **ComEd**
  - 2011 Initial F.R. filing (6.40%)
  - 2012 F.R. update 2.25%
  - 2013 F.R. update 16.97%
  - 2014 F.R. update 9.89%
  - 2015 F.R. update (2.58%)
  - 2016 F.R. update 5.07%
  - 2017 F. R. update 3.64%
  - 2018 F.R. update request (.85%)*

*includes $200 million in tax reform savings
FEJA (Future Energy Jobs Act)

- Authorized Zero Emission Credit (ZEC) surcharges, greatly increased energy efficiency spending with the opportunity to earn additional profits on EE spending, Renewable Energy /Solar Rebates

- Benefits, opportunities, costs and impacts vary considerably:
  - On industrial, commercial, and residential consumers
  - On utilities, generators, competitors, developers
  - On jobs

- ZECS

  - ZEC Total revenue, or financial benefit to owner of nuclear plants: $230 million per year, subject to adjustment based on future energy prices and capacity prices. 20 ILCS 3855/1-75(d-5)(3).

  - Nuclear Jobs: 700 and 750 plant jobs at Clinton and Quad Cities preserved, plus seasonal employees.

  - Consumers effectively pay Exelon a little more than $150,000 per plant job per year.
Utility financial risk negligible

- Formula rates guarantee recovery of all costs and forecasted plant investment for coming year
- Decoupling
- Uncollectibles riders
- Cash Working Capital allowance
- Energy Efficiency formula rate with opportunity for additional profits
- ICC: Recent, repeated “settlement” approach to setting of ROE/ROR encourages utility overstatement of financial risk and utility-recommended ROE
Ratepayer risk significant

- Pay for utility “learnings” and pilots
- Rate-setting that once encouraged utilities to operate in a least-cost framework is falling away
- QIP riders for gas utilities
- Statutory changes insulates shareholders, not ratepayers, altering the balance of the regulatory framework/compact
- Affordability objective often lost in the shuffle
FEJA

- Increased energy efficiency spending tied to increased annual energy savings goals:
  - ComEd: $351 million/year
    ($1.4 billion over 4-yr plan period)
  - Ameren (Gas and Elec.): $114 million/year
    ($456 million over 4-yr. plan period)
AG: Maximize EE spending for those customers who need bill savings the most.

Statutory minimum spend on Income Qualified (IQ) programs per FEJA:
- ComEd -- $25 million/year
- Ameren -- $8.35 million/year

**ComEd:**
Negotiated settlement with ComEd 2018-2021 Plan:
$48 million/year, incl. $6 million in Third-Party IQ programs, plus commitment to develop more IQ programs through R&D funds.

**Ameren:** No settlement
- Ameren Electric: $15 million/year
- Ameren Gas: $5 million/year
EE Profit Incentive: Is it really needed?

- Evaluation results remain to be seen.
- AG Observations to date:
  - Incentives to invest in (expensive) sorely needed IQ retrofits throughout the state is tempered by the desire to exceed energy savings targets and earn extra shareholder profits for exceptional performance, as authorized by FEJA statute.
  - Ameren: Litigation focused on whether Ameren underestimated its ability to meet statutory goals, thereby increasing chances for additional profits on EE spending.
  - Does the FEJA profit structure lead to under-estimation of possible energy savings in plan filings?
Solar – IPA/ICC Authority to Regulate and Consumer Protections Essential

• IPA Plan: Agency authority over suppliers and robust consumer protections critical

• See SOLAR POWER ON THE ROOF AND IN THE NEIGHBORHOOD: RECOMMENDATIONS FOR CONSUMER PROTECTION POLICIES (B. Alexander/J. Briesemeister)

Access to Utility Service is a Matter of Public Health and Safety

• When customers are disconnected, home is uninhabitable.

• Other consequences:
  • Public housing subsidies (24 CFR 965.502) for tenant-paid utilities through a utility allowance do not cover a tenant’s actual consumption of utilities and is instead determined through a formula based on projected uses by an energy conservative tenant.*
  
• Once a public housing or Housing Choice Voucher household is evicted from these federal housing programs, it is close to impossible to secure new federally assisted affordable housing.
  • Must pay off debt owed, then re-apply for the public housing or Housing Choice Voucher programs.
  • Eligible households often languish for years on waitlists or even worse, the waitlists are closed for years on end.*

*ICC Docket No. 16-0376, Shriver Center Initial Brief, p. 17-19
For thousands of customers, utility rates are unaffordable.

- Nearly half of the population in Illinois lives in poverty.
  
  - ComEd service territory: 47% of population live at or below 80% AMI
  
  - Ameren service territory: 41% live at or below 80% AMI

Source: ComEd IQ presentation, IQ Subcommittee; Ameren 2018-2021 EE Plan
LIHEAP/PIPP dollars are inadequate to meet the need

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Households</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;150% FPL*</td>
<td>1,114,245</td>
<td>1,092,303</td>
</tr>
<tr>
<td>Heating/Cooling Bills “Covered” by LIHEAP*</td>
<td>214,529</td>
<td>118,235</td>
</tr>
</tbody>
</table>

PIPP enrollment capped by available dollars and fills quickly

*Source: Energy Affordability Gap, 2017
http://www.homeenergyaffordabilitygap.com/03a_affordabilityData.html
What we know for sure...

• Customers want rates that are affordable!
• Customers want the lights to stay on (reliability/affordability).
• If utilities aim to provide the premier/individualized customer experience, then apply that concept to Revenue Collections.
  ➢ Work with those who can’t afford to pay.
  ➢ Get rid of customer deposits!
  ➢ Base deferred payment arrangements on simple premise:
    ➢ What can you afford to pay each month?
    ➢ Longer payback periods for DPAs’
    ➢ Minimize down payments.
    ➢ Make clear that payment of something is better than nothing each month.
    ➢ Coordinated EE delivery
Alternative Supplier Market: Customer Confusion, Marketing Abuses

• Complaints from customers detail marketing abuses, misinformation and significantly higher prices than bundled rates.
• The industry includes bad actors (door-to-door marketing), lacks transparency, and targets vulnerable populations.
• Whack-a-mole litigation is insufficient to protect customers.
• Charges on Plug-In Illinois site show that at 500 kwh/month, 78 of 88 offers *higher* than default supply charge, 18 offers >30% higher.
• Effect on bills magnified as usage increases.
• Need for bundled supply price disclosures in order for customers to protect their pocketbooks. (AG Bill)
Alternative supplier data is damning

Illinois: 2017 ORMD report:

- On average, residential RES customers paid around $11 million more per month during the last twelve months when compared to ComEd’s Price-to-compare.

- In addition, given that the PEA was a credit in eight of the twelve months during the June 2016 through May 2017 period, the gap between the ComEd supply price and the average RES price increased even more.

- In terms of cents per kWh, residential RES customers paid (on average) about 1.21 cents/kWh more when compared to the ComEd PTC only, and about 1.45 cents/kWh more when taking into account the PEA.

- Savings dependent on Muni Agg vs. Individual sales
  - Broken down by utility area, 569,954 of the 636,235 residential RES customers in Ameren Illinois’ areas, or 90%, are government aggregation customers.
  
  - In ComEd’s area, by contrast, only 485,074 of the 1,244,899 residential RES customers, or 39%, are government aggregation customers.
### ORMD Report:

<table>
<thead>
<tr>
<th>Planning year Ending in May</th>
<th>Annual Savings compared to ComEd's PTC (in million)</th>
<th>Annual Savings inclusive of the PEA Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$17.2</td>
<td>$24.2</td>
</tr>
<tr>
<td>2013</td>
<td>$250.8</td>
<td>$257.5</td>
</tr>
<tr>
<td>2014</td>
<td>-$40.2</td>
<td>$38.7</td>
</tr>
<tr>
<td>2015</td>
<td>-$12.3</td>
<td>-$73.4</td>
</tr>
<tr>
<td>2016</td>
<td>-$79.7</td>
<td>-$115.2</td>
</tr>
<tr>
<td>2017</td>
<td>-$131.4</td>
<td>-$152.1</td>
</tr>
<tr>
<td>Six-year total</td>
<td>$4.4</td>
<td>$20.3</td>
</tr>
</tbody>
</table>
Alternative Suppliers: Other observations

- Evidence of targeting of vulnerable populations.

- What’s clear is that self-policing of the alternative supply industry is not working.

- Modus operandi:
  - low teaser rates that quickly expire and leave consumers open to paying variable rates well above the standard rate available from a utility.
  - False representations of utility affiliation in both telemarketing and door-to-door sales.

Legislative fixes?
- AG bill: end of marketing to LIHEAP/PIPP customers, better disclosures to educate customers.
- CUB bill: end of POR for electric/gas suppliers.
The future: Questions regulators should be asking when faced with new utility proposals, tariffs:
Questions to ask utilities:

1. Do the benefits of your proposed investment exceed the costs?

2. Is the requested expense/investment already occurring in the competitive market?
   * IIT microgrid, for example
   * Amazon/on-line retailers v. ComEd Marketplace
To that end....
It is not the job of the regulator to guarantee utility profits.

- Utilities should not be devising ways to grow their rate bases when usage is decreasing, rates are increasing and significant numbers of customer may be forced off or, in the future exit, the delivery system.

- Microgrid proposal: OAG position -- $25 million microgrid for the Bronzeville neighborhood was neither necessary or cost-beneficial.

- ComEd Marketplace: OAG position -- evidence showed net loss to ratepayers.
Ratepayers should not be paying for “learnings”*
What we know for sure...

In a competitive market, when a business cannot adequately recover its fixed costs through the sale of products and services to consumers, the business must make adjustments.

- The business needs to modify its costs of doing business, make its products and services more attractive to consumers, or risk going out of business.
Utility obligations/Regulator inquiries:

Are cost-cutting measures available to the utilities?

Of course! Like any other business, utilities must continue to adjust to the needs of consumers. If consumers use less electricity than they used to, then utilities need to adjust their cost structures and expectations about profit levels.

If utilities fail to reduce costs...

...then they run the risk of bankruptcy or having to sell their business at a discount to a provider that can better meet the needs of consumers.

• Example: street rail companies that found themselves unable to compete with newer forms of transportation.

• When regulators refused to continue to raise prices (because they understood that the consumers would not pay the higher prices and demand would continue to drop), the companies went out of business or found ways to restructure and reduce their costs.

Other points for public utilities and regulators to keep in mind...
Keep in mind...

- Electric \textit{delivery service} is not a “thing” that consumers want to shop for.
  - It’s not coffee or a phone or an appliance.

- The delivery of electricity is \textbf{an essential input} to doing other things.
  - It’s an essential means (at least for now) to another end, such as turning on lights, running a refrigerator, watching TV, charging your phone, heating your home, etc.
It is not the job of the regulator to guarantee utility profits.

- It is not the job of ratepayers to pay for so-called “learnings” or services available in the competitive marketplace.
- NextGrid should not be an exercise in promoting electrification.
  - Remember the streetcar example
- It is the regulator’s job to ensure least cost rates.
- It is the regulator’s job to ensure that monopoly utilities do not impede distributed generation.
Rate Design: What makes sense and is consistent with the PUA?

Time of Use and Real Time Pricing rate designs should always remain Opt-In designs.

- There’s a reason we have average rates! (No risk, affordability.)
- There will always be customers whose daily life patterns do not conform to reducing usage at certain high-priced times.
  - Medically infirm
  - Job schedules
  - Household member needs (children, elderly)

No demand rates! Lack of understandability, extreme winners and losers. (The losers really lose.) Negative impact on solar development.

("Equity: the fair treatment of consumers and investors in order that ... (ii) the application of rates is based on public understandability and acceptance of the reasonableness of the rate structure and level")
CUB/EDF RTP Study

- One-year study period
- Controversial conclusion:

  Recommendation to Investigate a Transition to Opt-Out Real-Time Pricing. Policymakers should explore the comparative costs and benefits of introducing dynamic pricing for customers on an opt-out basis, rather than as a passive “opt-in” elective. For instance, our analysis of Illinois data suggests that an opt-out program could be marketed to customers most likely to enjoy prolific savings with real-time pricing—if accompanied by data analysis and the availability of smart devices that alert customers of, and perhaps even respond to, imminent price spikes.

- Should always remain opt-in with selective marketing, absent shadow billing and hold harmless safety valves.
<table>
<thead>
<tr>
<th>Time (Hour Ending)</th>
<th>Day-Ahead Hourly Price</th>
<th>Real-Time Hourly Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 AM</td>
<td>6.6¢</td>
<td>9.8¢</td>
</tr>
<tr>
<td>1:00 AM</td>
<td>5.7¢</td>
<td>7.3¢</td>
</tr>
<tr>
<td>2:00 AM</td>
<td>5.8¢</td>
<td>12.2¢</td>
</tr>
<tr>
<td>3:00 AM</td>
<td>5.5¢</td>
<td>3.6¢</td>
</tr>
<tr>
<td>4:00 AM</td>
<td>5.2¢</td>
<td>2.4¢</td>
</tr>
<tr>
<td>5:00 AM</td>
<td>6.1¢</td>
<td>2.6¢</td>
</tr>
<tr>
<td>6:00 AM</td>
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<td>3.7¢</td>
</tr>
<tr>
<td>7:00 AM</td>
<td>7.9¢</td>
<td>9.6¢</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>10.5¢</td>
<td>10.9¢</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>16.9¢</td>
<td>11.6¢</td>
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<tr>
<td>10:00 AM</td>
<td>16.6¢</td>
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</tr>
<tr>
<td>12:00 PM</td>
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</tr>
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</tr>
<tr>
<td>6:00 PM</td>
<td>13.0¢</td>
<td>12.9¢</td>
</tr>
</tbody>
</table>
Checklist for Utilities:

Investment Practices Must be Guided by Least-Cost Utility Ratemaking Requirement

- Model investment decisions like a competitive marketplace player does.
- Do (operational/customer) benefits exceed the cost?
- Is this investment already offered in the competitive marketplace?
Checklist for Regulators:

Changes in Public Policy by the ICC must be fact-/evidence-based.

- Authority derived from the General Assembly; lawmaking an imperfect process at best.
- Due process considerations are paramount.
  - Notice of Inquiries are not evidence-based proceedings.
  - Next Grid not an evidence-based proceeding.
  - Contested case provisions must apply.
  - Proposals/claims subject to discovery, cross-examination, appellate rights.
  - When assessing utility investment proposals, ensure the alleged benefits are real and exceed the costs.
In utility decision- and policy-making, remember the forest.

Ensure *least cost, affordable and reliable utility service.*