

**STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION**

Illinois Commerce Commission)	
On Its Own Motion)	
)	Docket No. 22-0487
vs)	
)	
Ameren Illinois Company d/b/a Ameren)	
Illinois)	
)	
Order Requiring Ameren Illinois Company)	
to file an Initial Multi-Year Integrated Grid)	
Plan and Initiating Proceeding to Determine)	
Whether the Plan is Reasonable and)	
Complies with the Public Utilities Act.)	

DIRECT TESTIMONY OF

DR. GABRIEL CHAN

ON BEHALF OF
ENVIRONMENTAL LAW & POLICY CENTER, NATURAL RESOURCES DEFENSE
COUNCIL, UNION OF CONCERNED SCIENTISTS, AND VOTE SOLAR
("JOINT NGO")

AND

ENVIRONMENTAL DEFENSE FUND

MAY 11, 2023

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1 **I. BACKGROUND AND SUMMARY**

2 **Q: Please state your name and business address.**

3 A: My name is Gabriel Chan. My business address is 301 19th Avenue S, Office 161,
4 Minneapolis, Minnesota, 55455.

5 **Q: By whom are you employed and in what capacity?**

6 A: I am an Associate Professor at the University of Minnesota where I hold the title of the
7 Charles M. Denny Jr. Chair in Science, Technology, and Environmental Policy and Co-
8 Direct the Center for Science, Technology, and Environmental Policy at the Humphrey
9 School of Public Affairs.

10 **Q: On whose behalf are you submitting this testimony?**

11 A: I appear here not on behalf of my employer, the University of Minnesota, but in my own
12 personal capacity as an expert witness on behalf of the Environmental Law & Policy
13 Center, Natural Resources Defense Council, Union of Concerned Scientists, and Vote
14 Solar (collectively the “Joint Non-Governmental Organizations” or “Joint NGO”), as well
15 as the Environmental Defense Fund.

16 **Q: Please summarize your qualifications, experience, and education.**

17 A: I have been an academic researcher and analyst in energy policy at the state, federal, and
18 international levels for over 10 years. I received my PhD in Public Policy from the Harvard
19 Kennedy School in 2015 and have been a Professor of Public Affairs at the University of
20 Minnesota since then. I have published 21 peer-reviewed publications and 20 technical
21 reports related to energy and environmental policy, including on issues related to utility
22 regulation and rate design. A detailed CV is attached as JNGO Ex. 5.01.

1 **Q: Have you testified before the Illinois Commerce Commission previously?**

2 A: No.

3 **Q: Have you testified or provided comments in similar state regulatory proceedings?**

4 A: Yes. I have provided expert testimony in general rate cases before the Minnesota Public
5 Utilities Commission (E002/GR-21-630) and the Michigan Public Service Commission
6 (U-20697). I have also participated in Minnesota Public Utilities Commission proceedings
7 related to community solar, the Value of Solar tariff, recovery from the COVID-19
8 pandemic, and customer utility data access over the past five years.

9 **Q: Are you sponsoring any exhibits?**

10 A: Yes, I am sponsoring the following exhibits:

- 11 • JNGO/EDF Ex. 5.01: Curriculum Vitae of Gabriel Chan.
- 12 • JNGO/EDF Ex. 5.02: Gabriel Chan & Alexandra Klass, *Regulating for Energy*
13 *Justice*, 97 NYU L. REV. 5 (2022), a law review article that reexamines energy
14 system governance through the lens of Energy Justice.
- 15 • JNGO/EDF Ex. 5.03: Baker, Shalanda, Subin DeVar, and Shiva Prakash. 2019.
16 *The Energy Justice Workbook. Initiative for Energy Justice*, a report that defines
17 and applies the principles of Energy Justice in energy-system governance. Also
18 available at [https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-](https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf)
19 [Workbook-2019-web.pdf](https://iejusa.org/wp-content/uploads/2019/12/The-Energy-Justice-Workbook-2019-web.pdf)
- 20 • JNGO/EDF Ex. 5.04: Opinion Dynamics. 2022. *Ameren Illinois Company Low*
21 *Income Needs Assessment: Final Report*, a summary of a representative survey of
22 1,300 customers served by the Company that provides insights on energy burden

1 and energy insecurity. Also available at [https://www.ilsag.info/wp-](https://www.ilsag.info/wp-content/uploads/AIC-2021-LINA-Report-FINAL-2022-06-01.pdf)
2 content/uploads/AIC-2021-LINA-Report-FINAL-2022-06-01.pdf

- 3 • JNGO/EDF Ex. 5.05: Community Organizing and Family Issues, *Response to*
4 *Staff's Request for Feedback Regarding Low-Income Rate Programs* (Aug. 19,
5 2022)

6 **Q: What is the purpose of your testimony?**

7 A: The purpose of my testimony is to use the lens of Energy Justice to frame the goals,
8 statutory requirements, and implementation by Ameren Illinois (the Company) of its multi-
9 year integrated grid plan (MYIGP) under 220 ILCS 5/16-105.17. My recommendations are
10 framed to support the implementation of the Company's MYIGP, recognizing that the
11 pathbreaking statutory framework established by the Climate and Equitable Jobs Act
12 ("CEJA") is still new and has the potential to both significantly advance the goals of Energy
13 Justice in Illinois and establish models for other states in the country.

14 **Q: Please summarize your conclusions and recommendations.**

15 A: I conclude that the Illinois Commerce Commission ("ICC") should direct Ameren to:

- 16 • Provide an initial assessment of the distribution of benefits from its proposed grid
17 plan, including to EIECs, building on the examples of distributional equity
18 assessment provided by JNGO/EDF witness Pereira;
- 19 • Develop a plan to iteratively improve on the granularity of its assessment of the
20 benefits of integrated grid planning over time, including through the usage of more
21 fine customer data, as recommended by JNGO/EDF witness Nock.
- 22 • Develop a plan for a broader evaluation of equity across multiple dimensions of
23 utility performance (e.g. power quality, customer service, affordability, safety,

1 hosting capacity) as recommended by JNGO witness Kenworthy. I agree with Mr.
2 Kenworthy's recommendation that Ameren should assess grid equity at a finer level
3 of geographic granularity, such as the census block group level.

4 **II. THE PREVALENCE AND DISPARITY OF ENERGY INSECURITY NECESSITATE A FOCUS ON**
5 **ENERGY JUSTICE**

6 **Q: Please summarize the purpose of this section.**

7 A: In this section, I define the terms "Energy Justice" and "energy insecurity" as they have
8 been used in academic scholarship and in practice. Then, I summarize evidence of the
9 prevalence and disparity of energy insecurity among the customers served by the Company.

10 **Q: Please define "Energy Justice" as it is used by practitioners and academic scholars.**

11 A: The Initiative for Energy Justice defines "Energy Justice" as having "the goal of achieving
12 equity in both the social and economic participation in the energy system, while also
13 remediating social, economic, and health burdens on those historically harmed by the
14 energy system"¹. Academic scholars and social movements have defined Energy Justice in
15 different but broadly consistent ways. Here, I highlight four constituent principles (also
16 "tenets") of Energy Justice that are prominently featured by the U.S. Department of
17 Energy, researchers, and activists:²

¹ INITIATIVE FOR ENERGY JUSTICE. THE ENERGY JUSTICE WORKBOOK 9, 66-68. <https://iejusa.org/section-1-defining-energy-justice/> (defining "energy justice" and providing alternative definitions)

² The U.S. Department of Energy also has reflected these same four elements of energy and environmental justice: procedural justice, distributive justice, recognition justice, and restorative justice. https://www.energy.gov/sites/default/files/2022-07/Environmental%20Justice%20Explainer%207_25_22.pdf For additional discussion of energy justice definitions see, e.g., Shelley Welton, *The Bounds of Energy Law*, 62 B.C. L. REV. 2339, 2377-80, 2377 n.192 (2021) (discussing and citing the growing scholarly literature on energy justice); Shelley Welton & Joel Eisen, *Clean Energy Justice*, 43 HARV. ENV'T L. REV. 307, 317-19, 307, 312-13, 317 n.43 (2019) (citing JOHN RAWLS, A THEORY OF JUSTICE 62 (1971)) (describing the "moral argument" for energy justice based on energy's status as a "primary good" necessary for participating "in the modern economy and in modern

- 1 • **Recognition justice:** understanding the history and context of energy decisions
2 that have created inequitable benefits and burdens in the past and in the present.
3 Recognition justice focuses on identifying and advocating for communities that
4 are ignored or misrepresented in energy decisions. In other words, it is concerned
5 with *who* is recognized by decisions and in decision-making processes.
- 6 • **Procedural justice:** meaningful and equitable participation and representation in
7 energy decision making. Procedural justice focuses on ensuring equitable
8 decision-making processes across the energy system. It is concerned with *how*
9 decisions are made.
- 10 • **Distributional justice:** ensuring benefits and burdens are equitably distributed.
11 Distributional justice looks at the uneven allocation of costs and benefits on
12 communities affected by the energy system. It asks, *what* costs and benefits are
13 borne by whom?
- 14 • **Restorative justice:** facilitating healing and harmony by improving conditions
15 within communities and providing for remediation of legacy harms. Restorative
16 justice asks how best to respond to harm caused by the energy system and assists
17 in pinpointing systemic changes that will prevent future harm. It asks, *why* do

communities” and analyzing literature regarding energy justice); Kirsten Jenkins, Darren McCauley, Raphael Heffron, Hannes Stephan & Robert Rehner, *Energy Justice: A Conceptual Review*, 11 ENERGY RSCH. & SOC. SCI. 174 (2016) (reviewing scholarly framings of energy justice in terms of distributional, recognitional, and procedural justice); Sanya Carley & David M. Konisky, *The Justice and Equity Implications of the Clean Energy Transition*, 5 NATURE ENERGY 569, 570 (2020) (applying the lens of distributional, procedural, recognitional, and restorative justice to clean energy transition); CHANDRA FARLEY, JOHN HOWAT, JENIFER BOSCO, NIDHI THAKAR, JAKE WISE, JEAN SU & LISA SCHWARZ, ADVANCING EQUITY IN UTILITY REGULATION I (2021) (discussing energy justice principles in the context of utility regulation in the South); Shalanda H. Baker, *Anti-Resilience: A Roadmap for Transformational Justice Within the Energy System*, 54 HARV. C.R.-C.L. L. REV. 1, 6 (2019) (arguing that energy justice should adopt an anti-resilience framework that proactively resists environmental racism, rather than planning for communities of color to bounce back in the name of resilience).

1 things exist the way that they do? In doing so, it seeks long-term solutions that
2 address root causes.

3 The tenets of Energy Justice help build more specific understanding of the
4 multitude of ways in which energy system governance and performance can be reoriented
5 toward the goals of Energy Justice. The pathbreaking framework for integrated grid
6 planning established by CEJA provides a critical juncture to consider how Illinois' energy-
7 system regulators can make decisions that build toward a future vision that aligns with the
8 goals of Energy Justice. As the Initiative for Energy Justice's definition emphasizes, that
9 future vision should consider how to build an energy system that achieves equity in social
10 and economic participation in the energy system, toward remediating past harms, and
11 supporting ongoing social and economic health and sustainability.

12 **Q: What is the relevance of Energy Justice for energy regulation generally?**

13 A: Despite the deep integration of energy in modern life—or perhaps because of this
14 integration—in too many communities, energy systems act to reinforce historic oppression
15 of marginalized people. Energy Justice offers a frame to reimagine energy systems as tools
16 for revitalization and systems change. Energy regulators can play important roles under
17 their existing authority—and under their expanded authority under equity-focused energy
18 law, exemplified by many provisions in CEJA—to exert a vision of Energy Justice that
19 would better align energy regulation with a contemporary understanding of the public
20 interest that wholly integrates equity. I explore this notion in detail at the national level in
21 JNGO/EDF Exhibit 5.02.

1 **Q: Please elaborate.**

2 A: A lack of Energy Justice is typified by the prevalence of “energy insecurity” and “energy
3 poverty.” The commodification of energy that is required for essential services—space and
4 water heating, cooling, refrigeration, lighting, and the operation of appliances—often
5 creates untenable tradeoffs, negative health impacts, and conditions of energy insecurity
6 for a significant percentage of U.S. residents.³ The prevalence, inequality, structural causes,
7 and lack of remediation of energy insecurity demonstrates a need to align utility processes,
8 programs, and policies with Energy Justice, as reinforced by JNGO/EDF witnesses Nock
9 and Pereira.

10 The relatively sparse discourse and public awareness of energy insecurity
11 demonstrates a need for greater recognition justice. The unequal experience of energy
12 insecurity demonstrates a need for greater distributional justice. The structural causes of
13 energy insecurity in housing policy, energy policy, public health policy, educational policy,
14 and economic policy demonstrate a need for greater restorative justice. And the lack of
15 remediation and representative processes for addressing energy insecurity demonstrates a
16 need for greater procedural justice.

17 Energy regulators have an opportunity to better reflect the moral imperative of
18 advancing Energy Justice by minimizing energy insecurity and provisioning necessary
19 energy services for underrepresented, marginalized, and low-income residents.⁴ Moreover,

³ See, e.g., NANCY L. SEIDMAN, ALICE NAPOLEON & KATHRYN MADDUX, *ENERGY INFRASTRUCTURE: SOURCES OF INEQUITIES AND POLICY SOLUTIONS FOR IMPROVING COMMUNITY HEALTH AND WELLBEING* 1 (2020).

⁴ See, e.g., Shelley Welton & Joel Eisen, *Clean Energy Justice*, 43 HARV. ENV'T L. REV. 307, 317–19, 317 n.43 (2019) (citing JOHN RAWLS, *A THEORY OF JUSTICE* 62 (1971)) (describing the “moral argument” for energy justice based on energy’s status as a “primary good” necessary for participating “in the modern economy and in modern communities”).

1 energy regulators have an opportunity to embrace the potential of their decisions to support
2 community efforts to “build thriving economies that provide dignified, productive and
3 ecologically sustainable livelihoods”⁵ in a more equitable energy system. Such a system
4 could create positive political feedback loops that could advance efforts to address a wide
5 range of policy goals, including mitigating climate change.⁶

6 **Q: Is there evidence that energy insecurity impacts a significant percentage of**
7 **customers served by the Company?**

8 A: Yes. There is compelling evidence from a rigorous customer survey of the pervasiveness
9 of energy insecurity and inequality in the experience of energy insecurity among the
10 customers served by the Company. In 2021, the Company commissioned the research firm
11 Opinion Dynamics to conduct a representative survey conducted of 1,300 customers served
12 by the Company focusing on the needs of low-income customers in a time period that
13 includes some of the impacts of the COVID-19 pandemic recovery. The final report
14 summarizing the findings of the survey is included as JNGO/EDF Exhibit 5.04.

15 The representative survey found that 16% of all customers served by the Company
16 had difficulty paying their Ameren Illinois energy bills over the course of 2020.⁷

17 Troublingly, 35% of low-income customers,⁸ 26% of customers living in multifamily

⁵ *Just Transition Principles*, CLIMATE JUST. ALL., <https://climatejusticealliance.org/just-transition> (describing a vision for a “just transition” that benefits whole communities).

⁶ See Shelley Welton & Joel Eisen, *Clean Energy Justice*, 43 HARV. ENV'T L. REV. 320–21 (describing an instrumental rationale for energy justice that would create ways for “clean energy advocates . . . to find common cause with advocates focused on issues of poverty, economic power, and social and racial justice . . . [and] to push back against utility antipathy to clean energy”).

⁷ JNGO/EDF Exhibit 5.04 at 27.

⁸ *Id.*

1 housing,⁹ and 36% of renters reported difficulty paying their Ameren Illinois energy bill.¹⁰
2 Additionally, the survey found that the “number one bill or expense that low income
3 customers struggled to pay was their AIC (Ameren Illinois Company) bill,” causing more
4 difficulty than automobile expenses, rent or mortgage, groceries, cell phone bills, water
5 bills, cable bills, credit card bills, internet bills, health insurance, and student loans.¹¹

6 **Q: Please explain the concept of “energy burden” and the evidence of the pervasiveness
7 and inequality of energy burden among the customers served by the Company.**

8 A: Energy burden is the percent of income that a household spends on energy bills, typically
9 averaged over the year. The Opinion Dynamics survey conducted in 2021 found that the
10 average energy burden among customers served by the Company is 4.0%. However, there
11 are large disparities in energy burden among customers (Figure 1). The survey found that
12 energy burden is substantially higher among households with low income,¹² households
13 living in multifamily or manufactured housing,¹³ renters,¹⁴ households with baseboard or
14 boiler heat,¹⁵ households with window or portable air conditioners,¹⁶ and households with
15 a head of household that does not have a college degree, is non-White, is a single mother,
16 has a disability, or is unemployed.¹⁷

⁹ JNGO/EDF Exhibit 5.04 at 28.

¹⁰ JNGO/EDF Exhibit 5.04 at 29.

¹¹ JNGO/EDF Exhibit 5.04 at 26.

¹² JNGO/EDF Exhibit 5.04 at 2.

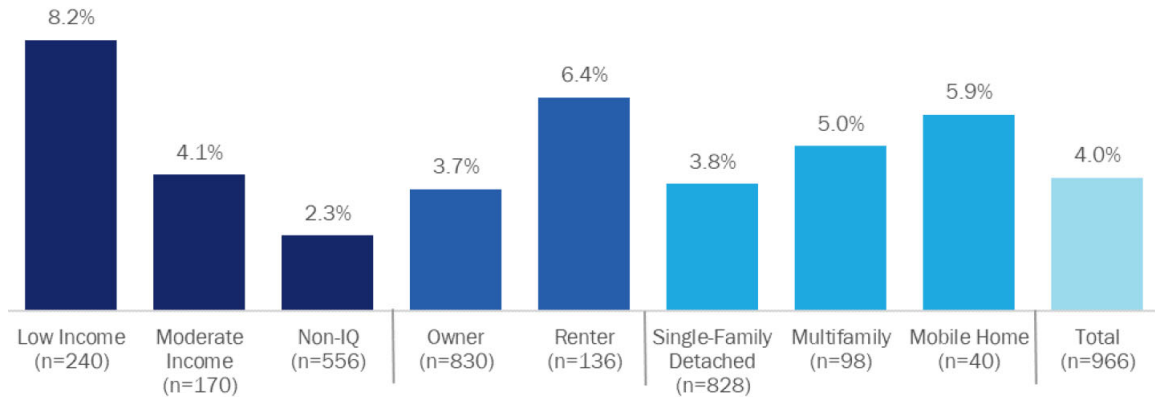
¹³ *Id.*

¹⁴ *Id.*

¹⁵ JNGO/EDF Exhibit 5.04 at 21.

¹⁶ *Id.*

¹⁷ JNGO/EDF Exhibit 5.04 at 22, 24.



1
2 Figure 1. Average energy burden among customers served by the Company by customer
3 segment.¹⁸

4 **Q: Are there critiques of using energy burden to assess energy insecurity?**

5 A: Yes. As explained by JNGO/EDF Witness Nock, energy burden by itself can fail to capture
6 dimensions of energy insecurity due to energy-limiting behavior (a household's inability
7 or unwillingness to consumer enough energy to reach a desired level of comfort can give
8 the false impression that some households with low energy burden are not energy insecure)
9 and a lack of robust housing or energy infrastructure (a household's lack of adequate
10 infrastructure can also give the appearance of low energy costs despite a lack of adequate
11 energy services).

12 **Q: Is there additional evidence that customers served by the Company experience energy
13 insecurity not captured by energy burden metrics?**

14 A: Yes. The Opinion Dynamics survey conducted in 2021 found a clear relationship between
15 income and the frequency of health, comfort, and safety hazards. Customers served by the
16 Company with low income, that rent their home, and that live in multi-family or
17 manufactured housing were more much more likely to report a greater frequency of

¹⁸ JNGO/EDF Exhibit 5.04 at 2.

1 uncomfortably cool temperatures on cold days/nights and uncomfortably warm
2 temperatures on hot days or nights than other customers.¹⁹ These customers were also more
3 likely to report infiltrations of air, water, or pests into their home than other customers,
4 indicating a need for more equitable access to home weatherization.²⁰ These findings
5 provide compelling evidence of disparities in energy-limiting behavior and the need to
6 access weatherization programs among the customers served by the Company that are
7 documented by JNGO/EDF Witness Nock in other jurisdictions.

8 **Q: Are existing public assistance programs sufficient to address energy insecurity**
9 **among the customers served by the Company?**

10 A: No. Households that receive some type of public benefit assistance, including from the
11 Low-Income Home Energy Assistance Program (LIHEAP), have significantly higher
12 energy burden than other households—even after accounting for public assistance.²¹
13 Further, less than two-thirds of households with income that would qualify for LIHEAP or
14 the Company’s Percentage of Income Payment Plan are aware of these programs.²²
15 Statewide, only 16% of the 1.28 million income-eligible people in Illinois were served by
16 LIHEAP in 2021.²³ And before the COVID-19 pandemic and associated shutoff
17 moratorium, in 2019 only 25% of income-eligible people in Illinois were served by
18 LIHEAP.²⁴

¹⁹ JNGO/EDF Exhibit 5.04 at 32-34.

²⁰ JNGO/EDF Exhibit 5.04 at 35-36.

²¹ JNGO/EDF Exhibit 5.04 at 22-23.

²² JNGO/EDF Exhibit 5.04 at 25.

²³ LIHEAP Performance Management Website (HHS), *Illinois LIHEAP FY2021 State Profile*.
<https://liheappm.acf.hhs.gov/sites/default/files/private/congress/profiles/2021/FY2021IllinoisProfile-508Compliant.pdf>

²⁴ LIHEAP Performance Management Website (HHS), *Illinois LIHEAP FY2019 State Profile*.
<https://liheappm.acf.hhs.gov/sites/default/files/private/congress/profiles/2019/FY%202019%20IL%20Profile.pdf>

1 **Q: Are these disparities unique to the Company's energy system?**

2 A: No. While the data available on energy insecurity experienced by customers served by the
3 Company highlights significant disparities, nationally, disparities in the experience of
4 energy insecurity are similarly extensive across income, race/ethnicity, housing tenure, and
5 housing type.²⁵ And regarding public assistance, nationally, Illinois matches national
6 trends with only 16% of income-eligible households receiving LIHEAP assistance in
7 2021.²⁶ Addressing disparities in energy insecurity will require significant effort on the part
8 of legislators, regulators, utilities, and stakeholders to address the structural inequities that
9 have accumulated over decades across the country, including—but in no way limited to—
10 the Company's energy system.

11 **Q: Does it appear to you that the Company is taking these issues seriously?**

12 A: Yes. From my review of the Company's MYIGP and testimony, it appears that the
13 Company is generally aware of these customer disparities and is committed to working
14 with stakeholders and the Commission to address them. While I have not had an
15 opportunity to speak directly to the Company about this, it is my understanding that the
16 Company's team has been open to meeting and talking with parties and other stakeholders,
17 including representatives of the JNGOs, to gather feedback and suggestions for their
18 ongoing efforts to address energy insecurity among its customers.

²⁵ See, for example, The American Council for an Energy-Efficient Economy (2020), *How High Are Household Energy Burdens?*, <https://www.aceee.org/sites/default/files/pdfs/u2006.pdf> (highlighting national-level disparities in energy burden); see also, US Energy Information Administration (2022), *In 2020, 27% of U.S. households had difficulty meeting their energy needs*, <https://www.eia.gov/todayinenergy/detail.php?id=51979> (highlighting national-level disparities in energy insecurity).

²⁶ LIHEAP Performance Management Website (HHS). Custom Reports.

1 **III. INTEGRATED GRID PLANNING IS NECESSARY TO ADVANCE ENERGY JUSTICE**

2 **Q: Please summarize the purpose of this section.**

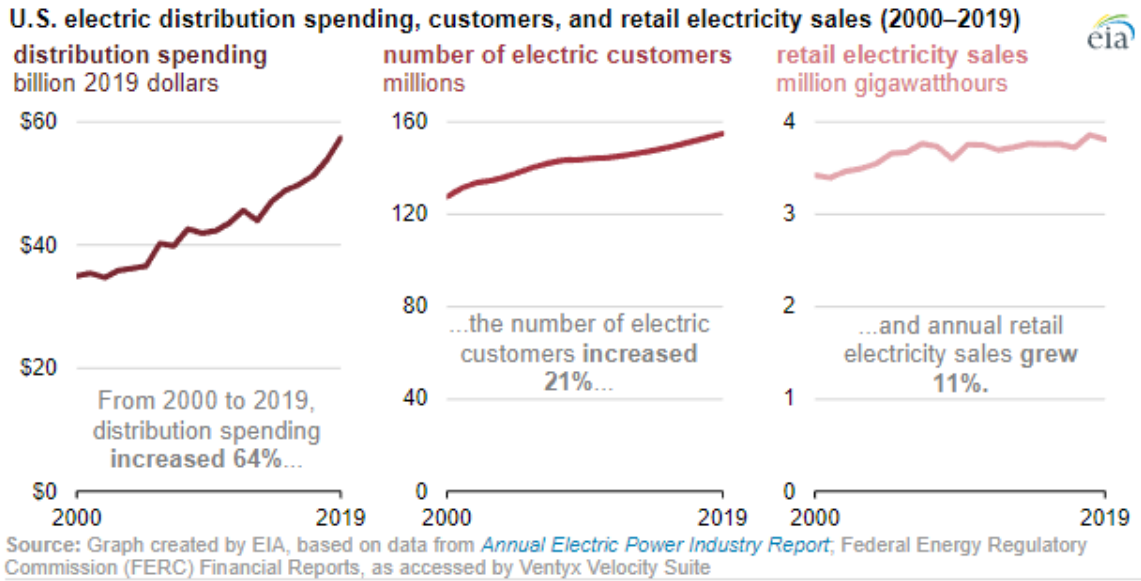
3 A: In this section, I analyze distribution grid costs as a potential cause of energy insecurity
4 and discuss the relevance of Energy Justice for integrated grid planning. I explain how
5 the statutory framework for integrated grid planning established by CEJA reflects the
6 central tenets of Energy Justice.

7 **Q: Are rising distribution costs a contributing factor to the prevalence of energy**
8 **insecurity nationally?**

9 A: Yes. Electricity delivery costs, particularly distribution costs, are a key driver of upward
10 pressure on electricity prices nationally.

11 Nationally, it is increasingly clear that distribution grid planning is a critical factor
12 in energy affordability, and therefore in addressing energy insecurity and advancing
13 Energy Justice. According to the U.S. Energy Information Administration, based on data
14 submitted by large utilities to the Federal Energy Regulatory Commission, distribution
15 spending increased 64% from 2000 to 2019 in real terms, while electricity sales grew only
16 11% over the same period.²⁷ See Figure 2.

²⁷ Lori Aniti, *Major utilities' spending on the electric distribution system continues to increase*, U.S. ENERGY INFO. ADMIN. (May 27, 2021) <https://www.eia.gov/todayinenergy/detail.php?id=48136>



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Figure 2. Trends in electric distribution spending (in real 2019 dollars), customers, and sales from 2000-2019.²⁸

Accordingly, the delivery costs as a share of total electricity costs to consumers grew considerably over the last decade (prior to recent short-term increases in the cost of power production), increasing by 65% in real terms from 2010 to 2020. See Figure 3.²⁹

²⁸ *Id.*

²⁹ Lori Aniti, *Major U.S. utilities spending more on electricity delivery, less on power production*, U.S. ENERGY INFO. ADMIN. (Nov. 23, 2021), <https://www.eia.gov/todayinenergy/detail.php?id=50456>

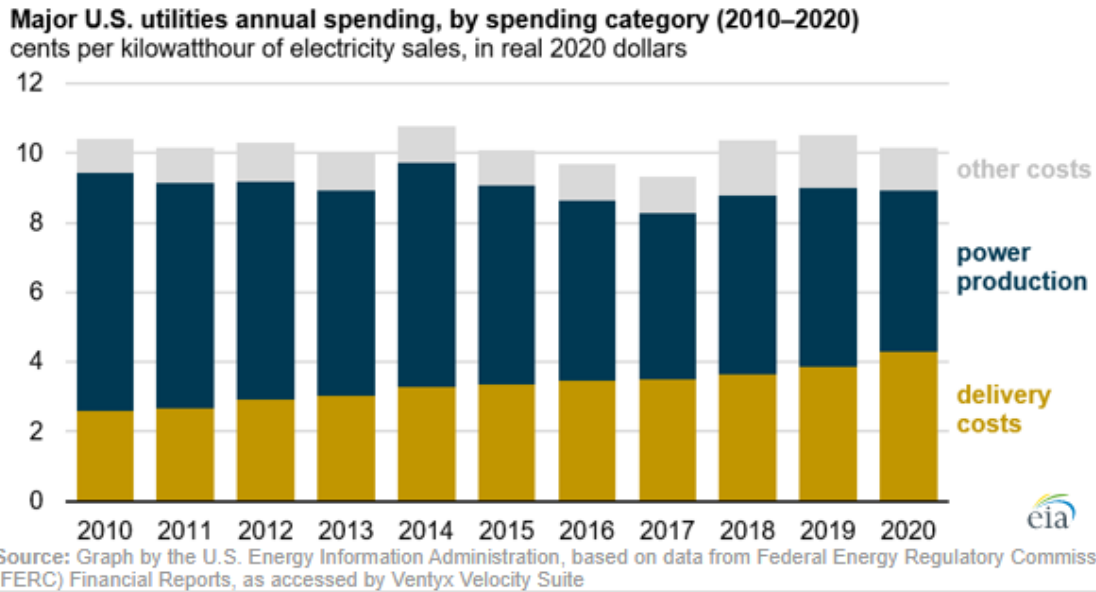


Figure 3. Trends in the per-kilowatt-hour costs of electricity sales to consumers by delivery, power production, and other costs from 2010-2020.³⁰

Q: Historically, have distribution costs contributed to upward pressure on the Company’s residential rates?

A: Yes. The Company’s delivery charge, which comprises around one-third of a typical residential customer’s electric bill³¹, has increased in recent years, contributing to significant increases in customer bills prior to implementation of CEJA.³² In nominal dollar terms, a typical residential customer served by the Company has seen their delivery costs increase by \$13.11 per month (\$157.32 per year) over the last 10 years and increase by \$5.82 per month (\$69.81 per year) over the last 5 years.

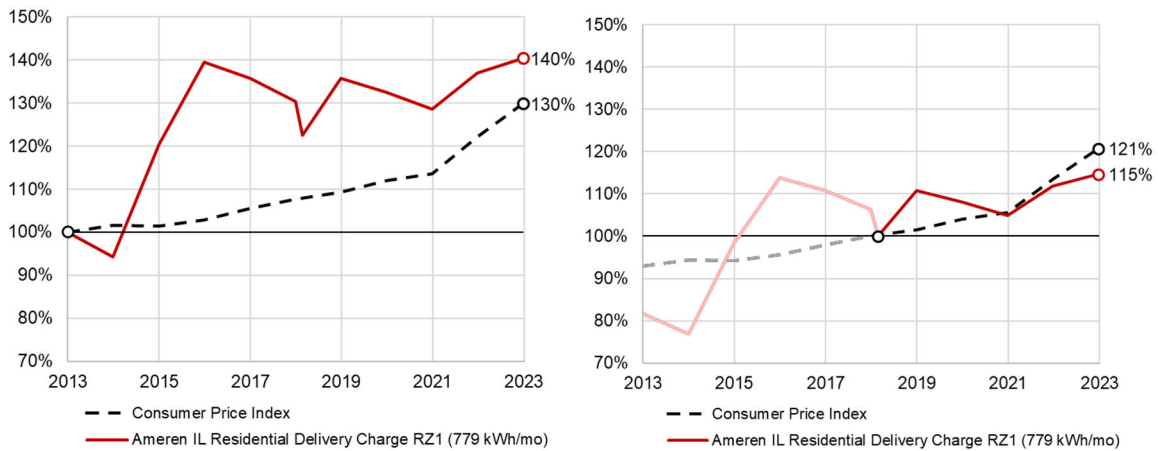
³⁰ *Id.*

³¹ Based on the ICC published January–March, 2023 non-summer “Price to Compare” for electric supply and transmission charges for Ameren Illinois of 11.833 cents per kWh, and consumption of 779 kWh/month, a representative residential customer would spend \$92.15 per month for supply and transmission. Under Ameren Illinois’ 2023 rates for delivery charge, the delivery charge for this level of consumption would be \$45.52, or 33.1% of the total bill (less taxes and additional mandated charges). ICC Price to Compare, <https://plugin.illinois.gov/understanding-the-price-to-compare/price-to-compare-ameren-illinois.html>

³² JNGO/EDF Exhibit 5.05 at 5 (finding that Illinois law changes, particularly the Energy Infrastructure Modernization Act in 2011 “have contributed to significant increases in the delivery portion of customer bills” prior to implementation of the multi-year integrated grid planning process).

1 Compared to price changes of other goods in the economy, over the past 10 years,
 2 a typical residential customer served by the Company has seen their residential delivery
 3 charge increase at a faster rate than inflation. However, over the past five years (when
 4 inflation has reached the highest levels in decades), the Company’s residential delivery
 5 charge has increased at a rate just below inflation.

6 Figure 4 shows my analysis of the rate of change in the Company’s residential
 7 delivery charge for a representative residential customer relative to 2013 (left) and relative
 8 to 2018 (right). This analysis is based on the Company’s published Modernization Action
 9 Plan-Pricing rates for residential delivery charges for 2013-2023 and the urban Consumer
 10 Price Index (CPI).³³



11 Figure 4. Trends in the Company’s delivery charge for a representative residential customer
 12 from 2013-2023 relative to 2013 (left) and 2018 (right) compared to the urban Consumer
 13 Price Index (dashed line). The delivery charge is calculated for a representative residential
 14 customer that consumes a constant 779 kWh per month in Ameren Illinois’ Rate Zone 1
 15 (rate zones were applicable through 2020).
 16

³³Ameren Illinois Electric Rates, <https://www.ameren.com/illinois/residential/rates/electric-rates>. U.S. Bureau of Labor Statistics, Consumer Price Index, https://data.bls.gov/timeseries/CUUR0000SA0?years_option=all_years

1 **Q: Does the Company’s proposal for distribution investments over the next four years**
2 **suggest that distribution costs could be an important contributing factor to energy**
3 **insecurity in the near future?**

4 A: Yes. Insofar as residential delivery charges reflect the Company’s total distribution
5 investments, the Company’s proposed distribution investments over the next four years
6 raise concerns that residential energy bills and energy insecurity could also increase. The
7 Company’s proposed MYIGP includes forecasted annual distribution capital investments
8 of \$507-615 million per year from 2024-2027.³⁴ This forecast represents a significant
9 departure from the Company’s distribution investments over the past four years³⁵, as shown
10 in Figure 5.

³⁴ Ameren Exhibit 2.1GP at 259 (Table 44), based on the summation of distribution system capital investments categorized as “new business, facility relocations, capacity expansion, system performance, preventative maintenance, and corrective maintenance.”

³⁵ Ameren Exhibit 2.1GP at 257 (Table 42).

Distribution System Capital Investments:
 Historic and Forecasted (\$M)

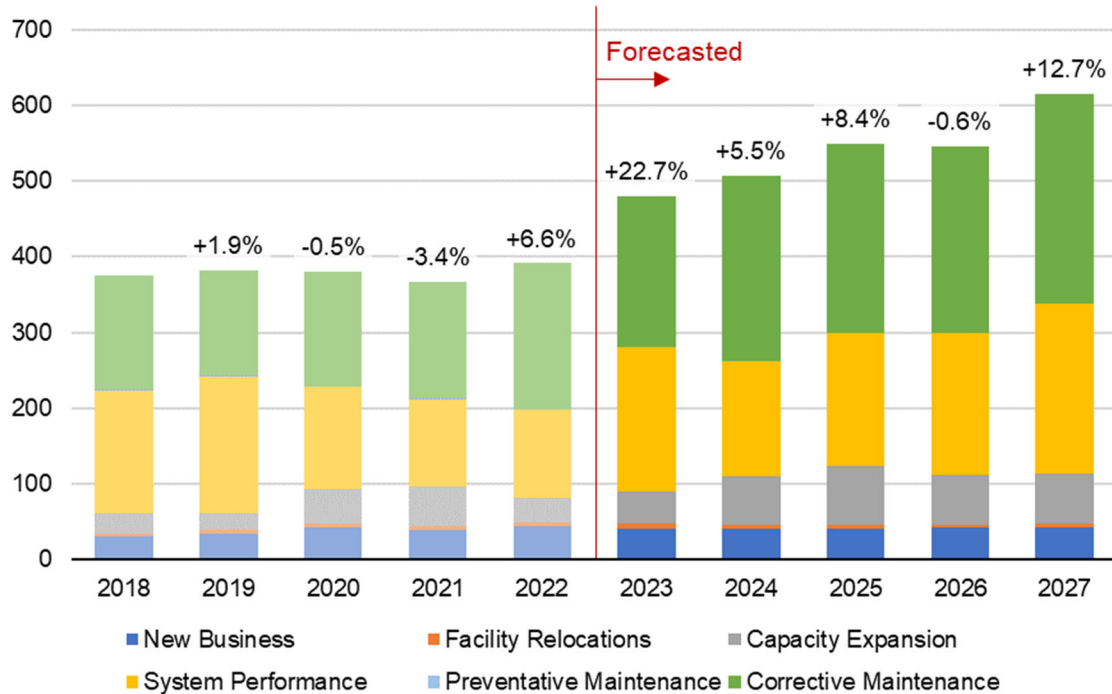
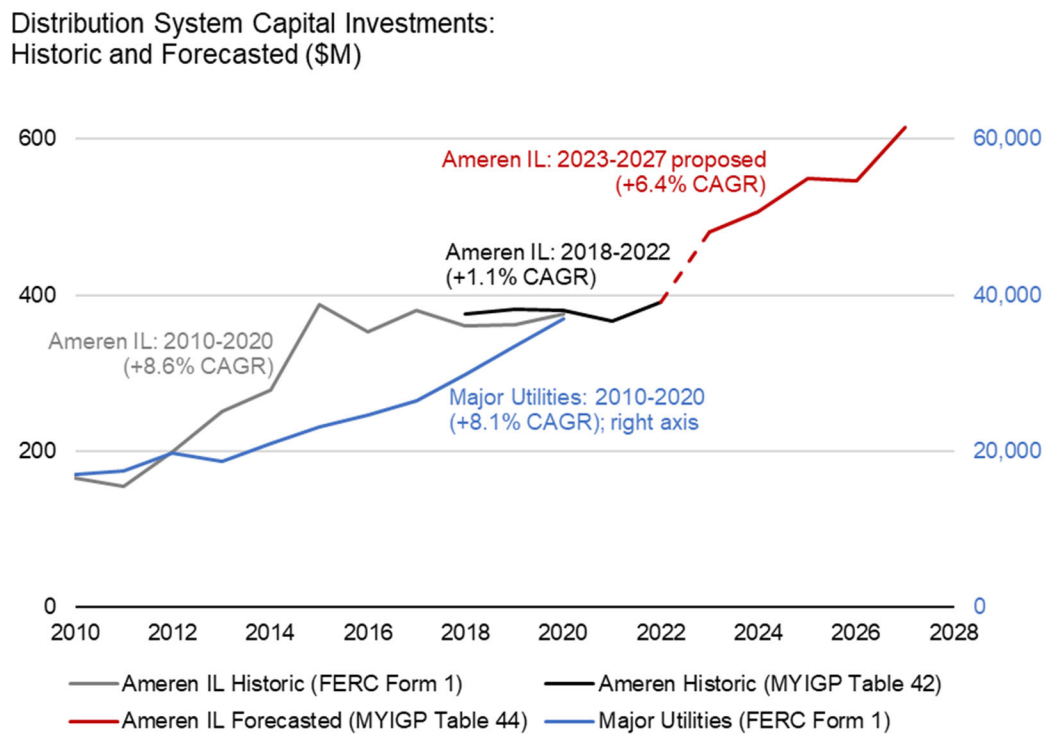


Figure 5. Historic distribution capital additions (2018-2022) and forecasted distribution capital investments (2023-2027) by investment categories required by 220 ILCS 5/16-105.17(f)(2)(C)(i), as reported in Tables 42 and 44 of the Company’s MYIGP. Year-on-year percent change shown with each bar. Reported investment associated with DER integration and charged to DER developers and retail customers included in Tables 42 and 44 is not shown.

However, over a longer historic time period, the Company’s proposed rate of increase in distribution capital in its proposed MYIGP is slightly below its historic rate. Based on my analysis of data submitted under the Federal Energy Regulatory Commission (FERC) Form 1, I find that the Company’s proposed rate of increase in distribution capital investment has historically tracked the average of major utilities over 2010-2020. As shown in Figure 6, from 2010-2020, I find that major utilities increased distribution capital investments at an annual rate of 8.1%, whereas the Company increased distribution

1 investments by 8.6% per year over this period.³⁶ The Company’s proposed MYIGP would
 2 see distribution capital investments increase by an average of 6.4% per year from 2023-
 3 2027.³⁷ While less than the rate of increase from 2010-2020 for the Company and major
 4 utilities overall, the Company’s proposed investments would nevertheless likely create
 5 significant upward pressure on residential electric rates. Increasing delivery costs at a time
 6 when supply costs are also increasing,³⁸ can exacerbate energy insecurity.



7
 8 Figure 6. Historic distribution capital additions for major utilities and Ameren Illinois
 9 (2010-2020) and forecasted distribution capital investments (2023-2027) based on
 10 Ameren Illinois MYIGP. The compound annual growth rate (CAGR) is shown for each
 11 time series, showing that the Company’s CAGR of distribution capital investments
 12 (8.6%) tracked major utilities (8.1%) from 2010-2020. The company’s proposed rate of
 13 growth in distribution capital investment in the MYIGP is 6.4% per year.
 14

³⁶ Calculated based on data from FERC Form 1 for Ameren Illinois and for all utilities included in the RMI Utility Transition Hub data portal. <https://utilitytransitionhub.rmi.org/finances/>
³⁷ Calculated based on data in Ameren Exhibit 2.1GP at 259 (Table 44).
³⁸ ICC Price to Compare, <https://plugin.illinois.gov/understanding-the-price-to-compare/price-to-compare-ameren-illinois.html> (For Ameren Illinois, the residential electric supply plus transmission “price to compare” rate below 800 kWh was 11.833 cents/kWh in May 2023 compared to 6.519 cents/kWh in May 2017).

1 **Q: Are rising delivery costs alone a necessary hindrance to advancing Energy Justice?**

2 No. Rising delivery costs reflect many complex underlying trends in the costs of materials
3 and construction, aging infrastructure, and increasing demands on the grid. As the grid
4 transitions to address multiple policy goals, it is critical that the upward pressure on prices
5 from increasing delivery costs is met with comprehensive policy and planning that
6 accounts for Energy Justice. In parallel to the MYIGP, I am aware that the Company is
7 developing proposals for its cost allocation³⁹ and a low-income discount⁴⁰ that can help
8 minimize the impact of increasing distribution investments on customer energy insecurity.
9 And within the context of the MYIGP proceeding, the Company is proposing actions that
10 can help address energy insecurity.⁴¹

11 For example, distribution grid investments can support the integration of distributed
12 energy resources (DERs), and complementary policy can make access to ownership and
13 benefits of DERs more equitable, thereby reducing energy insecurity among the
14 disadvantaged communities and aligning with the goals of Energy Justice. However,
15 without the integration of DER access policies with grid planning, increasing distribution
16 investments in isolation can work to exacerbate energy insecurity.

17 Therefore, integrated grid planning that prioritizes affordability for energy insecure
18 customers is essential for addressing Energy Justice. In passing CEJA into law, the Illinois
19 General Assembly's findings of fact align with this idea, finding that "inclusive distribution

³⁹ ICC Docket No. 23-0082, Ameren Illinois Multi-Year Rate Plan.

⁴⁰ Section 220 ILCS 5/9/241, requiring a study of a low-income discount rate; Ameren Exhibit 1.0GP at 19 ("the Company's plan to propose an electric low-income discount tariff in a revenue-neutral rate design filing will support the Company's efforts to consider affordability and to spread benefits to all Ameren Illinois customers.")

⁴¹ Ameren Exhibit 2.1GP at 244 (Table 40; providing examples of programs and initiatives bringing clean energy benefits to Equity Investment Eligible Communities).

1 system planning is an essential tool for the Commission, public utilities, and stakeholders
2 to effectively coordinate environmental, consumer, reliability, and equity goals at fair and
3 reasonable costs, and for ensuring transparent utility accountability for meeting those
4 goals.”⁴²

5 **Q: Does Illinois law regarding integrated grid planning align with the tenets of Energy
6 Justice?**

7 A: Broadly, yes. CEJA’s provisions for MYIGP adopts provisions that align with the four
8 tenets of Energy Justice: recognition, procedural, distributive, and restorative justice.

9 **Q: How does Illinois law regarding integrated grid planning align with recognition
10 justice?**

11 A: Recognition justice, which focuses on identifying and advocating for the communities
12 historically ignored or misrepresented in energy decisions, is instantiated in Illinois law
13 through the specific and operationalizable definition of “Equity Investment Eligible
14 Communities” (EIEC) in Section 20 ILCS 3501/801-10(oo). Illinois law defines an EIEC
15 as “the geographic areas throughout Illinois that would most benefit from equitable
16 investments by the State designed to combat discrimination.”⁴³ Specifically, Illinois law
17 defines EIECs based on definitions of area that have been “historically...excluded from
18 economic opportunities, including opportunities in the energy sector”⁴⁴ (R3 Areas) and
19 communities “where residents have historically been subject to disproportionate burdens
20 of pollution, including pollution from the energy sector”⁴⁵ (Environmental justice

⁴² Section 220 ILCS 5/16-105.17(a)(3).

⁴³ Section 20 ILCS 3501/801-10(oo).

⁴⁴ Section 20 ILCS 3501/801-10(oo)(1).

⁴⁵ Section 20 ILCS 3501/801-10(oo)(2).

1 communities). CEJA’s definition of EIECs, provides a clear legislative mandate to
2 recognize specific marginalized communities that should be given priority to benefit from
3 a MYIGP.

4 **Q: How does Illinois law regarding integrated grid planning align with procedural**
5 **justice?**

6 A: Procedural justice, which focuses on ensuring equitable decision-making processes across
7 the energy system, is instantiated in Illinois law through the specific processes for
8 developing a MYIGP described in statute. These design elements⁴⁶ and requirements for
9 stakeholder processes⁴⁷ in developing a MYIGP direct utilities and stakeholders to work
10 toward empowerment of customers, transparent processes, and robust opportunities for
11 public participation.

12 **Q: How does Illinois law regarding integrated grid planning align with distributional**
13 **justice?**

14 A: Distributional justice, which focuses on ensuring that the benefits and burdens of the
15 energy system are equitably shared, is instantiated in Illinois law through the specific
16 quantitative goal of supporting benefits to EIECs⁴⁸ and the goal of affordability, including
17 for low-income customers.⁴⁹ Specifically, Illinois law establishes a quantitative goal for
18 MYIGPs to “support efforts to bring at least 40% of the benefits [of a MYIGP] to Equity
19 Investment Eligible Communities.”⁵⁰ Further discussion of this provision is provided by
20 JNGO/EDF witness Pereira.

⁴⁶ Section 220 ILCS 5/16-105.17(d)(4,6).

⁴⁷ Section 220 ILCS 5/16-105.17(e).

⁴⁸ Section 220 ILCS 5/16-105.17(d)(3)

⁴⁹ Section 220 ILCS 5/16-105.17(d)(11).

⁵⁰ Section 220 ILCS 5/16-105.17(d)(3).

1 **Q: How does Illinois law regarding integrated grid planning align with restorative**
2 **justice?**

3 A: Restorative justice, which focuses on responding to harm caused by the energy system and
4 identifying systemic changes that will prevent future harm is instantiated in Illinois law
5 through the links it establishes between MYIGP and addressing environmental justice.
6 Specifically, Illinois law recognizes that “in the absence of a transparent, meaningful
7 distribution system planning process, utility investments may not always serve customers’
8 best interests, appropriately promote the expansion of clean distributed energy resources,
9 and advance equity and environmental justice.”⁵¹ Through its layered adoption of
10 recognitional, procedural, and distributional justice tenets, Illinois law regarding MYIGP
11 provides a robust framework for addressing restorative justice through targeted
12 investments that create benefits and pathways for empowerment for historically
13 marginalized groups.

14 **IV. THE COMPANY’S PROPOSED GRID PLAN REFLECTS PRINCIPLES OF ENERGY JUSTICE**

15 **Q: Please summarize the purpose of this section.**

16 A: In this section, I provide my assessment of the Company’s proposed multi-year integrated
17 grid plan through the lens of Energy Justice. I analyze the key elements of the proposed
18 plan through the lens of recognitional, procedural, distributive, and restorative justice.

19 **Q: How does the Company’s proposed grid plan align with recognition justice?**

20 A: The Company’s proposed grid plan recognizes that “communities of color and low-
21 income families pay a significantly higher share of their income in energy costs” and that

⁵¹ Section 220 ILCS 5/16-105.17(a)(5).

1 “high levels of energy burden can impact physical and mental health, education,
2 nutrition, job performance, and community development.”⁵² The Company’s proposed
3 plan also summarizes its analysis of Equity Investment Eligible Communities (EIECs) in
4 its service area, finding that 255,500 of its customers live in EIECs.⁵³

5 **Q: How does the Company’s proposed grid plan align with procedural justice?**

6 A: CEJA’s requirement for the Commission to convene third-party facilitated workshops
7 were an important first step to invite a range of stakeholder views to be considered in
8 integrated grid planning. I reviewed the public summary of the 15 stakeholder
9 workshops⁵⁴ and appreciated the level of engagement invited among stakeholders,
10 particularly around issues of equity. In reflecting on the stakeholder process, I agree with
11 the Company’s acknowledgement that “the stakeholder engagement process...must be an
12 ongoing effort to be effective,” and is “especially important for EIECs.”⁵⁵

13 **Q: How does the Company’s proposed grid plan align with distributional justice?**

14 A: The Company’s proposed grid plan and accompanying testimony outlines a diverse array
15 of actions that can address distributional equity, both ongoing and newly proposed.⁵⁶ My
16 assessment of these actions is that they represent a comprehensive portfolio of
17 approaches to addressing distributional equity. However, it is not possible to assess the
18 extent to which these actions will be broadly and deeply implemented in ways that can
19 address the large existing disparities among the Company’s customers. I concur with the

⁵² Ameren Exhibit 2.1GP at 243.

⁵³ *Id.*

⁵⁴ EnerNex, *Multi-Year Integrated Grid Plan Workshop Facilitator’s Report* (Jul. 1, 2022).

⁵⁵ Ameren Exhibit 2.1GP at 37.

⁵⁶ Ameren Exhibit 2.1GP at 245-253.

1 Company that some of the benefits of the grid plan depend on “actions and decisions by
2 third parties such as solar developers, private businesses, municipal officials, or a result
3 of State and/or federal government policy.”⁵⁷ However, this should not preclude an initial
4 assessment of the distribution of benefits from the array of actions the Company is taking
5 and proposing.

6 As explained in detail by JNGO/EDF witness Pereira, the Company’s proposed
7 grid plan and accompanying testimony lacks clear detail on how progress toward
8 distributional justice will be measured and tracked over time and does not provide an initial
9 assessment of the share of benefits to EIECs. I endorse witness Pereira’s recommendation
10 to develop a transparent and accountable framework for evaluating the benefits of the
11 Company’s MYIGP.

12 While a full assessment of the benefits of a grid plan would be complex, this should
13 not preclude at least an initial assessment. An initial assessment is particularly important
14 given the Commission’s initiating order that “each utility’s Plan must propose distribution
15 system investment programs, policies, and plans designed to optimize achievement of the
16 objectives of Section 16-105.17 and achieve the performance and tracking metrics to be
17 approved by the Commission in Docket No. 22-0067 [22-0063], in the case of Ameren.”⁵⁸

18 As one of the objectives of Section 16-105.17 specifies a quantifiable objective of “at least
19 40% of the benefits” to EIECs, I do not believe that an evaluation of whether the
20 Company’s proposed plan is optimized to achieve this objective would be possible without
21 at least an initial assessment of the share of benefits to EIECs. And as JNGO/EDF witness

⁵⁷ Ameren Exhibit 2.1GP at 38.

⁵⁸ ICC, *Order Requiring Filing of Initial Multi-Year Integrated Grid Plan and Initiative Proceeding* (Jul. 21, 2022).

1 Pereira demonstrates, there is a robust record of frameworks from other states and the
2 federal government that can be adopted by the ICC to guide such an initial assessment.

3 **Q: How does the Company’s proposed grid plan align with restorative justice?**

4 A: My assessment is that it is too early to determine how the Company’s proposed grid plan
5 aligns with the principle of restorative justice. Addressing restorative justice will depend
6 on how the plan is implemented, and whether the MYIGP enables systemic changes that
7 are of a proportionate scale to the historic harms caused by inequitable infrastructure
8 planning over many decades.

9 **V. THE ILLINOIS COMMERCE COMMISSION CAN SUPPORT IMPLEMENTATION OF GRID**
10 **PLANNING TO ADVANCE ENERGY JUSTICE**

11 **Q: Please summarize the purpose of this section.**

12 A: In this section, I offer support and expand on JNGO/EDF witness Pereira’s
13 recommendations that the ICC establish a framework for transparency and accountability
14 in this proceeding based on the principles of Energy Justice to evaluate progress in
15 implementing the Company’s grid plan.

16 **Q: Why is a framework to quantify and evaluate benefits important to advance the goals**
17 **of Energy Justice?**

18 A: In passing CEJA into law, the Illinois General Assembly’s findings of fact suggest that “it
19 would be beneficial to require utilities to demonstrate how their spending promotes
20 identified State clean energy goals, such as integrating renewable energy, empowering
21 customers to make informed choices, supporting electric vehicles, beneficial

1 electrification, and energy storage, achieving equity goals, enhancing resilience, and
2 maintaining reliability.”⁵⁹

3 I concur with the notion that it is in the public interest for utilities to demonstrate
4 how their spending aligns with state goals, including equity goals. Importantly, to provide
5 a publicly accountable “demonstration” of how spending aligns with goals, it is critical that
6 a transparent and inclusive framework is developed. While the Commission has taken up
7 this process generally through the development of performance metrics, the statute
8 underlying the Multi-Year Integrated Grid Plan establishes a specific set of requirements⁶⁰
9 that warrant a specific framework for “demonstration” of alignment with state goals.
10 Particularly relevant for Energy Justice is the guiding objective that multi-year grid plans
11 “support efforts to bring the benefits of grid modernization and clean energy, including,
12 but not limited to, deployment of distributed energy resources, to all retail customers, and
13 support efforts to bring at least 40% of the benefits of those benefits to Equity Investment
14 Eligible Communities.”⁶¹

15 The need for a specific framework regarding equity goals was reaffirmed during
16 the stakeholder process on the Multi-Year Integrated Grid Plans. According to EnerNex,
17 the independent facilitator of the stakeholder process, “Stakeholders and Utilities have a
18 broad set of ideas and positions regarding benefits, including which benefits to take into
19 account and how to value them. There was also an acknowledgement that this objective is
20 difficult to define due to the variety of benefits that can be attributed to grid modernization

⁵⁹ Section 220 ILCS 5/16-105.17(a)(8).

⁶⁰ Section 220 ILCS 5/16-105.17(d).

⁶¹ Section 220 ILCS 5/16-105.17(d)(3).

1 and clean energy.”⁶² In summarizing the discussion of quantifying and tracking benefits,
2 EnerNex found that “best practices for the allocation of benefits to disadvantaged
3 communities are still being determined without a clear, mature, example to follow in
4 Illinois.” And to address this, EnerNex recommended that “The Commission should issue
5 guidance on how utilities should consider distributional equity analysis (DEA) within the
6 MYIGP process, in accordance with the law, and outline the plan for refining the BCA
7 [benefit cost analysis]/DEA evaluation process in future cycles.”⁶³

8 **Q: Should the Company propose a framework to quantify the distribution of benefits of**
9 **its grid plan?**

10 A: Yes. There are many established examples that could be followed in Illinois to analyze
11 distributional equity. JNGO/EDF witness Pereira provides several examples of
12 distributional equity analysis at the federal and state levels. Dr. Pereira recommends that
13 the Company establish a framework for transparency and accountability in this proceeding
14 to demonstrate alignment with the equity goals established in statute that at least 40% of
15 the benefits of its proposed grid plan go to Equity Investment Eligible Communities.

16 **Q: Will the Company’s initial assessment of the distribution of benefits of its grid plan**
17 **be complete?**

18 A: No. Evaluating benefits will require iterative improvement over time. But it is critical to
19 have a baseline assessment that stakeholders can react to and to provide accountability and
20 transparency. I support JNGO witness Kenworthy’s recommendation that assessments of
21 equity should cover multiple dimensions of utility performance (*e.g.* power quality,

⁶² EnerNex, *Multi-Year Integrated Grid Plan Workshop Facilitator’s Report* (Jul. 1, 2022) at 9.

⁶³ EnerNex, *Multi-Year Integrated Grid Plan Workshop Facilitator’s Report* (Jul. 1, 2022) at 25.

1 customer service, affordability, safety, hosting capacity) and assess grid equity at a
2 sufficiently detailed level of geographic granularity, such as the census block group level.

3 Incorporating Energy Justice principles is not a one-time decision confined to a
4 single proceeding; it is a continual process of adaptive change management, a process that
5 will unfold over multiple dockets, actions outside of the Commission, and over many years.
6 The Commission should take action in this case to establish a clear interpretation of how
7 its authority established under CEJA aligns with Energy Justice principles. And the
8 Commission should also set a course through this proceeding and others to increase data
9 availability and other supportive actions that can advance Energy Justice and build capacity
10 for future decisions.

11 **VI. CONCLUSION**

12 **Q: What should the Commission do in this case?**

13 A: My recommendations reaffirm and bolster the recommendations of JNGO/EDF witnesses
14 Nock and Pereira and JNGO witness Kenworthy. I recommend that the Commission should
15 direct Ameren to:

- 16 • Provide an initial assessment of the distribution of benefits from its proposed grid
17 plan, including to EIECs, building on the examples of distributional equity
18 assessment provided by JNGO/EDF witness Pereira;
- 19 • Develop a plan to iteratively improve on the granularity of its assessment of the
20 benefits of integrated grid planning over time, including through the usage of more
21 fine customer data, as recommended by JNGO/EDF witness Nock.

- 1 • Develop a plan for a broader evaluation of equity across multiple dimensions of
2 utility performance (e.g. power quality, customer service, affordability, safety,
3 hosting capacity) at a sufficiently detailed level of geographic granularity, such as
4 the census block group level, as recommended by JNGO witness Kenworthy.

5 **Q: Does this conclude your testimony?**

6 **A: Yes.**