



## CITY COUNCIL Study Session

August 26, 2024

6:00 PM, Council Chambers - 111 E. Maple Ave.

To view a Council meeting agenda, visit <https://independencemo.portal.civicclerk.com/> and select 'Most Recent Council Agenda'.

### PRESENTATIONS

1. IPL Study

### INFORMATION ONLY

1. Boards and Commissions Report
2. ***Please Note:*** In accordance with RSMo. 610.021, the City Council may convene in an Executive Session during or after the meeting, in the Council Chambers and move to Conference Room D for the closed meeting, on matters of litigation, legal action, and/or attorney client communications, as permitted by Sec. 610.021(1), on matters of personnel, as permitted by Sec. 610.021(3) and personnel records, as permitted by 610.021(13), on matters of contracts, as permitted by 610.021(12), on matters of real estate, as permitted by 610.021(2) and/or matters of labor negotiations, as permitted by 610.021(9).



**Independence Power and Light Cost Benefit Analysis**

**Purchase Order: 24000832**

**Prepared for:**

**City of Independence, Missouri**

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August 6, 2024

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## **Executive Summary**

DKMT Consulting LLC was engaged to provide an independent analysis of the costs incurred and the benefits received from the City of Independence's ownership of Independence Power and Light. The purpose of this analysis is to inform decision-makers and stakeholders in their evaluation of alternative ownership options and governance models for IPL. This cost-benefit analysis discusses both qualitative and quantitative issues impacting the benefits of owning a municipal electric utility and the costs of operating and maintaining one. This cost-benefit analysis was performed independently of a parallel strategic planning effort assessing various scenarios to optimize the performance of IPL for the benefit of the City of Independence and its citizens. Our team performed a high-level visual inspection of IPL's transmission and distribution systems and found them to be well-maintained and robustly designed.

Multiple methods exist for valuing an electric system, including an income approach, original cost less depreciation, and value per customer. Readers are cautioned that the value shown does not represent a "sale price" for IPL. Based on estimated book values and a recent market transaction for similar assets, we approximate the value of IPL assets to be \$668 million.

There is currently \$267 million in outstanding principal on bonds tied to revenues from or assets tied to the electric distribution system. Debt service payments on this outstanding principal total \$402 million through 2049. The City of Independence holds all this debt in its name and would require the permission of the bondholders prior to divesting the electric distribution system. The Omaha Public Power District, the Missouri Joint Municipal Electric Utility Commission, and the Missouri Development Finance Board are the bondholders the City of Independence would need to grant permission for divestiture or change in governance of IPL.

We reviewed all the outstanding obligations relating to IPL's ownership of generation assets to determine whether current revenues support its associated debt and long-term obligation servicing needs. In addition to IPL's operating, capital, and PILOT expenditures, the City has long-term obligations to pay its share of operations, maintenance, and fuel costs for power purchase agreements with OPPD for Nebraska City 2 and the Missouri Electric Commission for IATAN 2. As a result of its 12.3% ownership, it has these same obligations for the Dogwood Energy Center.

Additionally, the City has long-term power or capacity purchase agreements with Smokey Hills and Marshall Wind farms, MCP-Independence Solar, and Oneta.

After comparing the net present value of existing long term obligations with the net present value of IPL's annual average revenue over the term of the obligations, we found a modest surplus of \$6,400,649<sup>1</sup>.

As a utility that is supposed to operate at breakeven, this surplus is less than 0.2% of total obligations and shows IPL is not running large long-term deficits or collecting excessive revenues. It also shows that the City of Independence is meeting its Charter obligation, which states:

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<sup>1</sup> NPV calculated applying a 3% discount rate through 2049.

**Section 3.17 of the City Charter:**

*“The electric utility shall not be operated for the benefit of other municipal functions, and shall not be used directly or indirectly as a general revenue producing agency for the City” ...” After providing for depreciation accruals and amortization of bonds, and for reasonable accumulation of surplus, the electric utility shall apply all annual profits to rate reductions.”*

However, this high-level analysis does not make any assumptions about inflation or examine its effects. For this *status quo* condition to remain stable, IPL will require annual rate increases that match the annual electric utility industry inflation rate.

IPL has sufficient electrical capacity to meet today’s needs. However, to accommodate economic growth within the City and meet changing Southwest Power Pool (SPP) requirements, IPL needs to acquire additional electrical capacity in an increasingly competitive marketplace. Numerous studies dating back to the mid-2010s have identified this need, and the City responded through its 10-year contract with Oneta for 45 MW of firm capacity with an option for more capacity if desired. This need was also the catalyst for the proposed repowering of the Blue Valley site with pre-owned aero-derivative turbines.

The City Charter does not mention investing in the electric system to support the City's economic growth. The language “*for reasonable accumulation of surplus*” is open to interpretation and has been a point of contention that may account for deferring investments to support economic development.

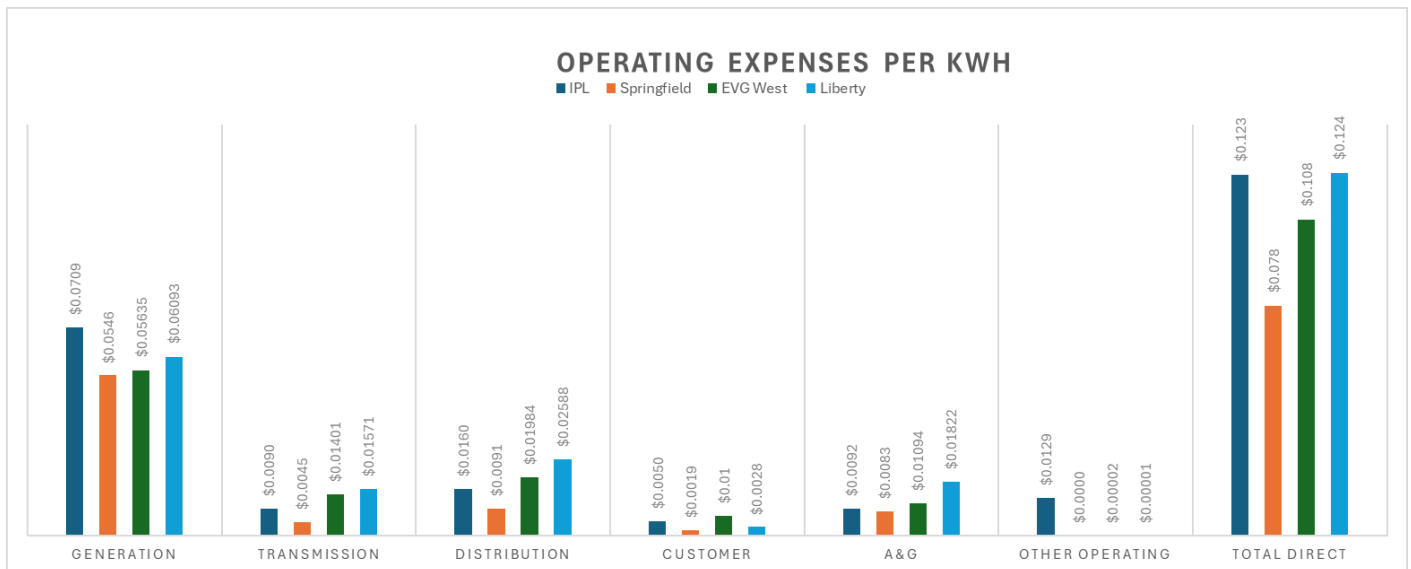
As described in further detail in the body of this report, DKMT believes the most significant risk the City faces is an early closure of Nebraska City 2 or IATAN 2 due to non-competitive economics. This risk is increased as proposed environmental regulations to constrain carbon emissions may require extensive capital investment by the end of this decade. Should this risk materialize, the City will find itself paying off debt on a prematurely retired coal-fired power plant while simultaneously searching for replacement capacity in an increasingly tight capacity market. This risk is not confined to IPL but affects all members of SPP.

Municipal utilities are typically more agile than regulated investor-owned utilities, and they should benefit from tax-free financing, quicker decision-making, and the ability to provide additional services to their communities. They can also more easily partner with other municipalities or private firms to finance energy projects. The recently enacted Inflation Reduction Act opened the opportunity for local governments to monetize tax credits from clean energy projects and receive the value of the tax credits as direct payments. Similarly, the Department of Energy’s Loan Program has numerous programs open to municipal governments to help finance energy projects with the benefit of federal loan guarantees.

IPL charges more for electricity than most other electric utilities in Missouri. Using a standard comparative measure of total sales revenue divided by kilowatt hours (kWh), we calculated IPL's 2023 revenue at 14.1 cents/kWh across all customer groups. The table below compares IPL with three other local utilities.

| Year | Electric Utility     | Revenues/kWh <sup>2</sup> |
|------|----------------------|---------------------------|
| 2023 | IPL                  | \$ 0.1410                 |
| 2022 | Springfield          | \$ 0.1052                 |
| 2022 | Evergy Missouri West | \$ 0.1080                 |
| 2022 | Liberty              | \$ 0.1316                 |

**IPL is an efficient utility.** When direct operational costs are compared across these same utilities, IPL has lower costs per kilowatt-hour (kWh) in several categories. The notable exception is generation costs. One reason for the higher generation costs is the debt service payments for Nebraska City 2 and IATAN 2, which are included in purchased power costs. In the case of IATAN 2, this accounts for approximately 50% of the generation cost.



To determine how IPL revenue dollars are allocated, we separated debt service into interest and principal payments for all outstanding debt. We then allocated IPL revenue across major cost centers. When one compares the 4.09 cents/kWh for purchased power with the 7.09 cents/kWh shown in the above graphic, the impact of debt service costs is evident.

<sup>2</sup> IPL calculation uses FERC revenue shown in 2023 AFCR Table 20 and kWh in Exhibit 44

| Category <sup>3</sup>                   | Cents | Percentage of Total |
|-----------------------------------------|-------|---------------------|
| Total Purchased Power Cost <sup>4</sup> | 4.09  | 28.986%             |
| Distribution O&M                        | 1.72  | 12.186%             |
| PILOT                                   | 1.60  | 11.359%             |
| Total Interest on Bonds                 | 1.45  | 10.257%             |
| Capital Investment                      | 0.99  | 7.013%              |
| Total Principal on Bonds                | 0.98  | 6.951%              |
| Total Transmission O&M                  | 0.97  | 6.878%              |
| G & A                                   | 0.94  | 6.673%              |
| CT O&M                                  | 0.72  | 5.082%              |
| Customer Service                        | 0.53  | 3.785%              |
| Payroll Taxes                           | 0.12  | 0.829%              |
| Total                                   | 14.1  | 100.000%            |

For each IPL electric rate class, we estimated the materiality of a one-cent reduction in the cost of energy on a customer's bill. The table below shows the gross annual savings a customer might see if IPL were able to reduce the cost of energy by one cent per kilowatt-hour.

| Customer Class                                 | Number of Customers | Revenue              | Total KWH          | Rate Cents/KWh | Gross savings for one cent decrease in | Estimated Annual Savings for a one cent drop in energy costs per |
|------------------------------------------------|---------------------|----------------------|--------------------|----------------|----------------------------------------|------------------------------------------------------------------|
| City traffic signals                           | 63                  | \$87,368             | 217,687            | 0.4013         | \$2,177                                | \$35                                                             |
| Private security lighting                      | 1,740               | 407,257              | 1,131,532          | 0.3599         | 11,315                                 | \$7                                                              |
| Small general services                         | 2,928               | 4,728,962            | 26,141,990         | 0.1809         | 261,420                                | \$89                                                             |
| Schools, churches, and hospitals, all electric | 2                   | 4,793                | 30,954             | 0.1548         | 310                                    | \$155                                                            |
| Residential                                    | 53,603              | 79,210,982           | 536,615,127        | 0.1476         | 5,366,151                              | \$100                                                            |
| Schools, churches, and hospitals               | 201                 | 1,317,583            | 9,184,034          | 0.1435         | 91,840                                 | \$457                                                            |
| Large general services                         | 1,612               | 36,167,893           | 266,306,331        | 0.1358         | 2,663,063                              | \$1,652                                                          |
| Sewer pumping                                  | 7                   | 71,597               | 543,314            | 0.1318         | 5,433                                  | \$776                                                            |
| Education                                      | 70                  | 3,601,343            | 28,003,082         | 0.1286         | 280,031                                | \$4,000                                                          |
| Large general services – prime voltage         | 8                   | 1,484,177            | 12,236,745         | 0.1213         | 122,367                                | \$15,296                                                         |
| Total electric general services                | 116                 | 5,200,956            | 46,863,521         | 0.1110         | 468,635                                | \$4,040                                                          |
| Large power services                           | 3                   | 2,304,097            | 21,173,640         | 0.1088         | 211,736                                | \$70,579                                                         |
| Education, all electric                        | 8                   | 427,984              | 4,131,200          | 0.1036         | 41,312                                 | \$5,164                                                          |
| Combined interruptible services                | 2                   | 2,866,426            | 30,574,600         | 0.0938         | 305,746                                | \$152,873                                                        |
| Municipal - City (Buildings)                   | 105                 | 1,097,204            | 12,622,903         | 0.0869         | 126,229                                | \$1,202                                                          |
| General services – space heating               | 31                  | 72,227               | 866,956            | 0.0833         | 8,670                                  | \$280                                                            |
| <b>Totals</b>                                  | <b>60,499</b>       | <b>\$139,050,849</b> | <b>996,643,616</b> |                | <b>\$9,966,436</b>                     |                                                                  |

<sup>3</sup> 2023 AFCR Data for cash based accounts

<sup>4</sup> DKMT moved interest and principal payments to respective categories.

IPL currently employs 157 people and accounts for 40% of the City's revenue<sup>5</sup>. The average annual payroll for IPL is approximately \$17 million, the majority of which is assumed to be spent locally. The impact of alternative IPL ownership on local spending is unknown.

IPL is a very reliable electric utility compared to its peers. The report's body provides a more detailed discussion of reliability. The impact of alternative ownership on the electric service quality within the City of Independence is unknown.

It is common for municipalities to compare the salaries of their electric utility workers with other city job classifications. While each municipality is unique, it is important to point out that there is a national shortage of electric utility line workers. Almost all electric utilities are looking to hire lineworkers. The reasons for this shortage are beyond the scope of this analysis. Still, the fact remains that the transformation of the electric utility sector is intensifying competition for skilled electric industry personnel. The table below shows the starting compensation levels for lineworkers near Independence, MO<sup>6</sup>.

| Position             | Company                          | State              | Compensation      |
|----------------------|----------------------------------|--------------------|-------------------|
| Lineman - Journeyman | Evergy                           | Missouri           | \$53/hr           |
| Lineman -Journeyman  | Evergy                           | Kansas             | \$49/hr           |
| Lineman -Journeyman  | Missouri Public Utility Alliance | Columbia, Missouri | \$99,000 per year |

We estimate that other city departments would have to absorb approximately \$5 million in annual contributions and services IPL currently provides to the City. The City estimates that there is a \$38 million liability associated with healthcare for IPL employees that would have to be satisfied prior to transferring system ownership and a \$7 million liability associated with LAGERS funding for IPL employees that would need to be satisfied prior to a change in ownership.

There is also a \$25-50 million environmental liability associated with the cost to remediate the Blue Valley site, depending on the level of remediation required. The status of this liability is undetermined for an alternative ownership scenario.

In summary, *status quo* operations at IPL are not creating surplus funds or long-term deficits. However, for stable conditions to continue, the utility would need annual rate increases matching the annual electric utility industry inflation rate. Additionally, there is an urgent need for additional generation capacity to accommodate economic growth, changing SPP requirements, and as a hedge against early coal plant closures.

IPL provides a highly reliable level of service and is cost-efficient compared to other local utilities, apart from generation. IPL's generation costs are higher than those of its peers, primarily due to debt service payments and the structure of the City's debt.

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<sup>5</sup> AFCR page 18

<sup>6</sup> Glassdoor 4 June 2024



## **Introduction**

DKMT Consulting LLC was engaged to provide an independent analysis of the costs incurred and the benefits received from the City of Independence's ownership of Independence Power and Light. The purpose of this analysis is to inform decision-makers and stakeholders in their evaluation of alternative ownership options and governance models for IPL. This cost-benefit analysis was performed independently of a parallel strategic planning effort assessing various scenarios to optimize the performance of IPL for the benefit of the City of Independence and its citizens.

This cost-benefit discusses both qualitative and quantitative issues impacting the benefits associated with owning a municipal electric utility and the costs associated with operating and maintaining one. Decisions made as long as two decades ago, when the electric utility industry was much different than it is today, impact the flexibility the City of Independence has in evaluating its options.

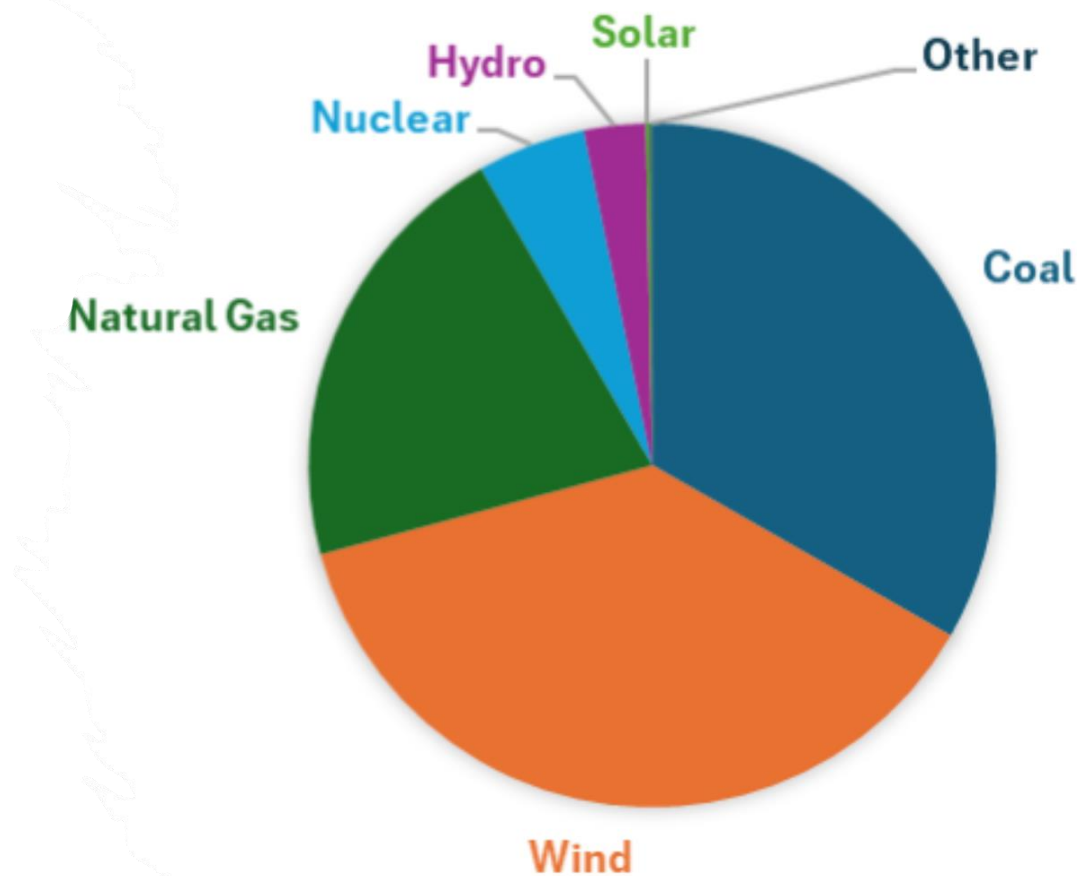
For example, the City must receive the consent of the Omaha Public Power District (OPPD), the Missouri Joint Municipal Electric Utility Commission (MJMEUC or MEC), and the Missouri Development Finance Board (MDFB) before changing IPL's ownership structure. This is because various bonds are tied to the revenues from the electric distribution system or tied to specific assets within the electric system. The tax-exempt nature of these bonds requires that they be paid off or that another tax-exempt entity assumes them, subject to the approval of the aforementioned organizations. The outstanding principal on IPL-related bonds in 2024 is approximately \$267 million. Debt service payments through 2049 total \$402 million.

Independence Power and Light (IPL) has served the City of Independence (the City) well since 1901. IPL has approximately 57,000 customers. In terms of customer numbers and revenues, IPL is one of the 100 largest municipal electric utilities in the country and is the second largest municipally owned electric utility in Missouri.

## **SPP Marketplace Characteristics**

IPL is a member of the Southwest Power Pool (SPP) and owns a transmission system consisting of one 161 kV switching station, three 161/69 kV substations, 25 miles of 161 kV transmission lines, and 51 miles of 69 kV transmission lines. Membership in the SPP imposes obligations on IPL and the City regarding the maintenance of adequate financial reserves and of cybersecurity standards, meeting personnel training requirements, adhering to FERC accounting standards, and maintaining sufficient generating capacity to meet its electrical demand and reserve margin obligations. Benefits associated with SPP membership include the ability to purchase wholesale energy at the lowest possible cost and earn revenue through energy sales and ancillary services offered in the wholesale energy market. Wind is the dominant energy production source in SPP and sets a very low price for wholesale energy.

## SPP ENERGY PRODUCTION 2022



Through its transmission ownership, IPL has generated an average annual revenue of approximately \$5.2 million in transmission congestion fees for the past five years (2019-2023)<sup>7</sup>. Transmission congestion fees account for differences in the transmission capacity between loads and generators. Under an alternative ownership scenario, the City of Independence would forfeit the PILOT fees it is currently collecting on this revenue.

The market design for the SPP ensures that generation plants that follow SPP dispatch instructions do not incur a financial loss for doing so. Put another way, SPP market prices cover the marginal costs of a generator to produce more energy to meet additional demand. SPP prices do not cover all costs of generation; only the marginal cost of producing the next kilowatt-hour as needed to meet market demand.

Generators that produce energy at a lower marginal cost are called upon more often than generators that produce energy at a higher marginal cost. The generator that is dispatched last to meet market needs is operating at breakeven, while more efficient generators have an opportunity to make money on the difference between their marginal cost and the last dispatched generator's

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<sup>7</sup> IPL supplied data.

marginal cost. It is essential to understand this fundamental market dynamic to evaluate the costs and benefits of owning electrical generation in the SPP marketplace.

The proliferation of low cost wind power in SPP has diminished the opportunities for thermal (gas, coal, oil) generators to participate in the wholesale energy marketplace.

While SPP does not have a capacity (MW) market, it does have a resource adequacy requirement for load-serving entities such as IPL. The only way to meet the capacity requirement is either to own a generating plant or to enter into a bilateral capacity contract with another power plant owner. IPL meets its SPP capacity obligations through its ownership of six General Electric (GE) Frame 5 combustion turbine generators (CTGs) and 12.3% of the Dogwood Energy Facility; through its participation agreements with Nebraska City and IATAN 2; and the capacity merit attributed to its Oneta and wind contracts. The table below shows the breakout of IPL's accredited capacity.

| <u>Generating Unit Characteristics</u>                   |                      |                  |                  |
|----------------------------------------------------------|----------------------|------------------|------------------|
| <u>City Owned and Operated Units</u>                     | Accredited Net       | Year of Initial  | <u>Fuel Type</u> |
| <u>Substation Generations – Combustion Turbine Units</u> | <u>Capacity (MW)</u> | <u>Operation</u> |                  |
| J-1 (Substation J)                                       | 12.3                 | 1968             | Oil              |
| J-2 (Substation J)                                       | 13.3                 | 1968             | Oil              |
| 1-3 (Substation I)                                       | 17.2                 | 1972             | Oil              |
| 1-4 (Substation I)                                       | 15.8                 | 1972             | Oil              |
| H- 5 (Substation H)                                      | 17.5                 | 1972             | Gas/Oil          |
| H-6 (Substation H)                                       | 17.7                 | 1974             | Gas/Oil          |
| Total IPL System (City Owned)                            | 93.8                 |                  |                  |
|                                                          |                      |                  |                  |
| <u>Jointly Owned Units</u>                               |                      |                  |                  |
| Dogwood Energy Facility                                  | 80.1                 | 2001             | Gas              |
|                                                          |                      |                  |                  |
| <u>Contracted Resources</u>                              |                      |                  |                  |
| OPPD – Nebraska City Unit No. 2                          | 57.6                 | 2009             | Coal             |
| MEC – Iatan Unit No. 2                                   | 53.0                 | 2010             | Coal             |
| Marshall Wind Farm                                       | 3.5                  | 2016             | Wind             |
| Smoky Hills Wind Farm Phase 2                            | 3.2                  | 2008             | Wind             |
| MCP – Independence                                       | n/a                  | 2017             | Solar            |
| MCP – Independence II                                    | n/a                  | 2018             | Solar            |
| Oneta LLC                                                | 45.0                 | 2002             | Gas              |
| Total Contracted Resources                               | 162.3                |                  |                  |
|                                                          |                      |                  |                  |
| <b>Total Accredited Capacity</b>                         | <b>336.2</b>         |                  |                  |

IPL's capacity obligation is required to meet its total peak load plus a 16% reserve margin<sup>8</sup>. It currently meets this requirement and has an additional 7.87% capacity buffer. Should a new investment within the City of Independence raise its electrical demand by more than 15.4 MW, IPL would be forced to find a counterparty and enter into a contract for additional capacity at prevailing market pricing. Sufficiency of electrical capacity can be directly linked to the City's economic

<sup>8</sup> Currently 15% requirement increasing to 16% in 2026.

development opportunities. As uneconomic thermal generation plants are retired within the SPP footprint, contracting for additional capacity will become more expensive, and it will also be harder to find available resources. Capacity requirements also limit IPL's flexibility to unilaterally retire generating units without building a new unit or contracting for additional capacity. This is an industry wide issue not just confined to IPL.

| Year | Category                             | MW             |
|------|--------------------------------------|----------------|
| 2022 | City of Independence Peak Demand     | 267            |
|      | SPP Reserve Requirement <sup>9</sup> | 1.16           |
|      | Required Capacity                    | 309.72         |
|      | <b>IPL Capacity Margin</b>           | <b>107.87%</b> |

## Generation Assets

### Dogwood

Generation assets owned by the City of Independence include a 12.3% share of the Dogwood Generating Facility, a 643 MW combined cycle plant located in Pleasant Hill, Missouri. The City purchased its share of the plant for \$47,736,000 in 2012 (~\$596/KW). Bonds related to Dogwood and a 2012 infrastructure bond issue were combined and refinanced in 2022. There is currently \$69,415,000 in outstanding principal remaining on the bonds. Revenue from the electric system is pledged to the repayment of these revenue bonds. Dogwood provides 23.8% of IPL's resource adequacy requirement.

### Dogwood Operations<sup>10</sup>

| Year | Capacity Factor | Busbar Cost |
|------|-----------------|-------------|
| 2023 | 44.4%           | \$40.37     |
| 2022 | 31.4%           | \$81.98     |
| 2021 | 31.2%           | \$82.45     |
| 2020 | 37.7%           | \$41.23     |

Evergy Missouri West recently acquired a 22.2% interest (148MW) in the Dogwood plant for \$60,775,000 (~\$411/KW). In its docketed testimony, it stated the acquisition of Dogwood will provide the Company's customers with steel-in-the-ground capacity and displace a portion of the Company's capacity and energy needs that are served by the wholesale market, mitigating wholesale market risk and SPP resource adequacy requirements.

In general, contracted capacity agreements, such as IPL's agreement with Oneta, are considered to have more risk than a physical plant because they have shorter terms and exposure to price

<sup>9</sup> 16% is planned for 2026. 15% is current requirement.

<sup>10</sup> MEC Annual Performance Reports

volatility and competition for renewal. IPL is currently observing price volatility in the marketplace as it looks for additional capacity.

#### GE Frame 5 Combustion Turbine Generators

IPL has six combustion turbine generators (CTGs) located in pairs at its substations, the combined capacity of which meets 27.9% of IPL's resource adequacy requirement.

| Unit                | Fuel                     | Capacity (MW) |
|---------------------|--------------------------|---------------|
| Substation J Unit 1 | Fuel Oil                 | 13            |
| Substation J Unit 2 | Fuel Oil                 | 12            |
| Substation I Unit 3 | Fuel Oil                 | 17            |
| Substation I Unit 4 | Fuel Oil                 | 16            |
| Substation H Unit 5 | Fuel Oil and Natural Gas | 17            |
| Substation H Unit 6 | Fuel Oil and Natural Gas | 18            |

When SPP calls upon the CTGs to run (be dispatched), IPL receives full cost recovery for its marginal costs. SPP covers all fuel costs and variable O&M costs to operate the combustion turbines. CTG fixed costs are recovered separately through retail rates and have averaged approximately \$500K over the past three years.

| IPL Combustion Turbine Fixed Costs |             |
|------------------------------------|-------------|
| Year                               | Actual Cost |
| 2022                               | \$582,246   |
| 2023                               | \$431,929   |
| 2024 (projected)                   | \$459,102   |

The combustion turbines (CTs) are debt-free and have proven to have significant economic merit during major storms and periods of grid instability. Over the past four years, they have returned an average of \$6,759,044 in SPP credits. During the February 2021 Winter Storm Uri, the CTs produced approximately \$12.3 million in revenue credits for IPL to use in offsetting power purchases. In January of this year, the CTs produced approximately \$375,000 in revenue credits to use in offsetting IPL power purchases during an arctic cold snap. Incidents such as these highlight the risk mitigation value of diverse-fueled physical assets compared to relying on contractual arrangements. Despite being 40 years old, the combustion turbines have been vastly underused compared to others of the same vintage. GE recommends life extension maintenance should occur when the CTs have reached 5,000 starts or 200,000 of accumulated fired hours<sup>11</sup>. Other inspections and maintenance occur at 1200 (HGP) and 2400 (MI) hours. While these inspections are expensive, the table below shows the years of successful operation in between these inspections.

<sup>11</sup> IPL 14 November H5 Turbine Repair presentation to City Council

Table 1 Years between Major Inspections

| Date       | Unit | S/N    | Inspection Type | Fired Starts 04/30/2024 | Fired Hours 04/30/2024 | Years since outage | Starts per year | Years between HGP | Years between MI |
|------------|------|--------|-----------------|-------------------------|------------------------|--------------------|-----------------|-------------------|------------------|
| 11/14/2011 | J-1  | 179344 | Major           | 1585                    | 4499                   | 12.5               | 22              | 55                | 110              |
| 1/30/2012  | J-2  | 17945  | Major           | 2895                    | 4108                   | 12.3               | 20              | 60                | 120.1            |
| 11/12/2012 | I-3  | 214425 | HGP             | 1546                    | 5389                   | 11.5               | 25              | 47.5              | 94.9             |
| 11/5/2012  | I-4  | 214426 | HGP             | 1074                    | 4609                   | 11.5               | 24              | 50.3              | 100.6            |
| 6/15/2023  | H-5  | 214427 | Major           | 3045                    | 24669                  | 0.9                | 209             | 5.7               | 11.5             |
| 3/5/2019   | H-6  | 226190 | Major           | 2914                    | 21241                  | 5.2                | 118             | 10.1              | 20.3             |

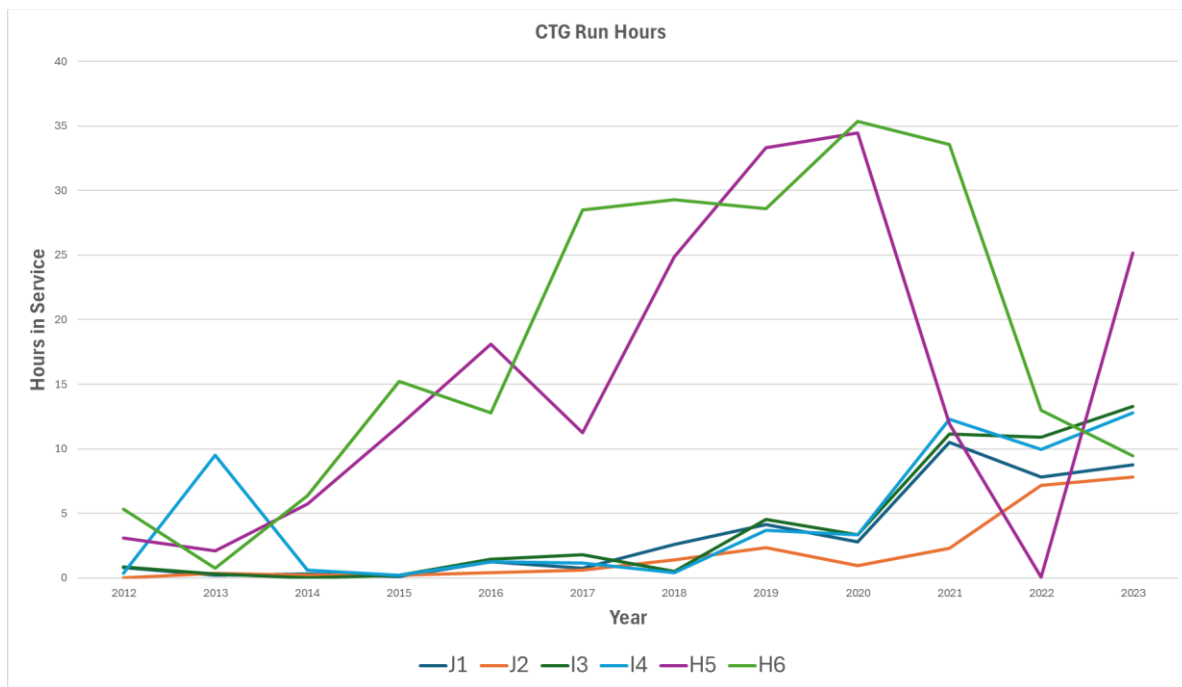


Figure 1 CT Service History

Additionally, as SPP's aggregate load increases and its transmission system becomes increasingly constrained, the CTs are being called upon to run more often, as shown above, and are becoming more valuable to the City of Independence. The biggest issue with the CTs is the availability of replacement parts.

## Power Participation Agreements

### IATAN 2

In June 2006, the City of Independence entered into a unit power purchase agreement with Missouri Joint Municipal Electric Utility Commission (MJMEUC). Under this agreement, the City purchased a 50% share (approximately 53 MW) of MJMEUC's 106 MW ownership share of the 875 MW IATAN 2 coal-fired generating unit located in Weston, Missouri.

MJMEUC issued tax-exempt bonds to pay for its share of the construction of the unit and the City of Independence is obligated to pay its share (50%) of the debt service on the bonds, the fixed

operation and maintenance costs, the variable operating costs including fuel, renewals and replacements of the unit and related administrative costs incurred by MJMEUC. The City of Independence may not engage in any transactions that compromise the tax-exempt nature of the bonds used to finance the MJMEUC portion of IATAN 2. This is important because only tax exempt entities may assume this debt, while a taxable entity may be required to pay off all debt and provide for future O&M contributions.

The unit began commercial operations on December 31, 2010. The term of the agreement is for the life of the plant. Per its agreement with MEC, the City “may not sell, lease, or otherwise dispose of all or substantially all of its electric system, nor may it assign all or any part of its entitlements or interests under its Unit Power Purchase Agreement, except upon the **approval of MEC**, such approval not to be unreasonably withheld or delayed”.

The City of Independence is required to make payments under the Unit Power Purchase Agreement whether or not Iatan Unit 2 is operating or operable or its output is suspended, interrupted, interfered with, reduced or curtailed or terminated in whole or in part.

The City of Independence portion of outstanding principal on the bonds related to IATAN 2 construction is \$86,502,500 through 2038. As currently structured, the debt service payments on this debt total \$118,906,860. IATAN 2 provides IPL with 15.8% (53 MW) of the capacity IPL requires to meet its resource adequacy requirements.

As alluded to in the SPP market description, the opportunity for coal-fired thermal generation to operate in the marketplace is being diminished by the increase in low-cost wind generation. This is one of the reasons for the annual decrease in IATAN 2’s capacity factor. Cheaper resources are displacing it from the marketplace. The capacity factor indicates the percentage of rated generation output the plant was able to produce. Busbar costs measure the plant’s cost to produce power and is one measure of a plant’s economic competitiveness.

#### **IATAN 2 Historic Capacity Factors and Busbar Costs**

| <b>Year</b> | <b>Capacity Factor</b> | <b>IPL Bus Bar Cost (\$/MWh)</b> |
|-------------|------------------------|----------------------------------|
| 2023        | 35.46% <sup>12</sup>   | \$114.72                         |
| 2022        | 53.31%                 | \$71.53                          |
| 2021        | 61.58%                 | \$60.60                          |
| 2020        | 64.05%                 | \$60.94                          |

For the City of Independence, this means that the plant will generate less revenue for debt repayment, and the City may need to increase its electric rates to help meet these debt obligations. Should the plant be retired before 2038, the same scenario plays out, with the unwelcome addition of a capacity shortfall and the need for IPL to contract for additional capacity in the marketplace. If the plant retires early, O&M and fuel costs will decrease substantially. IPL has averaged an annual payment of \$ 8.2 million for O&M, fuel, and administrative costs at IATAN 2 over the past five years. These cost reductions would partly mitigate the need for rate increases. However, there would be a

<sup>12</sup> Two forced outages and one prolonged scheduled outage in 2023, MEC 2024 Disclosure Report

slight shortfall, as debt service payments have averaged \$9.2 million over the past 5 years. There would also be a need to find 53 MW of replacement capacity.

Recently proposed EPA rules for CO<sub>2</sub> emissions from coal-fired power plants make the latter scenario very plausible. These proposed rules require coal plants operating beyond 2032 to substantially lower their carbon emissions.

#### Nebraska City 2 (NC2)

The NC2 unit is a 687-megawatt (MW) coal-fired generating station solely owned by OPPD. Similar to its agreement with MJMEUC, the City of Independence entered into a participation agreement with OPPD to construct the Nebraska City 2 power plant. Each Participation Agreement requires the Participant to pay its share of the costs of construction, financing, and operation of NC2, “and such payment is due regardless of whether NC2 achieved or maintains commercial operation”. The term of each Participation Agreement is 40 years following the commercial operation date of NC2 (May 2009), and a Participant may elect to renew its Participation Agreement after this initial term for additional periods up to the end of NC2’s operational life.

There are two outstanding bond issues for NC2: a 2015 series and a 2016 series. The City has a 32.65% share of the 2015A series debt and a 33.27% share of the 2016 debt. The City of Independence’s share of the total outstanding principal on NC2 bonds as of 2024 is \$63,835,378. Debt service on these bonds totals \$110,582,307 through 2049.

As with IATAN 2, the City pledged to charge and collect rates for electric power and energy to provide revenues sufficient to pay the cost of the following: operating expenses, 100% of aggregate debt service on all bonds the City issued to fund its NC2 participation agreements, and any other associated charges required to be paid out of revenues of the City’s electric system.

Low-cost wind generation is also impacting Nebraska City 2’s market participation, as can be seen by its decreasing annual capacity factors.

Nebraska City 2 Capacity Factor Trend

| Year | Capacity Factor |
|------|-----------------|
| 2023 | 50.7%           |
| 2022 | 61.8%           |
| 2021 | 63.9%           |
| 2020 | 61.2%           |
| 2019 | 62.0%           |
| 2018 | 80.7%           |
| 2017 | 71.9%           |

As with IATAN 2, this means that the plant will generate less revenue for debt repayment. Should the plant be retired before 2049, there will be a capacity shortfall and the need for IPL to contract for additional capacity in the marketplace. If the plant retired early, O&M and fuel costs should



decrease substantially. IPL has averaged an annual payment of \$ 11.7 million for O&M, fuel, and administrative costs at NC2 over the past five years. These cost reductions would mitigate the need for rate increases as debt service payments have averaged only \$4.5 million over the past five years. IPL could potentially save money once the cost of 58 MW replacement capacity is determined.

## **Capacity and Power Purchase Agreements**

### **Oneta**

In May 2019, the City of Independence executed a capacity purchase agreement with Oneta Power, LLC for 45 MW of capacity with the option to increase its contracted capacity by 25 MW within the first five years of the contract. The term of the agreement is 10 years. The Oneta Energy Center is a 1,127 MW natural gas-fired combined cycle facility in Coweta, OK. The capacity price increases by a set amount each year. The current annual cost of capacity is approximately \$1.3 million. Discussions with Oneta have confirmed that the price of capacity has almost doubled since the 2019 contract was signed.

### **Smokey Hills Wind**

In August 2008, the City of Independence executed a 20-year renewable energy purchase agreement with Smokey Hills Wind Project II, LLC for 15 MW. The project is in central Kansas. There are renewal options and the right to sell the City's share of the output to third parties. The non-dispatchable operational characteristics of wind power are the reason this contract is only accredited by SPP at 3.2 MW of capacity. The City pays approximately \$2 million annually for the energy from the project. The contract price is 4.5 cents per kWh.

### **Marshall Wind**

In May 2015, the City entered into a renewable energy purchase agreement with Marshall Wind Energy LLC for 20 MW. The project is located in north central Kansas. The agreement runs through 2036 with certain renewal options and the right to sell the energy to others. The City pays approximately \$2.4 million annually for the energy from this project. The project is accredited by SPP for 3.5 MW. The contract price is 3.38 cents per kWh.

### **MCP Independence Solar**

In November 2015 and July 2017, the City entered into renewable energy purchase agreements with MCP-Independence, LLC for solar power from a 3 MW farm and 8.5 MW expansion of that farm. The City is obligated to take all the energy produced by the solar farm for 25 years at a fixed price. The City pays approximately \$1.6 million annually for solar output.

The agreement expires in 2042 for the initial 3 MW and in 2043 for the 8.5 MW expansion. The City offers a community solar program for customers to subscribe to solar energy for a set fee of \$2.47 per solar unit (144 kWh). That portion of their energy bill is locked in for 15 years. 5.6 MW of the projects 11.5 MW capacity is subscribed. There are 203 residential and 96 commercial subscribers. The contract price is 8.15 cents per kWh.

### **Distribution System**

IPL's distribution system consists of approximately 564 circuit miles of 13 kV overhead lines and 233 circuit miles of 13 kV underground lines. Our team conducted a high-level visual inspection of the transmission and distribution system and found them to be well-maintained and robustly designed.

We estimate the replacement cost of the combined transmission and distribution system assets to be \$911,673,200. The Appendix provides a detailed breakdown of the system valuation.

| <b>SUMMARY</b>            |                       |
|---------------------------|-----------------------|
| Distribution System Total | \$ 656,275,177        |
| Transmission System Total | 255,398,023           |
| <b>GRAND TOTAL</b>        | <b>\$ 911,673,200</b> |

The Replacement Cost New (RCN) reflects today's cost to replicate the system in a greenfield environment. The review included making a best-effort attempt to assess the age of individual system components. Using this data, DKMT calculated a depreciation value for T&D equipment. Replacement Cost New Less Depreciation (RCNLD) can be used as an alternative for the current book value of the system. We calculated the RCNLD of IPL's T&D System to be \$520,348,836.

### **2016D Leasehold Revenue Bonds**

In 2016, the City issued \$47,180,000 of leasehold revenue bonds through the Missouri Development Finance Board. Since 2018, the city has made annual interest-only payments of \$1,789,994. The first principal payments will occur in 2038. The bonds established leaseholds on production, transmission, distribution, and general administration projects. Some of the equipment associated with the leaseholds has been retired. \$47,180,000 remains in outstanding principal.

## Value of IPL Assets

Multiple methods exist for valuing an electric system, including an income approach, original cost less depreciation, replacement cost new less depreciation and value per customer. All these methods will provide a different range of values. Readers are cautioned that the value shown below does not represent a “sale price” for IPL. Based on estimated book values and a recent market transaction for similar assets, we approximate the value of IPL assets as shown below.

| <b>Asset</b>                          | <b>Estimated Value</b> |
|---------------------------------------|------------------------|
| Transmission and Distribution System  | \$ 520,348,836         |
| Machinery and Equipment <sup>13</sup> | 10,287,633             |
| Dogwood Ownership <sup>14</sup>       | 32,505,579             |
| Combustion Turbines <sup>15</sup>     | 38,518,126             |
| General Plant and Other <sup>16</sup> | 11,442,452             |
| NC2 Contract <sup>17</sup>            | 23,652,922             |
| IATAN 2 Contract <sup>18</sup>        | 21,763,973             |
| Oneta Contract <sup>19</sup>          | 8,870,791              |
| Wind Contract Capacity Value          | 518,670                |
| Solar Capacity Value                  | 0                      |
| <b>Approximate Total Asset Value</b>  | <b>\$ 667,908,982</b>  |

There is currently \$266,932,878 in outstanding principal on bonds tied to revenues from or assets tied to the electric distribution system. Debt service payments on this outstanding principal total \$401,677,168 through 2049. The City of Independence holds all this debt in its name and would require the permission of the bondholders prior to divesting the electric distribution system. The Omaha Public Power District, the Missouri Joint Municipal Electric Utility Commission, and the Missouri Development Finance Board are the bondholders the City of Independence would need to grant permission for divestiture or change in governance of IPL.

We reviewed all of the outstanding obligations relating to IPL's ownership of generation assets to determine whether current revenues support its associated debt and long-term obligation servicing needs. In addition to IPL's operating, capital, and PILOT expenditures, the City has long-term obligations to pay its share of operations, maintenance, and fuel costs for power purchase agreements with OPPD for Nebraska City 2 and the Missouri Electric Commission for IATAN 2. As a result of its 12.3% ownership, it has these same obligations for the Dogwood Energy Center.

<sup>13</sup> Independence 2023 AFCR Notes to financial records page 61.

<sup>14</sup> Based on market value Evergy Missouri West paid for 22% of Dogwood in 2024

<sup>15</sup> Based on the value in SPP Capacity Market Evergy Missouri West paid for Dogwood

<sup>16</sup> City 2023 AFCR Records General Plan Depreciation Factor

<sup>17</sup> NC2 Capacity times market value set by Evergy Missouri Dogwood Transaction

<sup>18</sup> IATAN 2 Capacity times market value set by Evergy Missouri Dogwood Transaction

<sup>19</sup> Remaining Contract net present value. Assume the price of contracted capacity has doubled since the contract origination and applied a [3] % discount rate to the calculation of present values.

Additionally, the City has long-term power or capacity purchase agreements with Smokey Hills and Marshall Wind farms, MCP-Independence Solar, and Oneta. The resulting financial obligations for the tenure of current contracts are summarized below.

| Obligations                                                            | 2024 Net Present Value of Obligations <sup>20</sup> |
|------------------------------------------------------------------------|-----------------------------------------------------|
| Debt Service                                                           | \$301,353,781 <sup>21</sup>                         |
| O&M, Fuel, and other costs for NC2, IATAN 2, and Dogwood               | 433,129,116 <sup>22</sup>                           |
| PPA with Smokey Hills, Marshall Wind, MCP-Independence Solar and Oneta | 501,270,398 <sup>23</sup>                           |
| IPL Current Operating Expenses, including capital investment and PILOT | 1,232,676,592 <sup>24</sup>                         |
| <b>Total Obligations</b>                                               | <b>\$2,468,429,886</b>                              |

IPL currently has a 5-year annual average revenue of approximately \$138 million. The net present value of this revenue stream<sup>25</sup> is \$2,474,830,536 through 2049. The difference between the net present value of obligations versus revenue shows a modest NPV surplus of approximately \$6,400,649<sup>26</sup>.

As a utility that is supposed to operate at breakeven, this surplus is less than 0.2% of total obligations, which shows that IPL is not running large long-term deficits or collecting excessive revenues.

### Electric Reliability

Electric reliability, as discussed in this section, refers to the ability of the distribution system to consistently deliver electricity to consumers within accepted industry standards. Our discussion is limited to operational reliability, which ensures that the “lights stay on.” This includes IPL’s response to both planned and unplanned system interruptions while maintaining stability and continuity of service. Unplanned interruptions causing customer outages are most often due to storms (lightning), wind (vegetation), animals (squirrels), and equipment failure, along with a variety of other incidents (e.g., a car hits a pole).

Customer perception of reliable electric services is measured internally by the City of Independence through the 2023 City of Independence Resident Survey: Findings Report<sup>27</sup>. 82% of residents responded that they were Satisfied or Very Satisfied with “Overall reliability of electrical service.”

<sup>20</sup> NPV calculated through 2049 applying a 3% discount rate.

<sup>21</sup> NPV using 3% discount rate through end of obligations.

<sup>22</sup> Used five-year average of expenses.

<sup>23</sup> Used five- year average of costs.

<sup>24</sup> Based on 2019-2023 AFCR data and City Finance provided capital spend 5 year average

<sup>25</sup> NPV calculated applying a [3] % discount rate.

<sup>26</sup> NPV calculated applying a 3% discount rate through 2049.

<sup>27</sup> 2023 City of Independence Resident Survey: Findings Report.

DKMT also asked all interviewees about their perception of electric reliability performance. Their common response was “reliability is good” with one customer stating that “IPL reliability is the best I have ever had.”

In the United States, electric reliability is determined through several measures which are defined by IEEE Standard 1366 – Reliability Indices<sup>28</sup>. We focused on three of these measurements:

1. **SAIFI (System Average Interruption Frequency Index):** This measure, which provides insight into the frequency of outages, defines how often the average utility customer experiences an interruption. For example, an annual SAIFI of 1.00 would mean that the average customer would see one outage a year while a SAIFI of 0.25 would mean only 25% of customers would experience one outage a year. A SAIFI greater than 1.00 would mean that the average customer would experience more than one outage per year.
2. **CAIDI (Customer Average Interruption Duration Index):** CAIDI measures the average time, in minutes, required to restore service after an interruption. Practically, it provides insight into how long it takes to restore customers who actually have the outage (not the “average” customer). Technically, the outage duration starts from the time of the interruption (not when the outage is called into the utility) until the customers power is restored.
3. **ASAI (Average Service Availability Index):** Sometimes called the service reliability index, ASAI is the ratio of the number of hours (per month) where service is provided over the total number of hours per month (about 730 hours per month).

A utility captures information about interruptions and outages either manually or automatically. A brief overview of both methods is provided to help you better understand IPL reliability statistics.

#### Advanced metering infrastructure (AMI)

AMI meters, sensing the loss of power, automatically report outages as soon as the interruption occurs. The report is “timestamped” so that, even if there is a delay in the utility receiving the report, the actual start time is captured. In addition, when the power is restored, the AMI meter reports the time of the restoration. A part of the AMI system is Meter Data Management (MDM). MDM removes all manual work associated with outage reporting. In addition, the MDM is directly connected to an Outage Management System (OMS), which, based on meter reports, estimates the place(s) where the interruption occurred. In addition, the OMS will automatically create and send a work order to the field journeymen to initiate restoration. Once field personnel determine the cause of the interruption (lightning strike, car hitting a pole, etc.), the OMS provides an estimated time for restoration, which is typically shared with the customer.

#### IPL reporting of customer outages

IPL does not have an AMI system; it manually captures customer outage information in two primary ways.

1. Customers call the dedicated IPL outage number (816) 325-7550). This number, which is the best outage reporting method, allows direct transfer of significant customer information to IPL’s OMS.

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<sup>28</sup> <https://site.ieee.org/boston-pes/files/2019/03/IEEE-1366-Reliability-Indices-2-2019.pdf>

2. Customers call the City of Independence’s Customer Service call center. This method requires manual intervention of a customer service representative to provide information which can delay OMS notification.

In addition to the manual nature of IPL outage reporting, the IPL process suffers challenges caused by inaccurate information relating the caller ID to the service address. Customers are required to call the Customer Service department to update information regarding the phone number assigned to the service address. During 2023, an average of 71% of calls coming into the OMS were “unresolved” (e.g., could not assign a service address of the outage. This significantly slows down the process of accurate and timely identification of the location of the interruption causing the outage(s).

DKMT understands how this has occurred at IPL and finds the same problems at other non-AMI utilities. We believe it would be difficult to develop and maintain a database correctly relating service locations to customer telephone numbers without significant effort and likely with the need for additional customer service resources.

Additionally, the current IPL outage reporting process adds significant uncertainty to when the outage begins and when it ends, as it is dependent on the linemen finding the interruption location, working to restore power, and then manually closing out the work order. Suppose the outage is at night during a severe storm. In that case, the lineman is focused on working safely and restoring as many customers as possible, not on the timely and accurate manual notification of a single restoration work order.

AMI removes the location constraint since the meter is assigned to a unique service address. Therefore, when reporting an outage, the OMS knows the exact location of the outage. In addition, all AMI meters impacted by the interruption concurrently report outages. This makes for an easier OMS solution to the problem's location.

#### SAIFI performance

As stated earlier, the System Average Interruption Frequency Index measures how often the average utility customer experiences an interruption. DKMT performed an analysis of IPL monthly customer and outage data for fiscal year (FY) 2019 through FY2024 (February). The outage data did not include major event (ME) days<sup>29</sup>. Because IPL provided our team with monthly data, we were able to estimate calendar year (CY) SAIFI as shown in Table 2 below.

*Table 2 - Estimated IPL SAIFI w/o ME Days*

| CY2019 | CY2020 | CY2021 | CY2022 | CY2023 |
|--------|--------|--------|--------|--------|
| 0.034  | 0.029  | 0.053  | 0.024  | 0.031  |

<sup>29</sup> [IEEE defines Major Event Days](#) (MEDs) through a statistical analysis using daily calculated System Average Interruption Duration Index (SAIDI). While the link provides a good, detailed discussion of the MED methodology, MEDs “... represent those events of such a reliability magnitude that a crisis mode of operation is required to adequately respond.” Practically, think of an ME day as one which results from a very severe thunderstorm or ice storm impacting IPL customers.

The five-year average IPL SAIFI is 0.034. This means, on average, less than 4% of IPL customers experienced an outage, for non-Major Event days, each year between 2019 and 2023. As a benchmark, first quartile 2022 IEEE SAIFI performance was 0.84<sup>30</sup>. Therefore, even if there are significant challenges with data quality because of IPL's outage processes, IPL's SAIFI performance is extremely good.

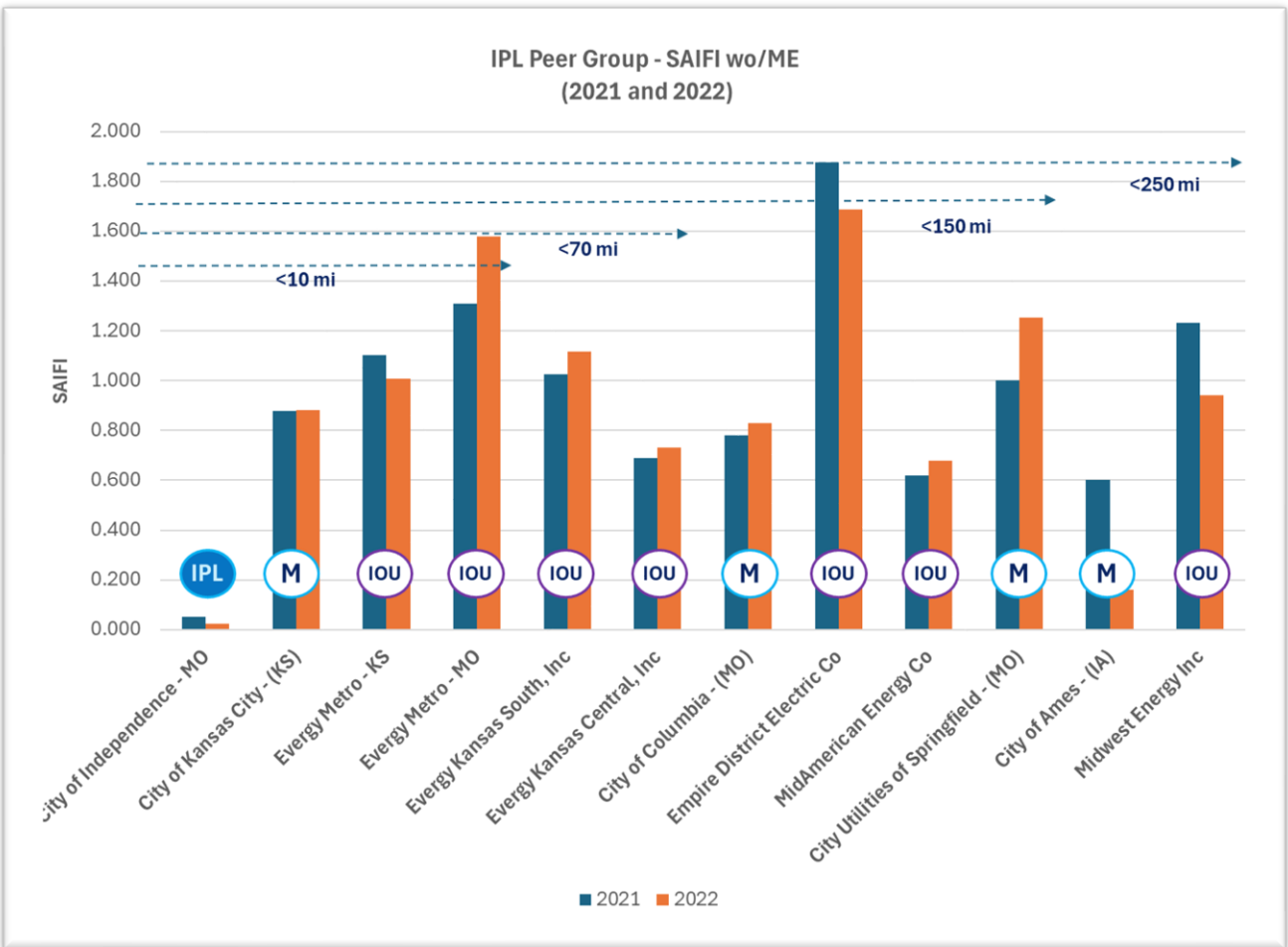
DKMT also developed a more localized benchmark peer group from cooperatives, investor owned, and municipal utilities located in IA, KS, and MO (within 250 miles of the City of Independence), with greater than or equal to 25,000 customers, and who reported SAIFI performance from 2019 through 2022 to the US Energy Information Administration. EIA Form-861 data<sup>31</sup> is reported on a calendar year basis, and so DKMT estimated calendar year SAIFI based on month-by-month customer counts and outage data.

As shown below, IPL SAIFI performance is the best in the peer group. Again, because of potential uncertainty of outage data due to the non-AMI OMS process, doubling or tripling the SAIFI performance would not change IPL's best in peer performance.

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<sup>30</sup> [IEEE Benchmark Year 2023 Results for 2022 Data, 2023 Distribution Reliability Working Group Meeting, July 19, 2023, Orlando, FL.](#)

<sup>31</sup> [Annual Electric Power Industry Report, Form EIA-861.](#)



*IPL Reliability Peer Group CY 2021 and CY 2022 Average Interruption Frequency (SAIFI) performance.*

#### CAIDI performance

DKMT reviewed IPL Customer Average Interruption Duration Index (CAIDI) performance between FY2019 and FY2023. We note that IPL internally reports CAIDI performance on a monthly basis for the fiscal year from July 1 through June 30. We did not estimate calendar year end CAIDI as we believe the month over month data provides adequate insight into IPL's CAIDI performance.

The figure below shows a surface graph of IPL's CAIDI performance month by month between FY2019 and FY2023. We note that there is a high variability in CAIDI, which is due to severe weather events. For the five-year period, the monthly average CAIDI was 98.58 minutes. During this same period, there are four monthly average CAIDI indices greater than 150 minutes. These occur when expected (spring, late-summer, and January/ February).



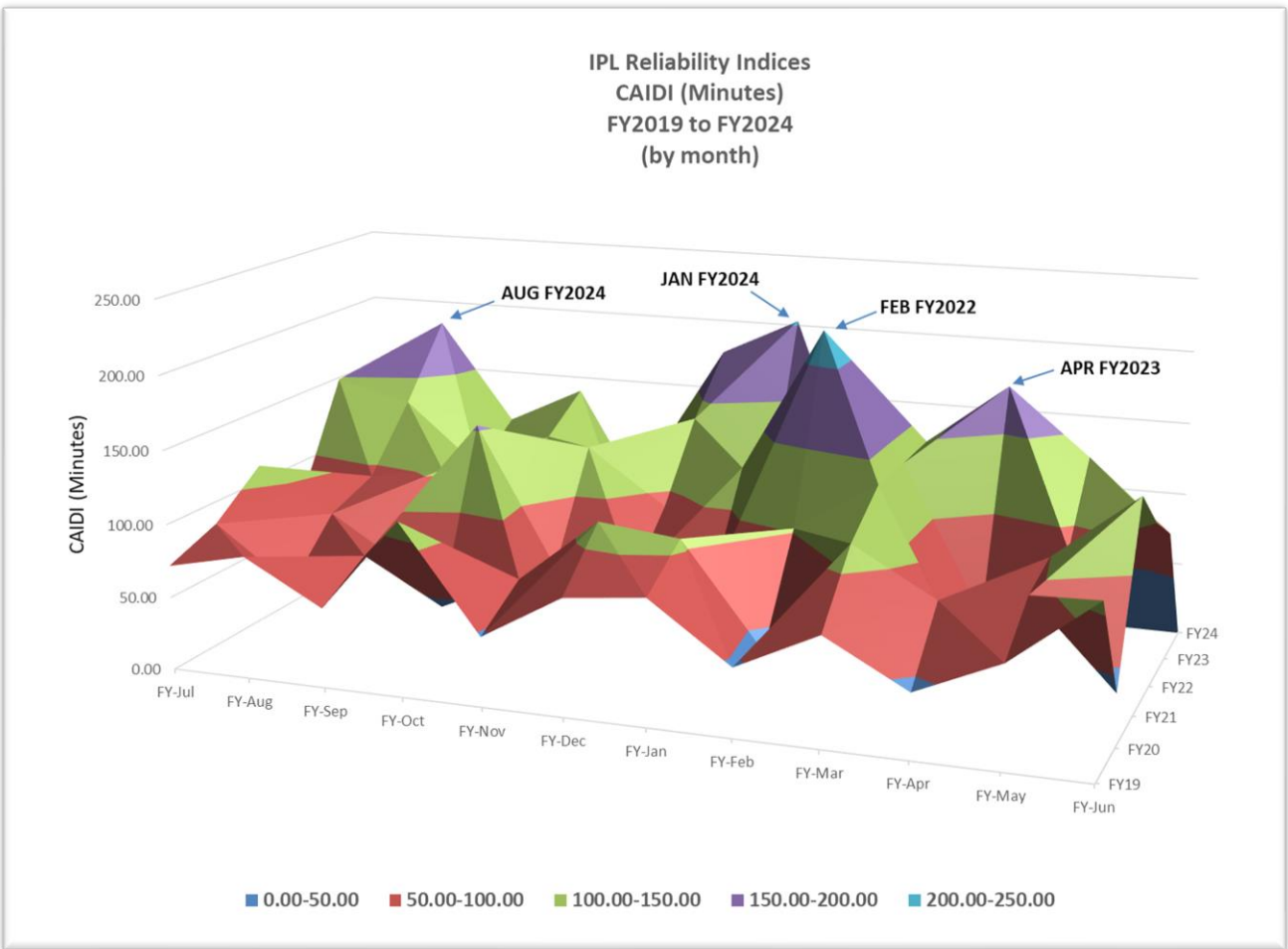


Figure x - IPL CAIDI FY-2019 through (FY2024(FEB))

### ASAI performance

Finally, we reviewed IPL's Average Service Availability Index (ASAI) during the fiscal five-year period of FY2019 through FY2024. The overall average "up time" for the distribution system was 99.994% with a low of 99.982% and a high of 100%.

### IPL distribution infrastructure and reliability

DKMT assessed the overall material condition of IPL's distribution infrastructure through direct expert observation by both a journeyman/lineman and an electrical engineer. In the judgement of the assessment team, they observed no indications that the system could not support the internally reported reliability performance.

DKMT concludes, as developed through customer interviews, City of Independence community surveys, analysis of both IPL internal and external reliability data, and our qualitative assessment of the distribution infrastructure, that IPL electric reliability is found to be very good.

## Rates

Comparisons of electric rates and electric bills are easy to misinterpret and can lead to misunderstandings that are hard to correct. In general, customers are only concerned with their total bill and look for ways to reduce it.

A utility needs to recover all its operating and debt service costs and fund a reasonable operational reserve fund. This is called its revenue requirement. IPL has an annual revenue requirement of approximately \$140 million.

It is common practice among electric utilities to divide their customers into various groups based on the characteristics of their electrical load. For example, residential customers have load characteristics that are different from those of large commercial and industrial customers. The City of Independence and IPL develop electric rates for each group of customers to recover all the costs of providing electric service to IPL's customers. Municipally owned utilities have the flexibility to change their customer groupings and electric rates anytime the City Council thinks it is appropriate. Utilities regulated by the Missouri Public Utilities Commission can only change electric rates and customer groupings through regulatory proceedings that can last months or years to complete.

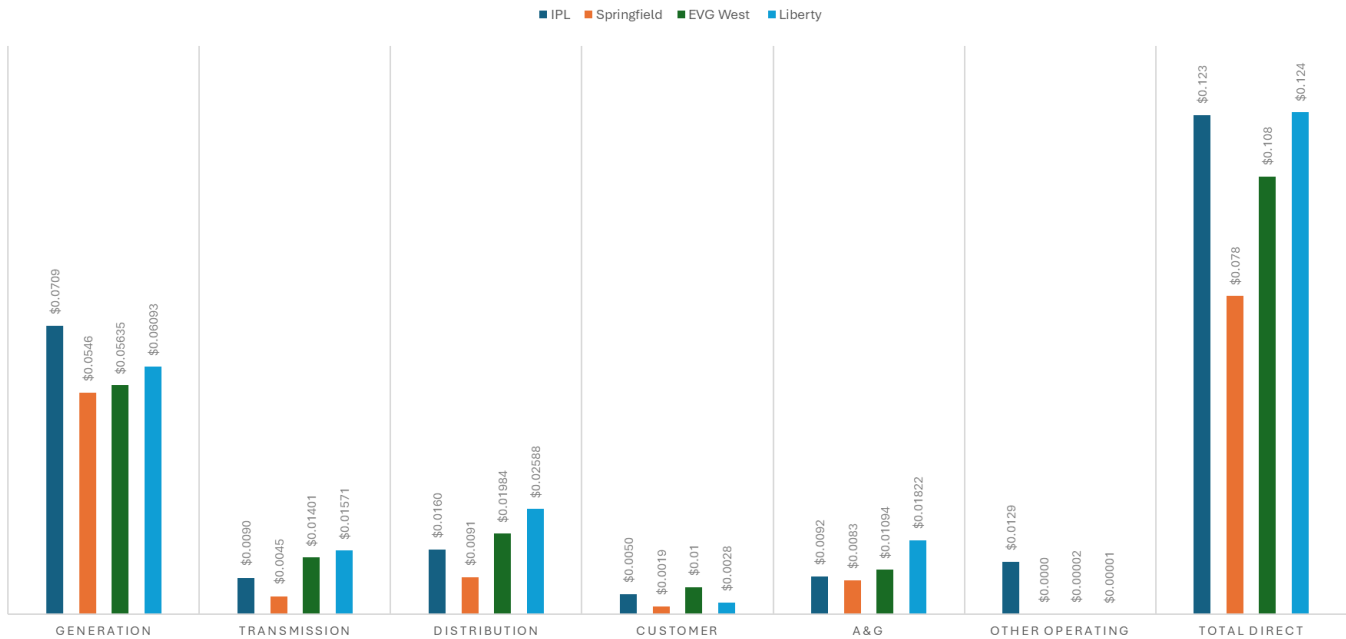
In terms of operational efficiency, IPL compares well with other utilities for operating expenses per kWh across most electric utility activities, apart from generation costs, as shown in the figure below. The City's 2023 AFCD shows that it paid \$53.99/MWh for power from NC2, \$77.45/MWh for power from IATAN 2, \$67.76/MWh from Dogwood<sup>32</sup>, \$33.64/MWh for power from the Marshall Wind Energy Center, \$32.54/MWh for power from the Smokey Hills wind farm and \$75.96/MWh for energy from the MCP-Independence solar farm. As previously mentioned, IPL's fixed cost for the CTGs is approximately \$500,000 annually. Whenever the CTGs are dispatched, IPL is made whole on all costs associated with the CTGs while they are operating, as it is with Dogwood, IATAN 2, and NC 2.

On average, debt service on outstanding bonds made up 28.24% (\$15.24/MWh) of NC2's cost, 51% (\$39.56/MWh) of IATAN 2's cost, and 41% (\$27.63/MWh) of Dogwood's cost. Debt Service payments are one reason IPL generation costs are higher than those of other comparable utilities.

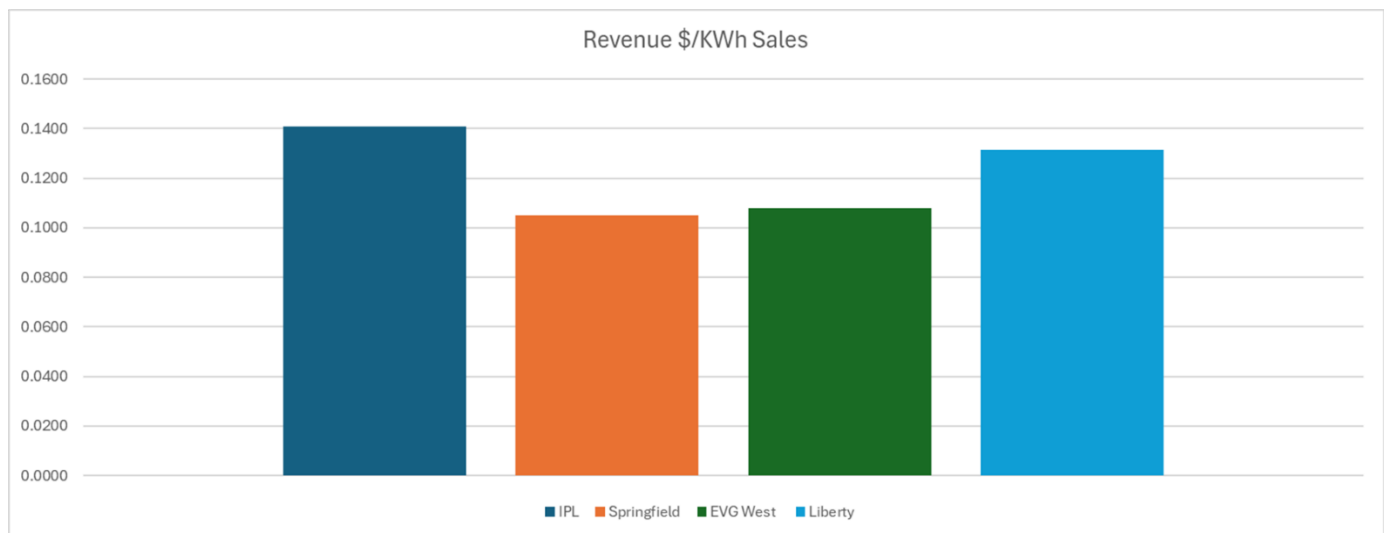
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<sup>32</sup> DKMT Calc temp

### OPERATING EXPENSES PER KWH



Differences in various policies make it difficult to compare electric rates across investor-owned and municipally owned electric utilities. One point of comparison is a utility's total sales revenue versus its sales volume, which shows how much a utility is charging for power across all customer classes.

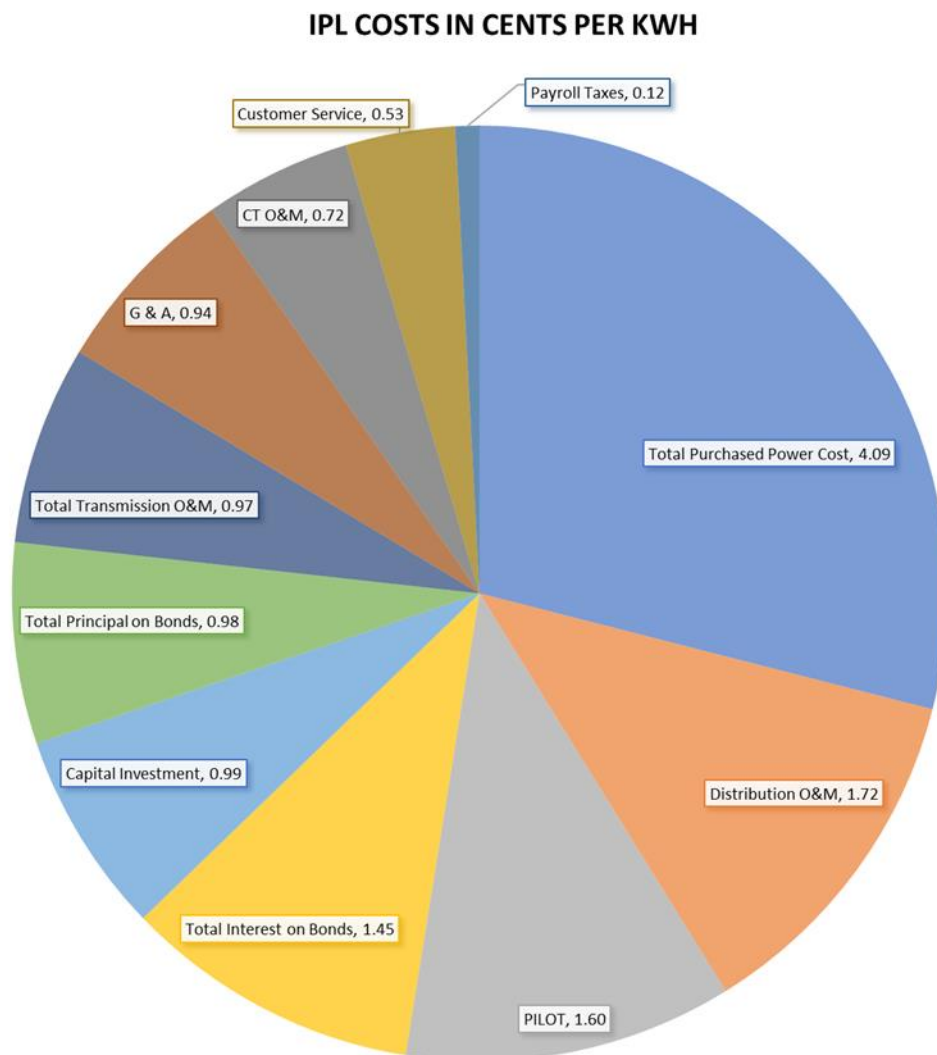


IPL charges more for power than City Utilities of Springfield, Evergy Missouri West, and Liberty Utilities. For a municipally owned utility, such as IPL, the difference between the operating costs and the revenue received reflects debt service payments, payments in lieu of taxes (PILOT), and other miscellaneous charges.

| Data Year | Utility     | Revenues/kWh <sup>33</sup> |
|-----------|-------------|----------------------------|
| 2023      | IPL         | 0.1410                     |
| 2022      | Springfield | 0.1052                     |
| 2022      | EVG West    | 0.1080                     |
| 2022      | Liberty     | 0.1316                     |

Identifying the inputs into IPL's electric costs shows how ratepayer funds are broken down by major cost category.

The pie chart and the table below show the relative contribution of each cost category that makes up IPL's electric rates.



<sup>33</sup> IPL calculation uses FERC revenue shown in 2023 ACFR Table 20 and KWh in Exhibit 44

The table shown below breaks out the relative cost of each major expense category IPL ratepayers pay for one kilowatt-hour (kWh) of electricity:

| <b>Category<sup>34</sup></b>             | <b>Cents</b> | <b>Percentage of Total</b> |
|------------------------------------------|--------------|----------------------------|
| Total Purchased Power Cost <sup>35</sup> | 4.09         | 28.986%                    |
| Distribution O&M                         | 1.72         | 12.186%                    |
| PILOT                                    | 1.60         | 11.359%                    |
| Total Interest on Bonds                  | 1.45         | 10.257%                    |
| Capital Investment                       | 0.99         | 7.013%                     |
| Total Principal on Bonds                 | 0.98         | 6.951%                     |
| Total Transmission O&M                   | 0.97         | 6.878%                     |
| G & A                                    | 0.94         | 6.673%                     |
| CT O&M                                   | 0.72         | 5.082%                     |
| Customer Service                         | 0.53         | 3.785%                     |
| Payroll Taxes                            | 0.12         | 0.829%                     |
| Total                                    | 14.1         | 100.000%                   |

### **Services IPL provides and receives from City Departments**

IPL has been an integral part of the City since its founding in 1901. Its operations are intertwined with various other departments that provide services to and receive services from IPL.

These services include:

- IPL paid the water department \$2,451,852 for customer service support services and telephone operators in fiscal 2023.
- IPL pays Finance and Administration \$2,893,851 for various support services such as HR, Tech Services, and Finance support.
- IPL provides communication transport services for all city facilities (40 locations), Independence School District (42 locations), and Blue Springs School District (4 locations). The total annual budget for these services is approximately \$800,000 and is paid for through a combination of electric rates, school district reimbursements (\$230K), and city facility connection charges.
- The water and sewer utilities paid IPL \$2,092,268 for meter reading services in fiscal year 2023.

<sup>34</sup> 2023 AFCR cash based accounts

<sup>35</sup> DKMT shifted interest and principal to respective categories.

- IPL maintains the traffic signals for 78 intersections throughout the city at an annual cost of approximately \$435,000.
- IPL maintains 58 school crossing signals for the Independence, Fort Osage, and Blue Springs school districts at an annual cost of approximately \$68,000.
- IPL maintains the streetlights throughout the city at an annual cost of approximately \$350,000.
- IPL personnel also provide miscellaneous support, such as assisting the water and sewer treatment plants with electrical distribution system repairs, supporting the police department with camera installation and removal, and supporting the annual Santa-Cali-Gon.

Should the City decide to divest itself of IPL, we estimate that approximately \$5 million in remaining costs would need to be shifted to other City departments to maintain the current level of service provided by IPL for these services.

The City estimates that a \$38,372,844 liability associated with healthcare for IPL employees would have to be satisfied prior to transferring system ownership and a \$7,291,922 liability associated with LAGERS funding for IPL employees would have to be satisfied prior to a change in ownership.

The table below shows the current level of IPL contributions and reimbursement for various services and the estimated amounts the City would need to reallocate to other departments to maintain the same level of service.

| Activity                               | IPL Current Transfers/Support | Remaining Percentage or Change | Reallocation to other City Departments |
|----------------------------------------|-------------------------------|--------------------------------|----------------------------------------|
| IPL pays water for customer service    | \$ 2,451,852                  | 25%                            | \$ 612,963                             |
| IPL Pays F&A for support               | 2,893,851                     | 30%                            | 868,155                                |
| Communication Support -Fiber           | 800,000                       | 100%                           | 800,000                                |
| IPL receives funds for meter reading   | (2,092,268)                   | -50%                           | 1,046,134                              |
| Traffic Signal Maintenance             | 435,000                       | 100%                           | 435,000                                |
| School Crossing Signal Maintenance     | 68,000                        | 100%                           | 68,000                                 |
| Streetlight Maintenance                | 350,000                       | 100%                           | 350,000                                |
| General Fund Contribution              | 1,168,553                     | 100%                           | 1,168,553                              |
| School District Reimbursement for fibe | (230,000)                     | 100%                           | (230,000)                              |
|                                        |                               |                                |                                        |
|                                        | <b>5,844,988</b>              |                                | <b>\$ 5,118,805</b>                    |

There is also a \$25-50 million environmental liability associated with the cost to remediate the Blue Valley site, depending on the level of remediation required. The status of this liability is undetermined for an alternative ownership scenario.

IPL currently employs 157 people and accounts for 40% of the City's revenue<sup>36</sup>. The average annual payroll for IPL is approximately \$17 million, the majority of which is assumed to be spent locally. The impact of alternative IPL ownership on local spending is unknown.

It is common for municipalities to compare the salaries of their electric utility workers with other city job classifications. While each municipality is unique, it is important to point out that there is a national shortage of electric utility line workers. Almost all electric utilities are looking to hire lineworkers. The reasons for this shortage are beyond the scope of this analysis. Still, the fact remains that the transformation of the electric utility sector is intensifying competition for skilled electric industry personnel. The table below shows the starting compensation levels for lineworkers near Independence, MO<sup>37</sup>.

| <b>Position</b>      | <b>Company</b>                   | <b>State</b>       | <b>Compensation</b> |
|----------------------|----------------------------------|--------------------|---------------------|
| Lineman - Journeyman | Evergy                           | Missouri           | \$53/hr             |
| Lineman -Journeyman  | Evergy                           | Kansas             | \$49/hr             |
| Lineman -Journeyman  | Missouri Public Utility Alliance | Columbia, Missouri | \$99,000 per year   |

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<sup>36</sup> AFCD page 18

<sup>37</sup> Glassdoor 4 June 2024

## Impact of Rate Reductions

For each IPL electric rate class, the materiality of a one-cent reduction in the cost of energy will have a different impact on a customer's bill due to charges unrelated to energy use. Using data found in Table 20 of the 2023 City of Independence AFCR, DKMT estimated the gross annual savings a customer might see if IPL were able to reduce the cost of energy by one cent per kilowatt-hr.

| Customer Class                                 | Number of Customers | Revenue              | Total KWH          | Rate Cents/KWh | Gross savings for one cent decrease in | Estimated Annual Savings for a one cent drop in energy costs per |
|------------------------------------------------|---------------------|----------------------|--------------------|----------------|----------------------------------------|------------------------------------------------------------------|
| City traffic signals                           | 63                  | \$87,368             | 217,687            | 0.4013         | \$2,177                                | \$35                                                             |
| Private security lighting                      | 1,740               | 407,257              | 1,131,532          | 0.3599         | 11,315                                 | \$7                                                              |
| Small general services                         | 2,928               | 4,728,962            | 26,141,990         | 0.1809         | 261,420                                | \$89                                                             |
| Schools, churches, and hospitals, all electric | 2                   | 4,793                | 30,954             | 0.1548         | 310                                    | \$155                                                            |
| Residential                                    | 53,603              | 79,210,982           | 536,615,127        | 0.1476         | 5,366,151                              | \$100                                                            |
| Schools, churches, and hospitals               | 201                 | 1,317,583            | 9,184,034          | 0.1435         | 91,840                                 | \$457                                                            |
| Large general services                         | 1,612               | 36,167,893           | 266,306,331        | 0.1358         | 2,663,063                              | \$1,652                                                          |
| Sewer pumping                                  | 7                   | 71,597               | 543,314            | 0.1318         | 5,433                                  | \$776                                                            |
| Education                                      | 70                  | 3,601,343            | 28,003,082         | 0.1286         | 280,031                                | \$4,000                                                          |
| Large general services – prime voltage         | 8                   | 1,484,177            | 12,236,745         | 0.1213         | 122,367                                | \$15,296                                                         |
| Total electric general services                | 116                 | 5,200,956            | 46,863,521         | 0.1110         | 468,635                                | \$4,040                                                          |
| Large power services                           | 3                   | 2,304,097            | 21,173,640         | 0.1088         | 211,736                                | \$70,579                                                         |
| Education, all electric                        | 8                   | 427,984              | 4,131,200          | 0.1036         | 41,312                                 | \$5,164                                                          |
| Combined interruptible services                | 2                   | 2,866,426            | 30,574,600         | 0.0938         | 305,746                                | \$152,873                                                        |
| Municipal - City (Buildings)                   | 105                 | 1,097,204            | 12,622,903         | 0.0869         | 126,229                                | \$1,202                                                          |
| General services – space heating               | 31                  | 72,227               | 866,956            | 0.0833         | 8,670                                  | \$280                                                            |
| <b>Totals</b>                                  | <b>60,499</b>       | <b>\$139,050,849</b> | <b>996,643,616</b> |                | <b>\$9,966,436</b>                     |                                                                  |

As expected, the impact of a reduction in energy costs is greater on customers with higher energy usage. The cumulative effect on the City is a reduction in gross revenues of approximately \$10 million, and a corresponding reduction in PILOT and sales tax of approximately \$1 million. This relationship holds for all electricity suppliers to the city and its ratepayers. Other municipalities take advantage of the flexibility inherent in municipal utility ownership to develop economic development packages that increase the sales tax and property tax base to offset reductions in franchise fees and PILOT revenues.

In summary, *status quo* operations at IPL are not creating surplus funds or long-term deficits. However, for stable conditions to continue, the utility would need annual rate increases matching the annual electric utility industry inflation rate. Additionally, there is an urgent need for additional generation capacity to accommodate economic growth, changing SPP requirements, and as a hedge against early coal plant closures.

IPL provides a highly reliable level of service and is cost-efficient compared to other local utilities, with the exception of generation. IPL's generation costs are higher than those of its peers, primarily due to debt service payments and the structure of its debt.



# IPL Cost Benefit Analysis

Presented August 15  
2024



# Introduction

- DKMT Consulting was retained to perform two independent studies. The first was a Cost-Benefit Analysis of Independence Power and Light to inform stakeholders in their deliberations regarding alternative ownership models for IPL. This report does not recommend retaining or divesting IPL.
- The second report is a Strategic Plan describing actions to make IPL the best utility it can be to serve the City of Independence.

# Benefits of Owning IPL

- Municipal utilities are typically more agile than regulated investor-owned utilities with:
  - Tax-free financing,
  - Quicker decision-making
  - Ability to provide additional services to their communities.
  - Rates and fees set by Community Leadership
- Currently employs 157 personnel with a Payroll of \$17 million.
- Provides the City of Independence with industry-leading electric reliability.
- Provides shared services to other utilities, the City, and School Districts.
- Provides the City the ability to access wholesale electric markets and generate additional revenue.

# Costs of Owning IPL

- The electric utility industry is a capital-intensive and complex industry that is undergoing significant change.
- Through 2049, IPL will generate approximately \$2.4 billion in revenue to pay the same amount in obligations. IPL is operated as a break-even enterprise per the City Charter and is not generating financial surpluses or long-term debts.
- Inflation, capacity needs, compensation, and supply chain issues will require rate increases to keep IPL operating at break-even.

# Current IPL Obligations

- \$267 million in outstanding principal on bonds tied to revenues from or assets tied to the electric distribution system.
- These bonds are held by Omaha Public Power District (\$64 M), Missouri Electric Commission (\$86.5 M), and the Missouri Development Finance Board (\$116.5 M). The City requires the consent of each bondholder prior to changing ownership of the system and must not endanger the bonds' tax-free status.
- The obligations for NC2, IATAN2, and Dogwood remain even if the power plants are shutdown before the end of plant life.

# Current IPL Obligations (cont'd)

- The City of Independence is obligated to pay its portion of fuel, O&M, and decommissioning costs for Nebraska City 2, IATAN 2 and Dogwood for the life of the plants. The NPV of this obligation is estimated to be approximately \$433 million through 2049.
- The City has capacity contract obligations with Oneta (2030), and purchased power contracts with Smokey Hills (2027), Marshall Wind (2036) Farms, and MCP-Independence Solar (2043). The NPV of these contracts is estimated to be approximately 500 million through 2043.

# Current IPL Obligations (cont'd)

- Estimated environmental liability to clean up the Blue Valley site is \$25-50 million.
- Estimated liability for IPL employee healthcare is \$38 million.
- Estimated liability for IPL Lagers is \$7 million.
- DKMT estimates that approximately \$5 million shared costs for services would have to be shifted to other city departments to continue the same level of service provided by IPL, if divested.

# IPL Performance

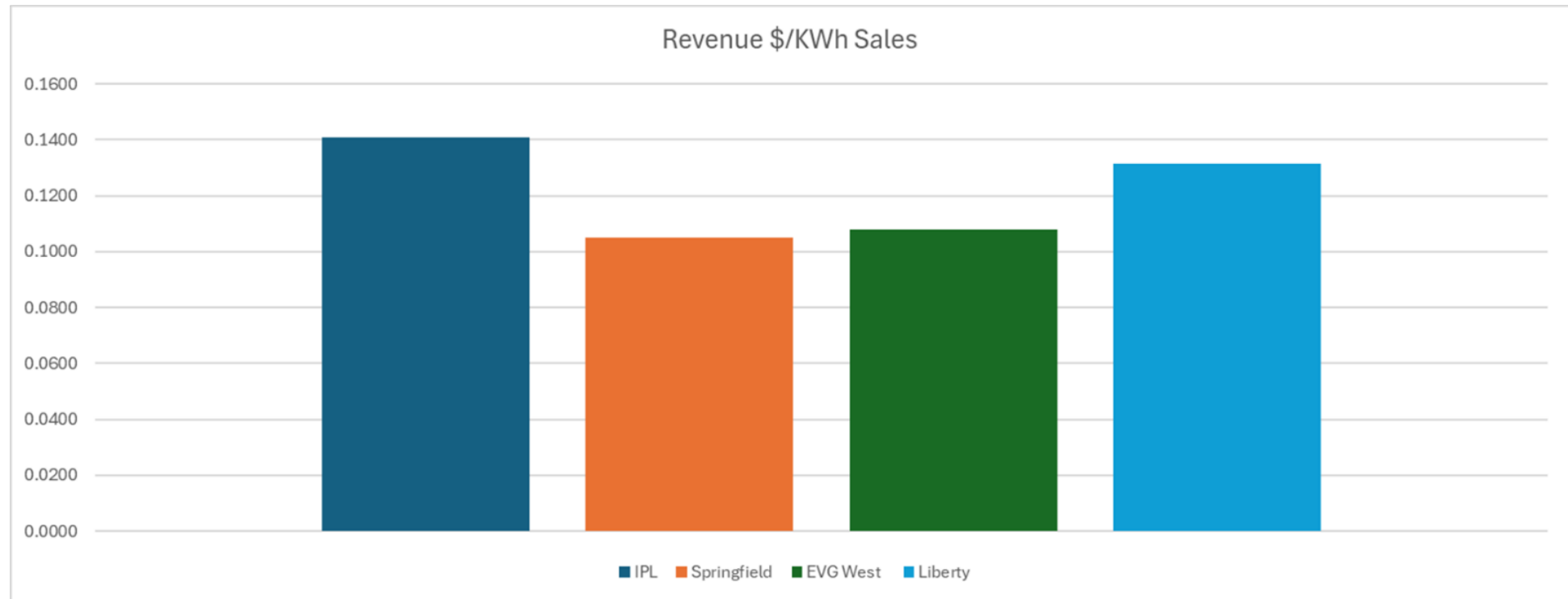
- **IPL is an efficient utility.** It compares well with peers with the exception of generation costs.
- Generation costs include debt service for NC2 and IATAN2. In the case of IATAN 2, this is approximately 50% of the cost.



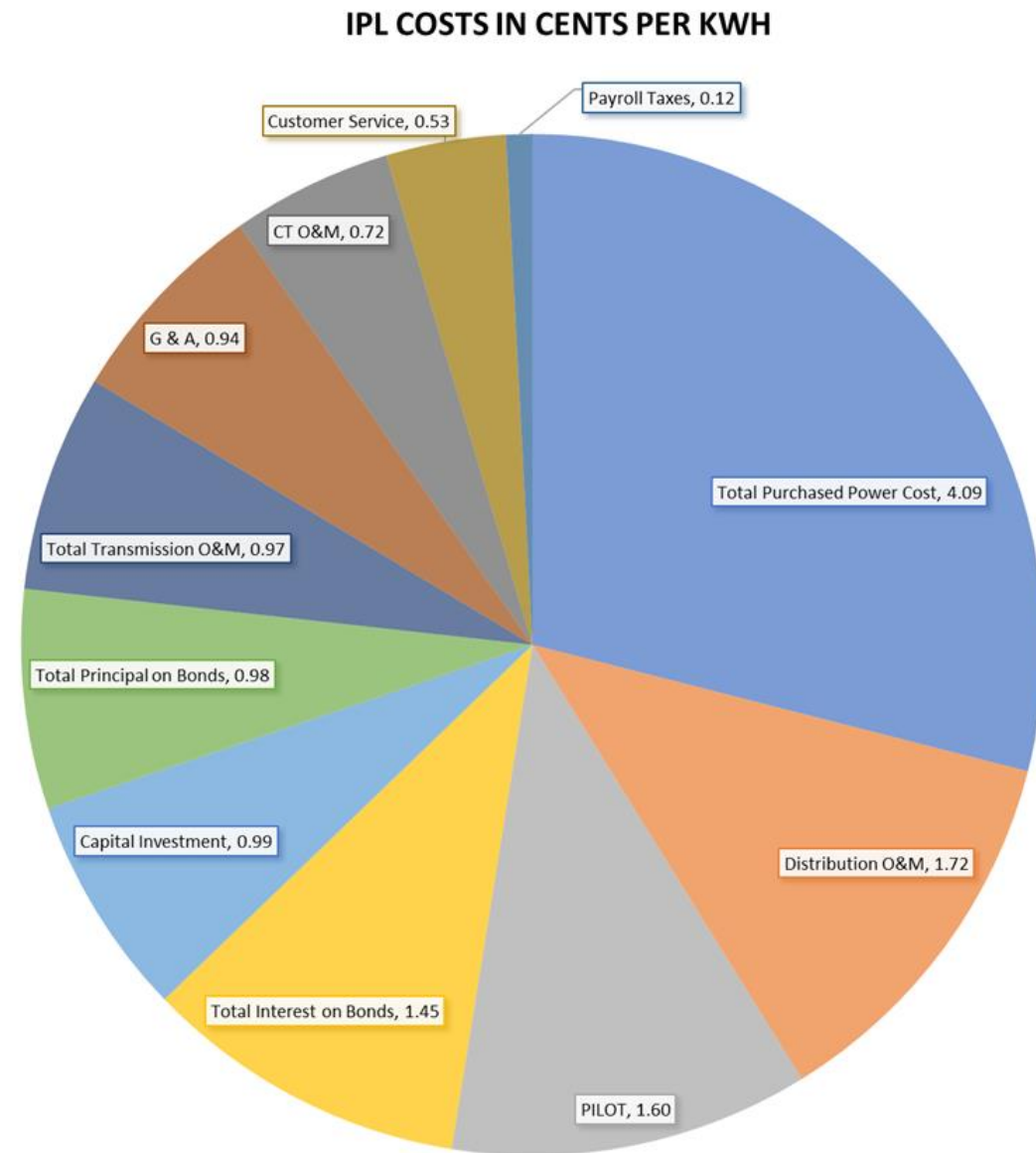
# IPL Performance



# IPL is a higher cost utility because of its debt structure and other non-operating charges



# An approximate breakdown of IPL Costs per KWH



# Questions ?





**Independence Power & Light**

**Independence Power & Light Strategic Plan**

**Purchase Order: 24000832**

**Prepared for:**

**City of Independence, Missouri**

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August 12, 2024

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## Executive Summary

Independence Power & Light (IPL) is a municipally owned electric utility that has served the City of Independence (COI) well, since 1901. There are more than 60,000 customers within the city limits, making IPL one of Missouri's top three largest municipal electric utilities in terms of the number of customers and revenues.

DKMT was retained to develop a Strategic Plan for IPL that focuses on meeting the needs and desires of the Independence community. This plan was created independently from a parallel cost-benefit analysis.

As previously mentioned in our 2020 report to the City Council, significant changes have occurred at IPL in the last seven years. It has had five utility directors, implemented a new billing system, permanently shut down its Blue Valley generating plant, downsized the organization, and operated remotely during a pandemic.

Our impression of IPL is that it lags other electric utilities in implementing modern technology that improves customer service and promotes better outage response. The most significant issue raised in nearly every interview was IPL's governance and the challenges introduced by the existing governance model. IPL provides excellent reliability and compares favorably with its peers in all areas except the cost of generation.

To be the best utility it can be, the vision for IPL expressed by the community includes:

- A governing body of well-educated professionals who are responsive to the needs of the community and the utility.
- Business decisions are based both on quality data and qualitative experience.
- Employees that want to work for IPL and have the skillsets that support the strategic priorities, which includes a succession plan to avoid loss of valuable system knowledge.
- A well-informed public that understands and supports the decisions that the utility makes.
- A plan for rates that are equal to or lower than neighboring utilities.
- Modern technology to support communication, increase efficiency, and expand customer-enabling services to manage electricity usage.
- Economic development programs that support commercial and industrial business growth
- The ability to retire generation in a cost-effective way.
- Continue to have the best level of service reliability in their class of municipal utilities.
- IPL is operated in a business-like manner for the benefit of the community.

The Strategic Planning team of DKMT, conducted a high level strategic planning retreat with IPL leadership and held meetings with City management, five council members (3 in one meeting, 2 in another), and six members of the PUAB (3 in each meeting) to identify the top priorities for



the future of IPL. Additional interviews with key community members representing community activists, economic development interests, large commercial customers, the International Brotherhood of Electrical Workers (“IBEW”), and the Independence School District provided input as to what was working and what was not working, as well as what would they like to see from IPL in the future (see Appendix A for a list of interviews). These interviews created the basis and set the priorities for the strategic areas presented in this plan. A summary of the sessions is listed in Appendix B.

The team then collected financial and operational data to determine a baseline from which to build a plan for the future. Key factors influencing IPL’s direction are: 1) finances, which include rates, 2) the number of customers and rate of economic growth, 3) power supply options; and 4) operations – most importantly -the reliability of the transmission and distribution system.

Any plan will have financial and rate implications; the strategies discussed in this report were modeled to determine what financial resources are needed to implement suggested options while minimizing overall rates. We were asked to study three future power supply scenarios – one where IPL owned and operated all their resources (capacity and energy), a second where IPL purchased all their resources from the market or through power supply contracts, and the third is a hybrid model similar to what is in place today.

The Strategic Plan is composed of five main areas where long term strategies could create the most value for the utility and the community. They are:

1. **Governance** –Presents options for a structure that facilitates sound decision making and utility centric oversight. This is addressed in a separate whitepaper.
2. **Financial Strategy** -Describes processes to support developing a strong financial base that informs and drives decisions, provides tools for cost management and planning, is transparent, funds innovation and supports cost based rates and rate design for economic development.
3. **Customer Strategy** – Addresses the need for energy programs that meet the unique needs of Independence, supports customer control over use and cost of electricity, technology to enhance doing business with IPL, improvements in customer service, and communication strategies to inform and engage the community.
4. **Power Supply Strategic Scenarios** – Presents three scenarios for future power resources and recommendations for a formal long term generation plan that takes into account costs and risks, along with a timeline for decision makers to act.
5. **Operations Strategy** - Ensures the continued level of reliability customers have grown to expect, while incorporating modern technologies to enhance efficiency, operations, and the customer experience .

DKMT modeled the impact of funding strategic options. These included required capital investments to remain highly reliable, technology to improve operations and service while providing efficiencies, and needed staffing expertise. Power supply options were not included due to the uncertainty of the type of resource, timing, and cost. However, because power supply is the largest and most expensive portion of IPL's rates, new supply can only help to lower those costs. The model results show modest increases in rates beginning in 2028 and escalating in outer years based on investments in critical infrastructure. The details are presented at the end of this report and in Appendix D.

While the strategic plan offers options that require investments, it is essential to note that the issues impacting IPL impact the entire electric industry. For example, the increasing scarcity of capacity in the Southwest Power Pool (SPP) affects all electric utilities and will drive the cost of electricity higher throughout SPP. Investments in technology to make the grid more resilient and accommodate the electrification of the economy are also driving the cost of electricity higher throughout the country. An example of this is Evergy Missouri West's pending rate case asking for a 17% rate increase to cover infrastructure investments and power plant purchases. This will add an average of \$17 to their customers' bills. In California, PGE rates increased 17% last year and may increase an additional 7% this year. Our team believes that in the near term, rates IOUs charge for electricity will surpass IPL's current rates. The City of Independence has the opportunity to make investments now, as outlined in this plan, that will make its rates more competitive in the long term and promote economic growth in the city.

Ultimately, the success of IPL's future depends on good governance directly supporting good decision-making, a strong financial position, the ability to recruit and retain employees, a data-driven executable power supply plan, and the implementation of Automated Metering Infrastructure (AMI). In every area of this report, technology is the tool for enabling IPL to move forward to be the best it can be and provide comparable service to its peers.

# What's Working Today and Needs to Continue

## Reliability

Reliability is IPL's greatest operating strength which has resulted in positive community support, *as well as national recognition.*

Electric reliability, as discussed in this report, refers to the ability of the distribution system to consistently deliver electricity to consumers within accepted standards. Our discussion here is limited to operational reliability which helps to ensure that electric utilities are able to "keep the lights on".

### ***IPL customer perception of reliability***

Customer perception of the reliability of electric services was measured internally by the City of Independence through the 2023 City of Independence Resident Survey: Findings Report<sup>12</sup> 82% of residents responded that they were Satisfied or Very Satisfied with "Overall reliability of electrical service."

DKMT also asked all customers interviewed during this project about their perception of electric reliability performance. Their common response was "reliability is good" with one customer stating that "IPL reliability is the best I have ever had."

### ***National awards for reliability***

IPL has received, in 2023, two national awards for reliability from the American Public Power Association (APPA), Reliable Public Power Provider (RP3) designation and the Certificate for Excellence in Reliability (see Appendix C for more details).

***Reliability is a significant attribute. IPL should continue operating the system at this level of performance.*** This report addresses the long term options and actions needed for continued reliability, which in turn is critical for economic development.

## Customer Services

*The level of **collaboration** and communication with new development is exceptional.*

A large commercial developer commented that the level of cooperation and flexibility shown by IPL crews was better than 95% of their power providers.

*IPL offers a variety of methods for customers to pay their bills* which include remote check deposit, credit card, standard mail, and paying online through the website. Many of these

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<sup>1</sup> 2023 City of Independence Resident Survey: Findings Report

options are fairly new and driven by staff who are working to meet customer needs and facilitate timely payment. The options that IPL offers for bill payment are typically offered by most electric utilities, however, IPL does not currently offer the availability of an app to facilitate mobile payments.

*A significant percentage of IPL residential customers are economically challenged.* In partnership with CSI Cares, IPL funds \$60,000 a year in one time assistance for low-income households' utility bills (I-Share program) and \$230,000 in assistance to help pay 50% of elderly customers' bills (IRAP program) who need assistance. Both of these programs are fully utilized and continue to be of service to the City of Independence customers. In addition, IPL funds \$50,000 a year to Truman Habitat for weatherization assistance. Customer Service is a key strategy where additional opportunities for IPL to better serve its customers and community will be presented.

## **Employees**

*The employees and leadership of IPL are dedicated and take great pride in the work they do for the community.*

IPL is a valuable resource to the City and the risk of losing employees and institutional knowledge is significant. Suggestions and strategies for staff retention and development are presented in the Operations Strategy section.

## **What Needs Improvement**

Decisions that significantly impact IPL are not always based on data, and data is not routinely updated to support decisions. For example, prior decisions to lower IPL rates were made without relying on an analysis of the cost of providing electric service. As a result, rates were lowered and subsequently had to be raised to avoid long-term revenue shortfalls. Another example is that during this engagement, our team learned that IPL's revenue requirement model is not routinely updated on an annual basis.

The lack of a strategic plan for IPL forces City Council members to address each request for investment by IPL on an ad hoc basis.

IPL's finances are very opaque and controlled by the City. It takes a great deal of effort to reconcile conflicting sources of information to understand IPL's financial position.

The current interpretation of the City Charter does not allow IPL to make investments that support economic growth.

A more detailed discussion of governance is in a stand-alone white paper accompanying this report.

## Financial Strategy

### Background

#### Financial

IPL is a department of the City of Independence and is considered an enterprise fund. IPL generates revenues, pays its own expenses, pays the City for services that it uses in its operations, such as accounting, finance, and human resources, and makes a payment to the general fund of approximately 10% of gross revenues. This general fund payment is called a Payment in Lieu of Taxes (PILOT). A PILOT is not unusual for municipally owned utilities and typically ranges from 3% - 14%, depending on the utility charter and governance.

Routine capital investments in the system are funded from current revenues, which amount to between \$5 million and \$9 million annually per City finance. Large investments in generation have relied on the sale of bonds to fund their construction. See Appendix I for a listing of project budgets and spending from 2019-2023. The reports, prepared by City finance, show an original budget for capital projects, amendments, which are significantly larger than the original budget, and appear to include prior year projects roll-forward budgets plus additional projects identified but not in the original budget, encumbrances, actuals, and available budget at year end. The year end available budget is significant and seems to be a combination of multiyear project carryovers and projects that were not started or underspent for the current year.

A common message throughout this strategic plan is that IPL and the City must recognize the difference between an expense and funding an investment that will increase long term revenue. With an investment IPL may postpone short term revenues in order to increase the long-term revenue stream. This applies to everything from economic development rates that can attract business and jobs to Independence to investments in technology, such as AMI, which are discussed in more detail in the body of the report.

IPL's bonded debt is in two forms, City of Independence issued debt which is secured by IPL revenues or imbedded in the long-term purchase power agreements (PPAs) with Omaha Public Power District (OPPD) for power from Nebraska City 2 (NC2) and Missouri Electric Commission (MEC) for IATAN 2. The capacity payments IPL makes for their share of the output of the NC2 and IATAN 2 coal plants includes IPL's share of the debt to build the plants and are treated as long term fixed obligations for this analysis. The O&M and fuel costs of these plants, which vary with output, are also ongoing obligations for IPL and treated as O&M in our analysis. The last bond issued to fund infrastructure was in 2016, with a 2022 bond issue being a refunding/refinancing of the Dogwood plant. For the purposes of this report, DKMT has not

included any future decommissioning liabilities for these plants, as they are not known but should be incorporated into future financial plans.

The computation of debt service coverage (DSC) is one measure of a municipal utility's financial health. Based on DKMT's calculation, which included IPL's bonded debt and long term fixed obligations of the PPAs, IPL has a healthy DSC that exceeds IPL's target of 1.2 or better in the near term and exceeds the 1.10 required by their Bond Financing Agreement Covenants<sup>3</sup>. See Appendix D for a more in depth discussion of the calculation of DSC in the financial model.

A strong DSC provides the opportunity for additional debt funding of future improvements and reduces the reliance on revenue funded capital additions. A strong DSC will also allow future strategic investments with more manageable and smarter rate increase strategies. Finally, with a strong DSC, IPL can finance future capital improvements, spreading the cost and benefit of assets to the customers who use them, reducing future, inter-generational cost inequities. DKMT created a financial model that captures the current state of IPL's finances and models changes in the finances based on various strategies being implemented. The details of the model can be found in Appendix D.

The financial model is the basis for estimating the timing and amount of projected rate adjustments. Changes in the cost inputs either raise rates or lower them, depending on the magnitude of the cost.

Historically, decisions on rate adjustments have not relied on accurate or up-to-date financial data and analysis. This has resulted in financial shortfalls and excesses, as well as uncertainty for the utility and financial markets.

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<sup>3</sup> Missouri Development Finance Board Infrastructure Facilities Refunding Revenue Bonds Series 2022

## Comparability of IPL's Rates

During the interview process, the DKMT team was repeatedly informed how important competitive and lower electric bills are to the community. Affordable electricity is a priority for a population that has a median family income of \$57,415 and 40% of residents live in rental housing<sup>4</sup>. Approximately 15%<sup>5</sup> of the population of Independence falls below the poverty level, which is \$30,000 for a family of four<sup>6</sup>. Per the June 30, 2023, Annual Comprehensive Financial Report, the average household income is expected to be \$71,436 with the estimated per capita income being \$31,714. While these are slight increases over previous numbers, Independence's community income statistics remain below overall Missouri averages.

In addition, businesses expressed concern that their electric rates were not comparable to utilities that serve surrounding areas, which impacted IPL's overall competitiveness and the City's ability to attract new business.<sup>7</sup>

## What the data says

IPL's overall average rate levels are higher than other regional public power utilities and those from Evergy and Liberty. Supporting this finding, DKMT performed a comparison of overall rate levels for IPL versus peer municipal utilities and Evergy using an average retail revenue per kWh approach. The average retail revenue per kWh is defined as the revenues for a specific class of customers divided by the total energy sales for that class of customer. The average revenue approach is commonly used in the industry and provides the most accurate method of comparing rates between utilities because:

- The approach captures all components of the customer's bill.
- All customers are implicitly captured in the analysis.
- The potential bias of typical bills is avoided because rates between different entities are compared, adjusting for differences in customer types.

The source of data for the average revenue analysis was the S&P Global Database. The S&P Global Database is recognized in the utility industry as an authoritative source of information compiled from multiple sources.

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<sup>4</sup> US Census Bureau 2022 data

<sup>5</sup> US Census Bureau 2022 data

<sup>6</sup> US Department of Health and Human Services 2024

<sup>7</sup> DKMT also reviewed the 2021 Rate Comparison Study by Finley and found it consistent with our findings

Figure 1 below compares the average revenue per kWh for IPL and the comparable municipal and Evergy utilities in Missouri.

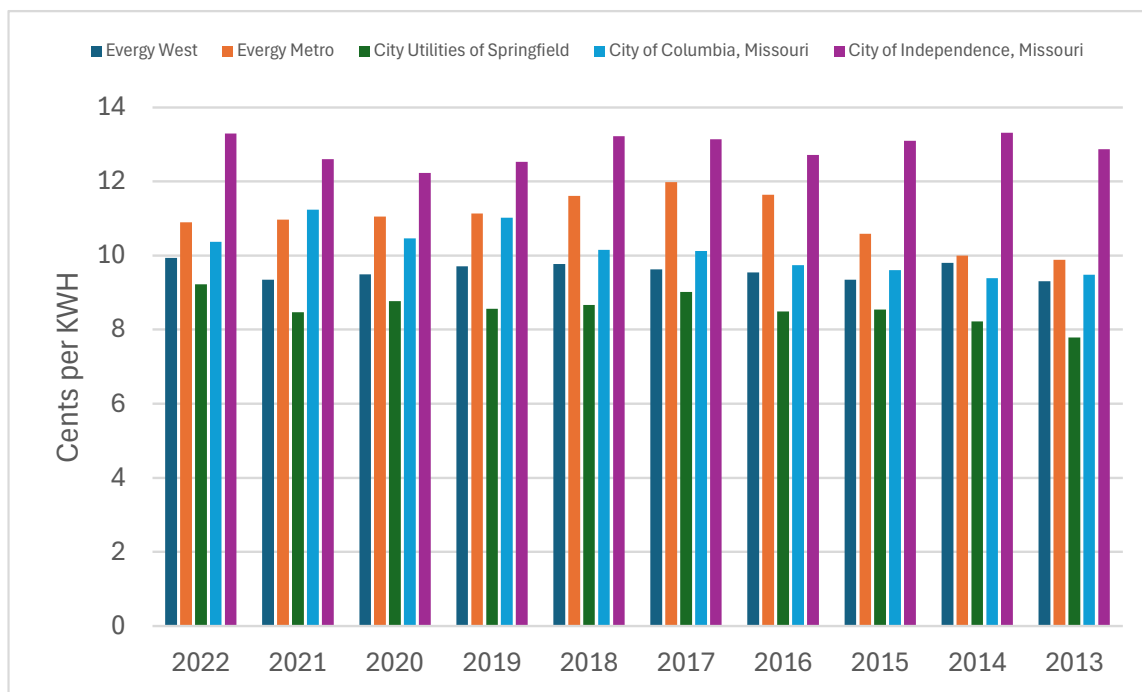


Figure 1 Total Retail Average Revenue per kWh

IPL has a higher average revenue than Springfield or Columbia for all classes. A higher average revenue is an indicator of higher costs which are driving higher rates. The higher costs have existed for the entire time period of the analysis suggesting that it is not a transitory situation triggered by recent or one-time events.

Additional rate comparison detail graphics showing municipal utility ranking by size in Missouri and the breakdown of comparability by rate class can be found in Appendix E.



A benchmarking analysis of IPL's cost structure versus the other municipal utilities suggests that the higher costs are primarily attributable to the generation portion of total O&M expenses as shown in Figure 2.

When direct operation costs are compared across these same utilities, IPL has lower costs per kilowatt-hour (kWh) in several categories. The notable exception is generation costs.

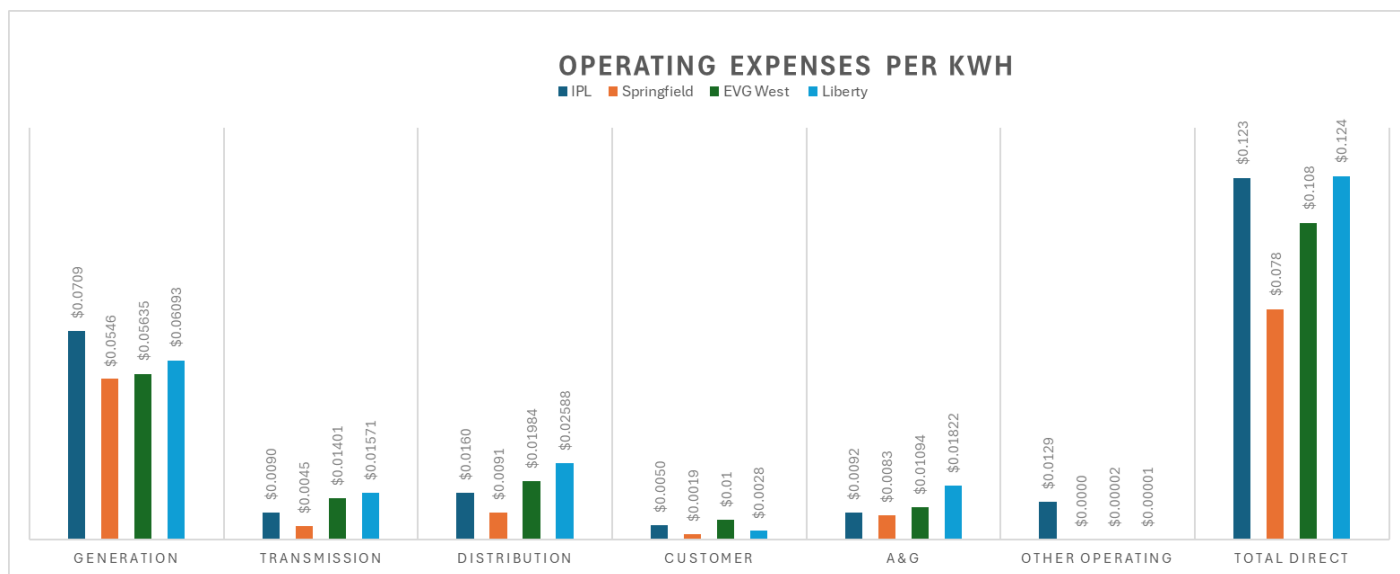
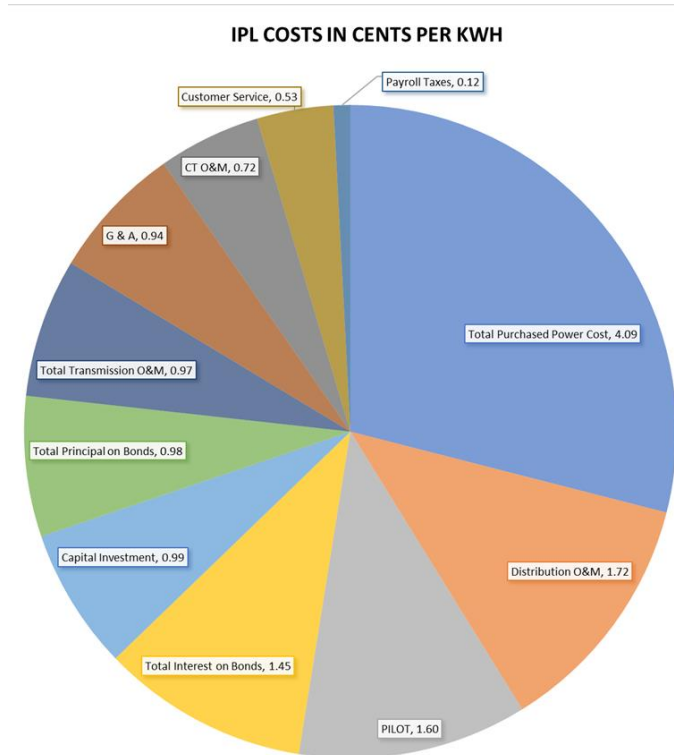


Figure 2 Operating Expenses per kWh

The pie chart and the table below show the relative contribution of each cost category that makes up IPL's electric rates.



The table shown below breaks out the relative cost of each major expense category IPL ratepayers pay for one kilowatt-hour (kWh) of electricity:

| Category <sup>8</sup>                   | Cents | Percentage of Total |
|-----------------------------------------|-------|---------------------|
| Total Purchased Power Cost <sup>9</sup> | 4.09  | 28.986%             |
| Distribution O&M                        | 1.72  | 12.186%             |
| PILOT                                   | 1.60  | 11.359%             |
| Total Interest on Bonds                 | 1.45  | 10.257%             |
| Capital Investment                      | 0.99  | 7.013%              |
| Total Principal on Bonds                | 0.98  | 6.951%              |
| Total Transmission O&M                  | 0.97  | 6.878%              |
| G & A                                   | 0.94  | 6.673%              |
| CT O&M                                  | 0.72  | 5.082%              |
| Customer Service                        | 0.53  | 3.785%              |
| Payroll Taxes                           | 0.12  | 0.829%              |
| Total                                   | 14.1  | 100.000%            |

<sup>8</sup> 2023 AFCR cash-based accounts

<sup>9</sup> DKMT shifted interest and principal to respective categories.

Because purchase power costs make up the most significant portion of IPL's cost, these costs exceeding the comparable utility power costs account for IPL's higher rates.

## Economic Development

IPL and the City of Independence have expressed interest in using IPL as a vehicle to stimulate economic development in the service area. The development of utility programs to stimulate economic development is not uncommon for electric utilities and has existed for approximately 40 years in various jurisdictions.

The Independence City Charter states

"The electric utility shall not be operated for the benefit of other municipal functions and shall not be used directly or indirectly as a general revenue producing agency for the city, but it may pay to the city an amount in lieu of such taxes as are normally placed upon private business enterprises. After providing for depreciation accruals and amortization of bonds, and for reasonable accumulation of surplus, the electric utility shall apply all annual profits to rate reductions."

This has been construed to limit IPL's ability to support economic growth, however improved reliability and innovative rate design and fees do not appear to be in conflict with the charter.

### *IPL's Economic Development Rider*

IPL offers an economic development rider<sup>10</sup> available to customers who otherwise qualify under the Large Power Service Tariff<sup>11</sup>. Large Power Service is restricted to customers of at least 200KW and receiving service at 13.2KV or higher. The rider further restricts service to "industrial" load which does not appear to be a defined term in IPL's tariffs. Industrial customers are defined as "any business that is primarily engaged in the manufacturing or processing of a product for sale or resale or any other similar industrial related activities as may be determined by the Department from time to time." The tariff further restricts load or load additions served by this rider to that which has at least a 50% load factor. The load factor is the average electricity consumption (kWh) divided by the maximum possible usage (KW). The load factor essentially tells how consistently a business or facility uses electricity.

The discount that is given to customers under this rider is established on an annual basis, which declines each subsequent year. Two sets of discounts are provided based upon a new load or load added at an existing location.

| SCHEDULE A*           | SCHEDULE B**          |
|-----------------------|-----------------------|
| 1st Contract Year 35% | 1st Contract Year 14% |
| 2nd Contract Year 30% | 2nd Contract Year 12% |
| 3rd Contract Year 25% | 3rd Contract Year 10% |

<sup>10</sup> [www.independencemo.gov/sites/default/files/2023-11/EDR%20November%202023.pdf](http://www.independencemo.gov/sites/default/files/2023-11/EDR%20November%202023.pdf)

<sup>11</sup> [www.independencemo.gov/sites/default/files/2023-11/MG4%20November%202023.pdf](http://www.independencemo.gov/sites/default/files/2023-11/MG4%20November%202023.pdf)

|                                |                                |
|--------------------------------|--------------------------------|
| 4th Contract Year 20%          | 4th Contract Year 8%           |
| 5th Contract Year 10%          | 5th Contract Year 4%           |
| 6th Contract Year and After 0% | 6th Contract Year and After 0% |

### *Analysis of the Economic Development Rider*

The economic development rider provides a mechanism for IPL to promote the City and attract new load. However, the following challenges exist with the current mechanism supporting an IPL economic development strategy:

- Figures 3 and 4 below illustrate that the existing economic development tariff provides, at best, temporary discounts compared to other electricity providers in the region.
- Inasmuch as the declining percentage discount is a common feature of economic development tariffs, IPL must recognize that their existing rates are higher than many local utilities. Figures 3 and 4 compare the discounted IPL rates to other local utilities.
- IPL has a history of shifting the allocation of the revenue requirement from residential to larger customers, making IPL unattractive to new larger loads.
- The economic development rider does not address job creation or contribution to local property taxes, the two primary goals of economic development.
- The economic development rider is restricted to manufacturing. However, much of the new load, which will be located in the Kansas City area, is not manufacturing. Much of the new load would contribute to job creation and expanding the tax base but are currently precluded from receiving a discount.
- Lastly, manufacturing does not ensure job creation. Two examples: 1) Air-separation plants are considered manufacturing but do not create any significant employment, and 2) Adding significant load to support robotic manufacturing may reduce overall plant employment.

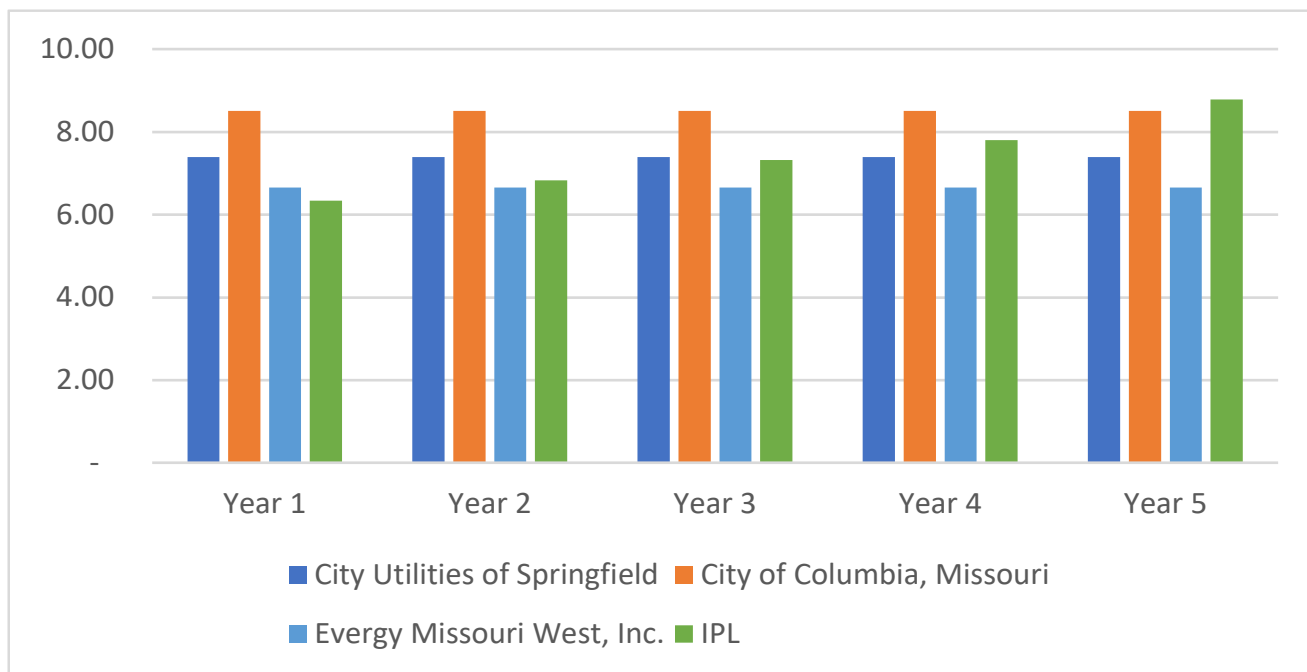


Figure 3 – Schedule A Economic Development Rate Discounts

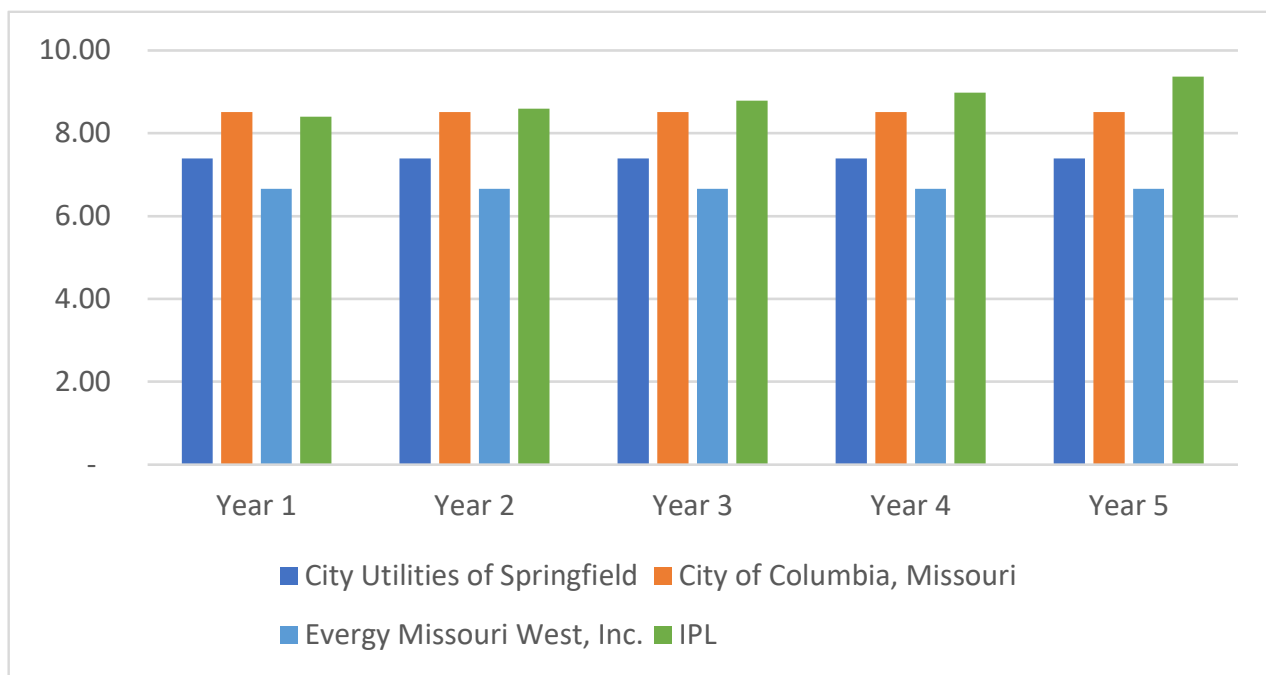


Figure 4 – Schedule B Economic Development Rate Discounts

## Strategies

Based on the interviews and data analysis, the following are the suggested financial priorities for IPL:

1. Competitive rates, simple, transparent, and adjusted on a regular basis.
2. Financially sound with adequate reserves, ability to fund priorities and maintain infrastructure.
3. Leverage the utility (reliability and rates) as an Economic Development tool.
4. Pursue funding opportunities such as grants and federal Inflation Reduction Act of 2022 (IRA) money.

## Foundational Strategies

In order to achieve these priorities, IPL and the City should start with the basics.

### ***Know and understand your cost of doing business***

IPL and the City prepare annual detailed budgets which should be programmatically driven to achieve current and long-term goals. Each manager should know and understand their budget and what drives the costs of programs so that they can respond accordingly.

Today, financial forecasts are based on data that is over two years old and reflects needed rate increases for 2024. When managers were interviewed, those that relied on city services and tools did not know their department's budget or receive quality and timely reports. This has led to frustration and the inability to identify or trend data to maximize their functional area performance.

DKMT's financial model, with updated costs, and maintaining the status quo, shows the timing of future rate adjustments which are in the range of 2% to 7% beginning in 2028. Detailed cost and rate studies would provide more precise forecasts. Further, obtaining grant funding for large projects, debt funding capital, the timing of major capital investments, the implementation of technologies and efficiencies, and growing the customer base will affect the size and timing of future rate increases. For more details refer to the financial model in Appendix D.

To facilitate strong financial management and ensure transparency the following practices are foundational to create a base for decisions and building a strong future for IPL:

1. Complete and accurate financial data should be collected and timely reported (for example, by the "N<sup>th</sup>" day following the closing of books, all managers should receive their monthly budget and actual financial reports to evaluate variances and needed actions).

2. Monthly or quarterly reports should be provided which compare and evaluate actual performance against budgets and forecasts.
3. Financial forecasts should be updated at least annually to reflect the current financial state of IPL and to provide management with the data necessary to make quality decisions on future funding needs.
4. Financial forecasts, along with demographic and load forecasts, are necessary to determine the timing and amount of future rate changes.
5. Decisions should consider the level of reserve funds required to meet financial policy targets, the ability to cover costs, debt service coverage adequacy, bond ratings, and funding required to implement key initiatives.
6. Streamlining administrative processes which drive costs by requiring additional resource time or work steps (for example, procurement).
7. Performance metrics which inform utility and city management, PUAB, and City Council how IPL is performing against clear functional goals would facilitate early identification of risks and opportunities. Performance measures that are publicly shared support transparency and begin to rebuild public trust in the utility.

***Once costs are understood, they can be managed and facilitate strategic decisions***

Costs to operate the utility, referred to as “cost of service,” are driven by the number of customers, type, and how and when they consume electricity. For example, if every customer (residential, commercial, and industrial) turned on their air conditioner full blast at the same time, the need for additional power would drive up the cost of serving those customers. Every customer plays a role in driving the cost of energy resources on that day. If, under this same scenario, industrial customers had an incentive not to turn on their air conditioner when every other customer class did, they would not be contributing to higher power costs. As a result, they could receive a different cost allocation or even a credit to reward them for helping reduce overall power demand and expense. Not only knowing the costs of serving electric customers, but what is driving those costs, will support the development of fair, competitive and equitable rates.

Once factors like cost and determinants, such as what customers are using power when, are known, IPL has the basis for creating rates tailored to each customer class. Some foundational rate design options are listed below.

Evaluate rate structures and ability to fund investments while maintaining affordability:

1. Simplify rate design – continue work on modernization of rates.
2. Update IPL cost of service studies annually.
3. Identify cost drivers and move revenue allocation closer to cost of service.
4. Customer choice – add rate design options which provide customers with additional choices based on how they use and want to manage their electric use and cost.

5. Low income – a component of IPL’s residential customer class is economically vulnerable. Investigate the feasibility of developing low Income rate options which provide discounts to low-income customers who are able to manage their use.

### **Implement changes supported by good data analytics**

#### *Cost Studies and Rate Design*

IPL’s rate design was analyzed based on the results of the previous rates study in 2018, the updated financial forecast in 2022 and discussions with IPL staff. The rate design in place at the time of this study was antiquated and, in the opinion of DKMT Consulting, difficult to understand. The rates sent questionable price signals to customers. However, since 2022 the rate design has been updated and significantly improved. The IPL staff should be commended for the improvement in the tariff/rate designs.

The cost allocation between classes does not appear to have been addressed. Interviews with IPL and the City staff have indicated that past Councils have directed them to shift rate increases away from residential customers to commercial and industrial customers. As a result of the cost shifting, IPL’s commercial and industrial tariffs are uncompetitive compared to peer utilities (See Appendix E Rate Comparison Details).

IPL staff last updated the financial model used to determine IPL’s revenue requirement in 2022, which was an update of the prior model. That model predicted a need for rate increase in the years 2024 and beyond. Based on DKMT’s financial model, IPL should prepare a new cost of service study and determine what is the proper allocation of costs between customer classes and timing of increases. An immediate adjustment of the rates to the proper cost of service levels may not be practical. However, IPL should gradually move toward rates that cover the costs associated with each rate class and reduce any cross subsidy between rate classes.

As discussed above, IPL has significantly improved the rate design compared to that which was proposed in the (Burns and McDonald) BM study. However, additional changes in rate design and better cost information could provide IPL with the ability to reduce costs, capture new load, and increase customer satisfaction.

#### *Future Economic Development Tariff*

A strategically supportive economic development rider should consider the following elements and advantages<sup>12</sup>:

#### **Elements:**

1. The discounts should be predicated upon the creation of jobs or increases in tax revenues for the City of Independence.

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<sup>12</sup> The proposed economic development rider model is similar to a special contract between CoServe, a cooperative in Texas, and Nebraska Furniture Mart



2. Any economic development rider should be available to all business types that create jobs or contribute to tax revenues and not be limited to “industrial” customers.
3. Any increase in load should not increase IPL’s risk.
4. IPL participates in the SPP wholesale market which provides an opportunity to access an observable price:
  - A transmission/distribution charge which is similar to existing tariffs.
  - A generation component composed of the market price of energy, capacity, and ancillary services.
  - A margin for IPL.
5. The SPP market provides energy, on average, that is 40% renewable and is a resource for customers with stated “green” energy goals.

## Future Strategies

*The lack of AMI prevents IPL from offering more sophisticated rate designs. The following options can only be implemented after AMI is installed. In order to tailor rates to better meet customer’s needs, IPL needs data on how and when customers use their power, especially for commercial and industrial customers.*

After the implementation of AMI and other supporting technologies, IPL can take advantage of the option to implement rate designs currently offered by most utilities. Examples include:

### *Residential Rate Design*

- Residential Time of Use (TOU) and Real Time Pricing (RTP) rate designs. These rate designs send a price signal to customers to consume electricity when costs are lower. TOU rates provide an opportunity for IPL to capture loads such as electric space heating and electric vehicle charging for incentive pricing based off peak use. All Missouri IOUs are required to implement TOU elements in their standard residential rates.
- Electric Vehicle (EV) – EV rates typically provide a discount to customers to charge vehicles during low-cost periods, such as in the middle of the night.
- Electric Heat Pumps – IPL is located in an area where the adoption of electric heat pumps could improve the energy efficiency of homes. The area has a significant cooling load and a relatively low heating load. Further, recent technological changes enable new heat pumps to provide levels of efficiency at 300% of electric resistance heat technology. In order to make heat pumps attractive to customers, electricity prices to operate the system must move closer to natural gas prices. Another option to incentivize the use of heat pumps is to

offer rebates that are significant enough that all customers could participate and thus have an opportunity to lower their energy cost.

- Demand Response (DR) programs – Incentives in the form of rate discounts or rebates can be developed for customers that help defer the purchase of the next incremental unit of power, thus saving all customers money. Allowing the control of devices behind the meter such as programmable thermostats is one example of DR.

DKMT suggests that to support the widest variety of rate options, future cost of service analysis includes a Marginal Cost of Service Study and a Rating Period Study. A Marginal Cost of Service Study quantifies the costs of adding or subtracting a unit of service (e.g., energy or demand) to the system. A Rating Period Study provides a rigorous quantification of time periods with high and low costs supporting the development of TOU and special rates encouraging efficient use of electricity. Further, these studies are critical to developing cost-effective energy efficiency programs.

#### *Commercial Rate Design*

IPL offers two commercial tariffs: the Commercial Rate (less than 50KW) and the Small Power Tariff (greater than 50KW but less than 200KW).

The Commercial Rate contains a monthly fixed charge and a flat energy charge. The rate design is a common offering for small commercial customers with limited energy needs. DKMT suggests that after the adoption of AMI, IPL should investigate the following pricing design options for the Commercial Rate customers:

- A TOU energy price signal allowing for a reduced off-peak price (see residential discussion above).
- A commercial electric space heat option targeting promoting the adoption of electric heat pumps (see residential discussion above).
- The introduction of a demand charge – a rate mechanism that measures the KW used (demand) which is in addition to the kWh or energy billed to a customer. Demand charges are typically fixed costs and provide a means of billing for the customer's contribution to a utility's capacity requirement.

The Small Power Rate contains a monthly fixed charge, two demand charges, and a flat energy charge. DKMT suggests the following potential changes to the Small Power Rate:

- A TOU energy price signal allowing for a reduced off-peak price (see residential discussion above).
- An electric space heat option targeting promoting the adoption of electric heat pumps (see residential discussion above).

- A demand response or critical peak pricing option allows customers to be compensated when costs are high if they reduce load or demand during critical peak periods when prices for power are higher than other times.

### *Industrial Rate Design*

IPL offers two industrial tariffs: Large Power Service and Industrial Power Service. Both tariffs have monthly fixed charges, two demand charges and on- and off-peak energy charges.

DKMT suggests the following potential changes to these tariffs:

- A non-firm option provides customers with a discount in exchange for curtailing load when requested by the utility, usually during times of high-power supply costs. The curtailment saves both the industrial customer and IPL money, benefiting all customers.
- Pricing based upon SPP price signals on a day-ahead or real-time basis. This gives large users of power the benefit of prices driven by their electric use during high and low market periods. It puts the customer in control of when they consume electricity and how much it is based on its cost.

### *Leverage the value of public power for economic development*

- Take advantage of the flexibility of a city owned utility to develop rates and services to attract businesses that help the City grow and reduce overall costs to the rest of the customers.
- Identify realistic economic development targets.
- Provide economic development incentives that avoid “free rider” problems.

### *Pursue outside funding sources*

There are federal funding sources currently available and being used to supplement utility technology, customer, and carbon reducing initiatives. IPL has not had the resources to be able to pursue these opportunities. DKMT suggests that IPL explore the following opportunities:

- Evaluate how the Department of Energy (DOE) Inflation Reduction Act (IRA) program can be used to fund needed improvements such as AMI and apply for funding.
- Regularly look for grants or other programs to fund new initiatives and technology for IPL, especially related to reducing the utility’s carbon impact, serving a significant low-income population, and creating innovative solutions for customers.
- Investigate DOE Loan Program Office (LPO ) government guaranteed loans.

## Resource Requirements

The financial and rate implications of implementing the operational strategies are discussed at the end of the report. . The most significant non-technology cost to implement the above strategic options would be appropriate staffing levels and capabilities to support IPL. Resources include personnel dedicated to generating quality and timely reports, analyzing results, working with managers to understand the implications of results, and regularly updating financial forecast and rate models. This will likely require the addition of at least one Financial Analyst dedicated solely to IPL (an IPL employee) to generate, evaluate and report on the financial data to support improved data driven decision making. This is a critical position that at one time existed but is no longer funded. An experienced utility financial analyst is critical in assisting city management and utility leaders in understanding the financial implications of their work, establishing performance measures, and support rate making efforts.

In addition, financial and enterprise systems may need to be updated and optimized to facilitate integrated reporting and analysis. User groups and best practice resources can provide guidance on how to get the most benefit from existing systems and process modifications.

The analyst could also evaluate additional funding options like federal IRA grants.

In addition, DKMT assumes the implementation of the above strategic options will require:

- Rate and Tariff design changes: Hiring a full or part-time rate analyst to support current staff. There is one person at IPL who performs all rate design and analysis functions. This person is extremely knowledgeable and is the only one who understands and can perform this function. As a risk and succession planning strategy, IPL should bring on another analyst to support this function.
- The contracting of experts, on an as-needed basis, to evaluate PPA financial structures, cost allocation and rate design options, and other financial recommendations where solutions can be realized in the short term and knowledge can be transferred for long term sustainability.
- The allocation of technology resources to optimize existing systems to provide integrated reporting and analytic tools.
- Resource Requirements for Economic Development Implementation – Hire a consultant to assist rate and financial analysts in developing new economic development rates.

# Customer Strategy

## Background

DKMT interviewed various IPL and City of Independence departments, as well as community members, to determine whether the level of customer service provided to the community was adequate.

The following is a list of customer programs IPL currently funds (more detailed descriptions, funding levels, and program participation is found in Appendix F).

- Commercial and Residential Rebates
- Surge Protection
- Home Energy Loan Program
- I-SHARE
- IRAP
- Community Solar
- Weatherization
- Marketing/Community Involvement

Feedback from various stakeholders identified a lack of knowledge and understanding of customer programs. In the case where some programs were understood, there appears to be a greater need to increase budgets or evaluate program performance. For example, the IRAP and ISAFE programs budgets are completely spent each year. This indicates the program outreach is successful, and they are filling a community need. However, without regular assessments and performance metrics (such as reduced delinquencies and turnoffs, savings in operating costs) it is not clear whether these programs are achieving any intended goals or whether they are adequate. Conversely, in conversations with business owners, many were unaware of programs that provided incentives or rebates for commercial customers. The lack of customer outreach may be a result of the high turnover in the City's Public Information Office (PIO) and the lack of dedicated personnel to support IPL communications. In addition, there appears to be a shortage of IPL staff to manage and deliver these programs.

A modern utility is customer focused, where the needs and wants of customers are a top priority. Customer service strategies, by far, had the most suggestions for change as brought forward by the Council, PUAB, Community, and IPL. Based on the interviews and data analysis, two key strategic areas were identified to support a more customer centric approach to serving the Independence community

– **Communication and Extension of Service Offerings.** More specifically:

1. Make it easy to do business with IPL.
2. Proactive in solving customer needs, including to be present, and transparent in explaining requirements, decisions and actions.
3. Communicate and implement active outreach, using multiple mediums, of IPL offerings and services.
4. Build better customer relationships through a large customer key account program and simplified communications.
5. Communicate expected IPL cultural and personnel practices, to both employees and oversight boards. Support ethical and transparent business practices in order to rebuild community trust.
6. Based on the high utilization of some of the IPL programs, especially those serving low income residents, evaluate each program for expansion or change, establish performance metrics to measure its value and whether established goals are being achieved.
7. Help customers reduce bills and have more control over decisions on when and how to manage electricity costs by implementing technology, programs, and rates that are more customer centric.
8. Leverage utility rates and services to enhance economic development and attract industry that can provide new jobs, strengthen, and diversify the economy, and spread fixed costs over more users to lower rates.

## Strategies

### Foundational Strategies to Improve Services to Customers

#### *Communications and Outreach*

A well planned and executed communication strategy is necessary to ensure customers of IPL are knowledgeable about programs and services, as well as how to do business with their utility. To support this strategy, IPL will need to:

- Develop a cohesive message about the fundamentals of IPL: 1) What does IPL do, 2) How to do business with IPL, and 3) What value IPL brings to the community.
- Create a unified value system that is regularly communicated both internally and externally, as well as reinforced by managers and leaders within the utility and the City to create a culture that mirrors the expectations of the community and places value on both the customers and employees.

- As the community observes consistent behaviors around transparency, data driven decisions and openness to input, trust will begin to rebuild between customers, employees, the PUAB and Council.
- Use multiple mediums to reach customers where they are most comfortable. Utilize bill stuffers, a website or app, emails or texts, signage, booths at community events, or any other opportunity to tell IPL's story where citizens and businesses are most likely to receive it. Communicate often, succinctly, and with a consistent message.
- Establish a formal Key Account program for large customers. Key Account programs assign a point of contact for each major customer to be the liaison between the customer and utility. Key Account managers are focused on problem solving and meeting the needs of those customers. It builds a relationship between the customer and IPL, as well as promotes economic and business growth. This is a service most utilities offer their largest customers. Key Accounts program management allows IPL staff to be responsive to customer needs in developing products such as florescent lighting replacement rebates, energy efficiency incentives, solar rebates, and more. Today, Customer Service does some of this, however it is infrequent, and many customers seem to be unaware of such services. The new Director has begun quarterly meetings with the large customers, which has been well received.

#### *Services and Programs*

- Products and Services – Customers mentioned not knowing of any offerings IPL had for energy related services or that they were limited and did not meet their needs. Best practice utilities continually evaluate service offerings and adjust to meet the current environment for their customers. A list and description of all of IPL's offerings is in Appendix F. With at least 15% or more of Independence's population at or below the poverty level, a concerted effort to develop programs to help customers reduce usage, such as energy audits, expanded weatherization retrofits, and low energy lighting retrofits would be of significant value.
- Energy Efficiency (EE) programs are implemented by utilities in order to control inefficient and costly consumption of electricity by customers. Well-designed EE programs provide benefits to both the customer and the utility. Customers benefit from receiving a lower bill, and the utility benefits from reducing overall capacity and energy requirements. In the past 40 years, EE programs have become uniformly adopted.

An expansion of EE programs would be beneficial to the community of Independence. IPL offers some EE programs, but the interviews indicated that the level of coordination in the development and marketing of these programs could be enhanced. For example, in an interview with a large customer, they stated that they were able to participate in EE programs for facilities served by Evergy, but no such similar programs were known to be offered by IPL. Conversely, interviews with IPL staff indicated that EE programs were

available. Communication, better outreach, and evaluation of existing programs' value to customers would begin to bridge the gap between IPL offerings and customer's needs.

- IPL should expand offerings to attract and retain their commercial and industrial customers by utilizing key account staff and innovative products beyond just economic development. Commercial customers have not been aware of most programs offered by IPL that would provide assistance in managing their electric bill. For example, some programs that may appeal to the commercial and industrial customers are solar rebates, energy efficiency, and voluntary interruptions during high energy price periods that can save money and reduce capacity requirements.
- In the future, IPL should investigate the potential for expanding, coordinating, better communicating, and marketing their EE programs. Optimally, EE planning should be coordinated with a larger generation and transmission group as part of a larger resource planning effort to reduce costs and maintain or improve reliability and customer satisfaction levels.
- Lastly, customer service is only offered during "business hours" which is not typical of most electric utilities. Efforts should be made to expand call center hours and automated services to accommodate all customers at all hours.

#### *Technology Enabling Customer Service Tools*

The lack of technology tools increases costs. Additionally, new rate mechanisms that could lead to increased load growth often require technology tools that currently, IPL does not possess.

- Outage response tools for both internal IPL usage (by storm teams, engineers, dispatchers, etc.), as well as by the customers and the public (media organizations) might include:
  - Synchronized customer information system with outage management system (OMS) and GIS database to allow accurate customer outage identification.
  - Integrated and automatic publishing of near real-time outage maps that are accessible (see website and customer app tools below).
  - Damage assessment tools used by IPL internal staff and Line workers / Journeypersons.
  - Estimated Time to Restore (ETR) algorithms for use by IPL internal staff to estimate storm response resources and to provide customers with regularly updated ETR. Through the internet and customer apps, customers will be able to have updated ETR without having to call IPL staff.
- Billing system enhancements:



- Allow large customers with multiple meters to have one consolidated bill.
- Simplified process of changing graphics for customer bills to be more user friendly.
- Historical usage and bill comparisons will be available for online inquiry by customers.
- Website and App Customer Tools – IPL currently has a website that is limited and is without an app capability to facilitate customer communications and transactions. Utilities with advanced websites and apps can expect that 80% of their customer communications will occur on those platforms, reducing call center operations costs. Enhanced web and app tools can facilitate doing business with IPL, including customer interactions such as requesting new service, disconnecting service, changing customer information, outage reporting, and applying for program offerings. This website and app would provide customer support 24 hours, 365 days a year. In addition, there would be cost savings in paperwork, administration, staffing, as well as increased customer satisfaction – all of which would be long term benefits.

#### *Other Economic Development Tools*

As mentioned in the “what’s working today” section, reliability is key to customer satisfaction and is a strong economic development tool. More and more businesses evaluate the reliability of the electric utility before making decisions to locate within a community. Continued investment in the transmission and distribution system will support this strategy. This is discussed in more detail in the Operations section of the report.

## Future Strategies

#### *Communications and Outreach*

- Once the foundational strategies are in place, expand customer knowledge and engagement to create focus groups for feedback and community outreach. Utilize modern technology to enhance customer participation and ownership in the direction of future IPL services.

#### *Services and Programs*

- As AMI is implemented, evaluate combining incentives with rate plans to motivate customers to consume electricity more efficiently. For example, providing a rebate for heat pumps, while designing special rates for customers with heat pumps, could save the customer money on their electric bill and save utility resources by moving usage away from peak periods, thus using the system more efficiently and reducing the need for new power supply resources.

#### *Technology Implementation*

Some examples of the use of websites and apps from other utilities include messaging to customers when usage has increased, or high bills are anticipated. These technologies require the adoption of other enabling technologies, such as AMI, but increase customer satisfaction.

- Other strategies based on the implementation of AMI would be bill savings to customers who agree to utility management of thermostats during peak cooling or heating periods. Creating tariffs or rates that incentivize customer management of when they use electricity, would depend on the implementation of tools that allow customers to monitor their usage in real-time.
- IPL needs to develop a strategy which adopts technology to achieve the goals of the utility and view these costs as investments in the system, not an increase in overhead costs.
- Automation of, and regular reporting of, customer program performance using integrated systems to collect data on participation and benefits, such as cost savings, of the programs provides key information. Trending and analysis of AMI data will facilitate flexibility in changing or adapting programs to better serve customers and achieve system goals for efficiency, load management and growth, etc.

## Resource Requirements

### *Communications and Outreach*

- Key Account Management necessitates additional staffing of at least one or more key account managers, depending on the number of customers IPL defines as Key Accounts. These employees will need to have strong customer service skills, as well as a full knowledge of all the programs and services IPL offers.
- Hire an experienced professional in marketing and outreach to develop materials and messages, deliver the messages, and use public outreach to better understand the needs of customers to drive program and service development.
- Hire an experienced Human Resources professional to work with the utility and Board to establish a roadmap and activities for cultural alignment conducive to building trust and confidence in the utility.

### *Service and Program Implementation*

- Hire a staff person or consultant to evaluate and develop or modify programs that better serve the needs of IPL customers, whether it is enhanced weatherization, energy efficiency, rebates, or any other service that data and customer input support.
- Gradually hire staff, over time, to implement and monitor the programs (their success and value) based on the growth in demand for these services.

### *Technology Implementation*

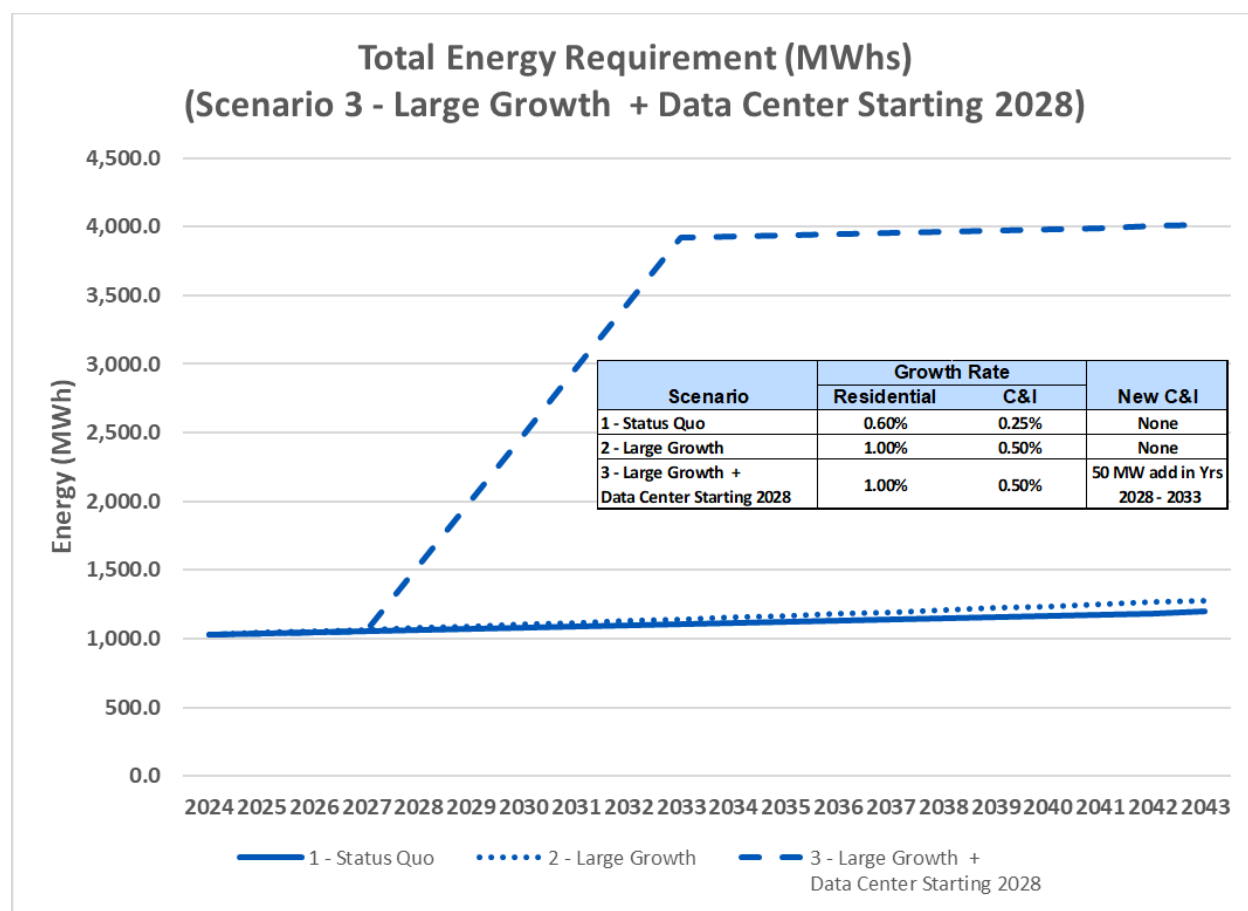
- Hire appropriate level of technology staff to design and provide ongoing support for:
  - Internal AMI, OMS, and other advanced distribution management technologies.
  - Website and app development.
  - Support staff to provide call in help when customers or IPL staff have technology problems.

# Power Supply Strategic Scenarios

## Background

As part of the strategic plan development, DKMT was asked to present three power supply scenarios: 1) 100% IPL owned generation, 2) no IPL owned generation with all power purchased on the market or through power supply contracts, and 3) a hybrid scenario which is similar to what exists today. The team was also asked to evaluate the impact of increasing the use of renewable energy.

The following chart shows IPL's projected use under a status quo scenario, a large growth scenario, and large customer addition scenario. These will serve as reference points for the purposes of developing strategic options for power supply.



The following charts illustrate the generation resources available as IPL owned, IPL as a participatory owner, and through PPAs. Figure 5 currently does not include shutting down Jackson Square J1 and J2. Figure 6 illustrates the impact of the previously discussed shutting down of Jackson Square J1 and J2 in 2030.

These charts are valuable to better inform the timing and amount of power resources IPL will require in the future based on current PPA expiration dates and generation unit replacements decisions. With the exception of meeting SPP reserve capacity margin requirements (discussed below), IPL has time to evaluate options given the length of the contracts and life cycle of the generating units, unless a large customer using more than about 10 to 13 MWs of power came to Independence in the next year or two. That event would require immediate action to meet capacity and potentially power resource needs in excess of what is available under the accredited IPL capacity.

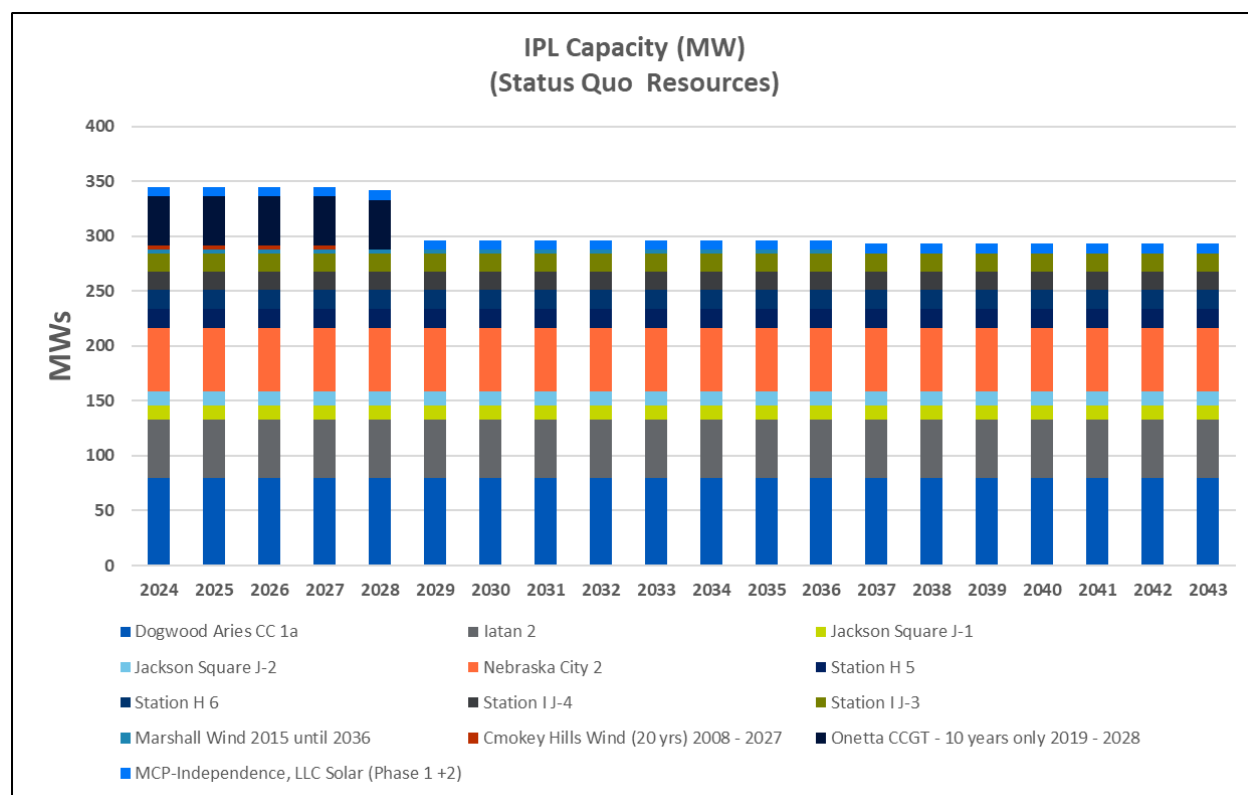


Figure 5 IPL Projected Total Capacity

This second figure is like the first, except it includes the impact of shutting down Jackson Square J-1 and J-2 in 2030.

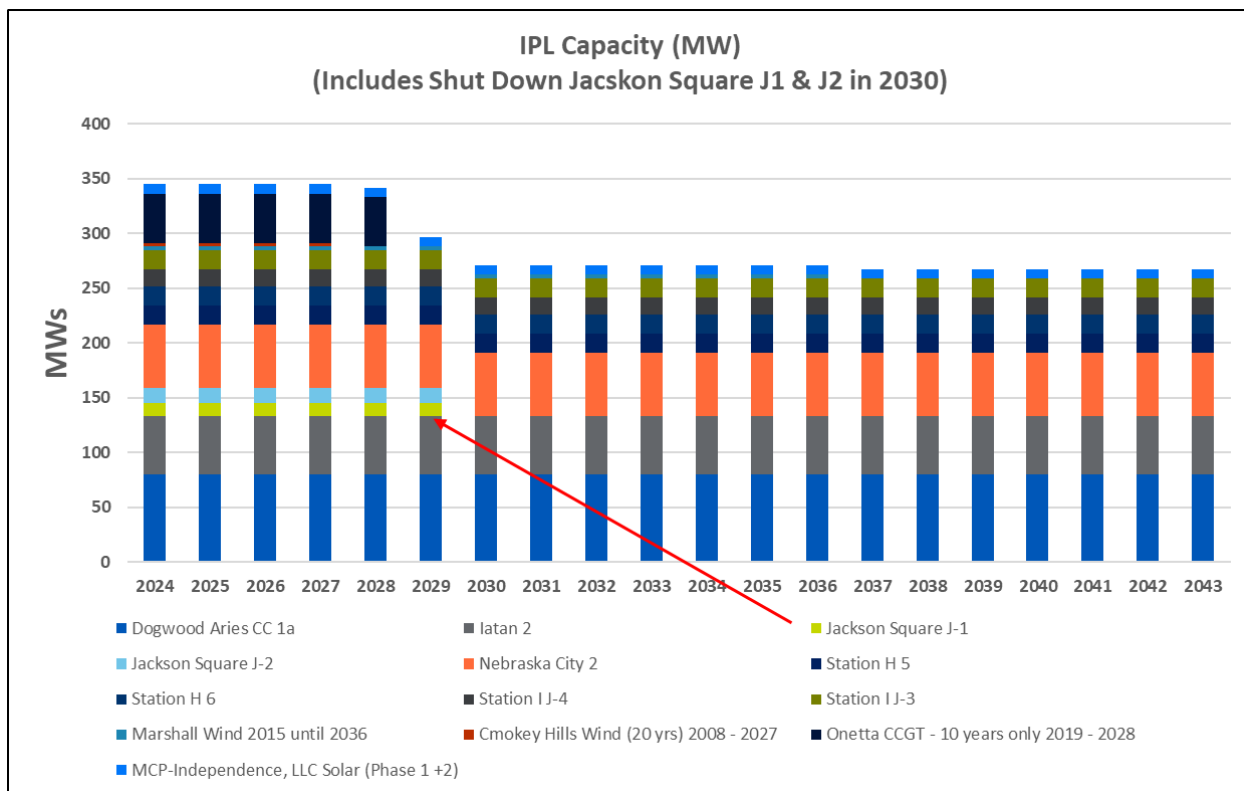


Figure 6 Impact of Shutting Down J1 and J2

*Note: The following is a summary of the detailed description of IPL's current energy market as found in DKMT's Independence Power & Light Cost Benefit Analysis report.*

IPL is a member of the Southwest Power Pool (SPP) and owns both transmission and generation.

The SPP market design ensures that generation plants meet the energy demand at the least cost. This means that SPP dispatches a generation unit based on the marginal costs of a generator to produce the next increment of energy to meet additional demand. SPP prices do not cover all costs of generation; only the marginal cost of producing the next kilowatt-hour needed to meet market demand. Generators that produce energy at a lower marginal cost are called upon more often than generators that produce energy at a higher marginal cost. The generator that is dispatched last to meet market needs is operating at breakeven, while more efficient generators have an opportunity to make money on the difference between their marginal cost and the last dispatched generator's marginal cost. It is essential to understand this fundamental market dynamic to evaluate strategies for meeting future IPL energy (kWh) needs.

Historically, IPL made additional revenue through energy sales (kWh) from its owned generation and participation agreements with Nebraska City and IATAN 2. We believe that as more renewable energy (primarily wind) is added to SPP, IPL's thermal plants (coal, gas, and oil) will diminish over time.

#### Key Takeaways

- Wind is the dominant energy production source in SPP due to its very low marginal cost of production, and, therefore, wind sets a very low wholesale price for energy. The proliferation of low-cost wind power in SPP has diminished the opportunities for thermal (gas, coal, oil) generators to participate in the wholesale energy (kWh) marketplace.
- IPL will likely see reduced revenues due to reduced SPP dispatch of IPL's thermal resources.

SPP membership imposes obligations on IPL and the City. The Resource Adequacy obligation is that IPL must ensure sufficient generating capacity to meet its electrical demand and reserve margin requirements. IPL meets this capacity obligation through its ownership of six General Electric (GE) Frame 5 combustion turbine generators (CTGs) and 12.3% of the Dogwood Energy Facility; through its participation agreements with Nebraska City and IATAN 2; and the capacity merit attributed to its Oneta and wind contracts. The following table shows IPL meeting a 16% capacity requirement with an additional 7.87% capacity buffer.

| Year | Category                                | MW             |
|------|-----------------------------------------|----------------|
| 2022 | City of Independence Peak Demand        | 267            |
|      | SPP Requirement to be 16% <sup>13</sup> | 1.16           |
|      | <b>Required capacity</b>                | <b>309.72</b>  |
|      | <b>Total accredited capacity</b>        | <b>336.2</b>   |
|      | <b>IPL sufficiency</b>                  | <b>107.87%</b> |

SPP's capacity requirements are expected to change due to the increasing non-dispatchable renewable resource capacity (wind and solar) with decreasing thermal capacity. The expected future capacity reserve requirements are expected to increase to a Summer Peak (16%) and Winter Peak (33%) in 2026.

Additionally, should new development within the City of Independence raise the electrical demand by more than 15.4 MW, IPL would be forced to find a counterparty and enter into a contract for additional capacity at prevailing market pricing. Therefore, sufficiency of electrical capacity can be directly linked to the City's economic development opportunities.

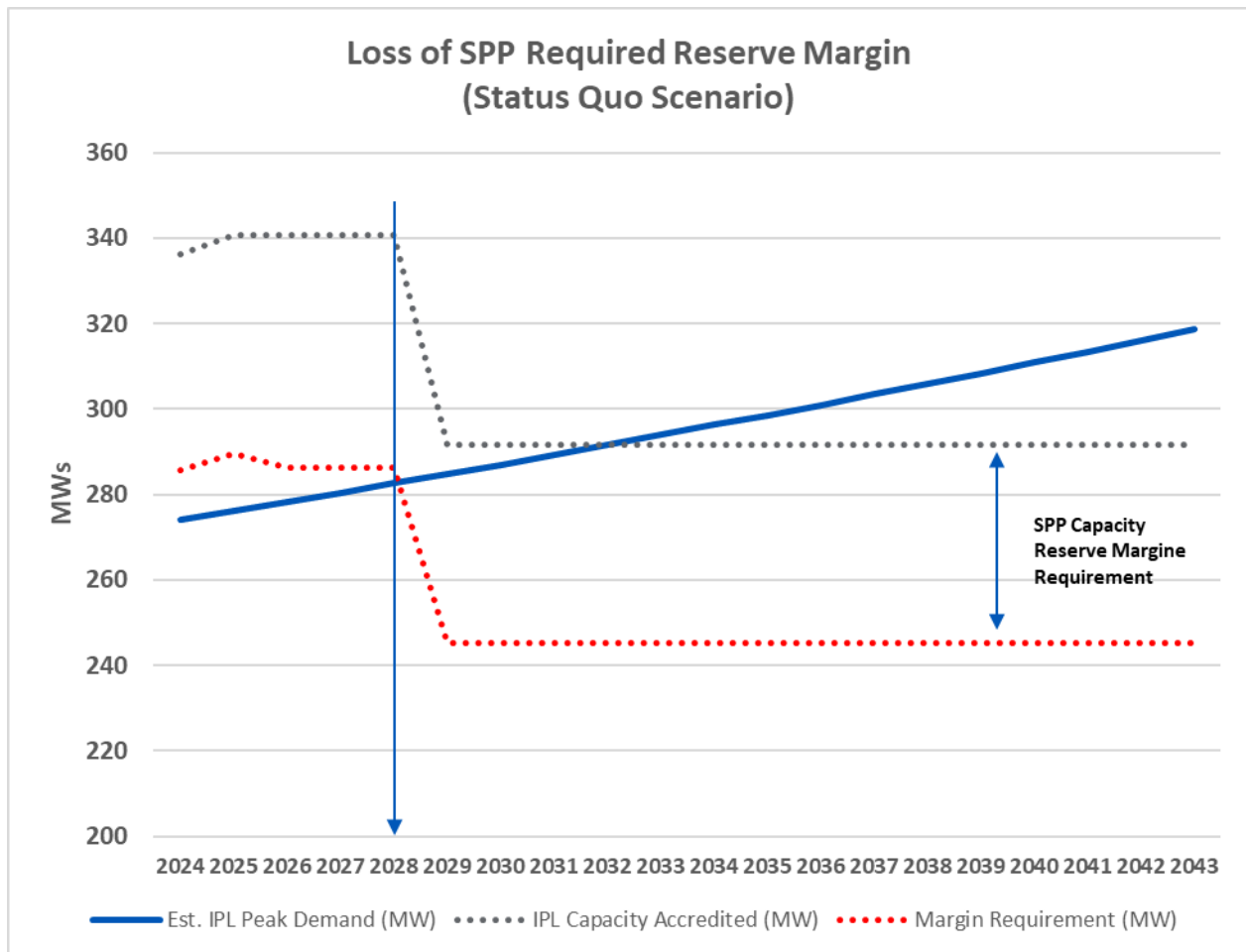
#### Key Takeaways

- The only way for IPL to meet the SPP capacity requirement is either to own generation or to enter into a bilateral capacity contract with another power plant owner.

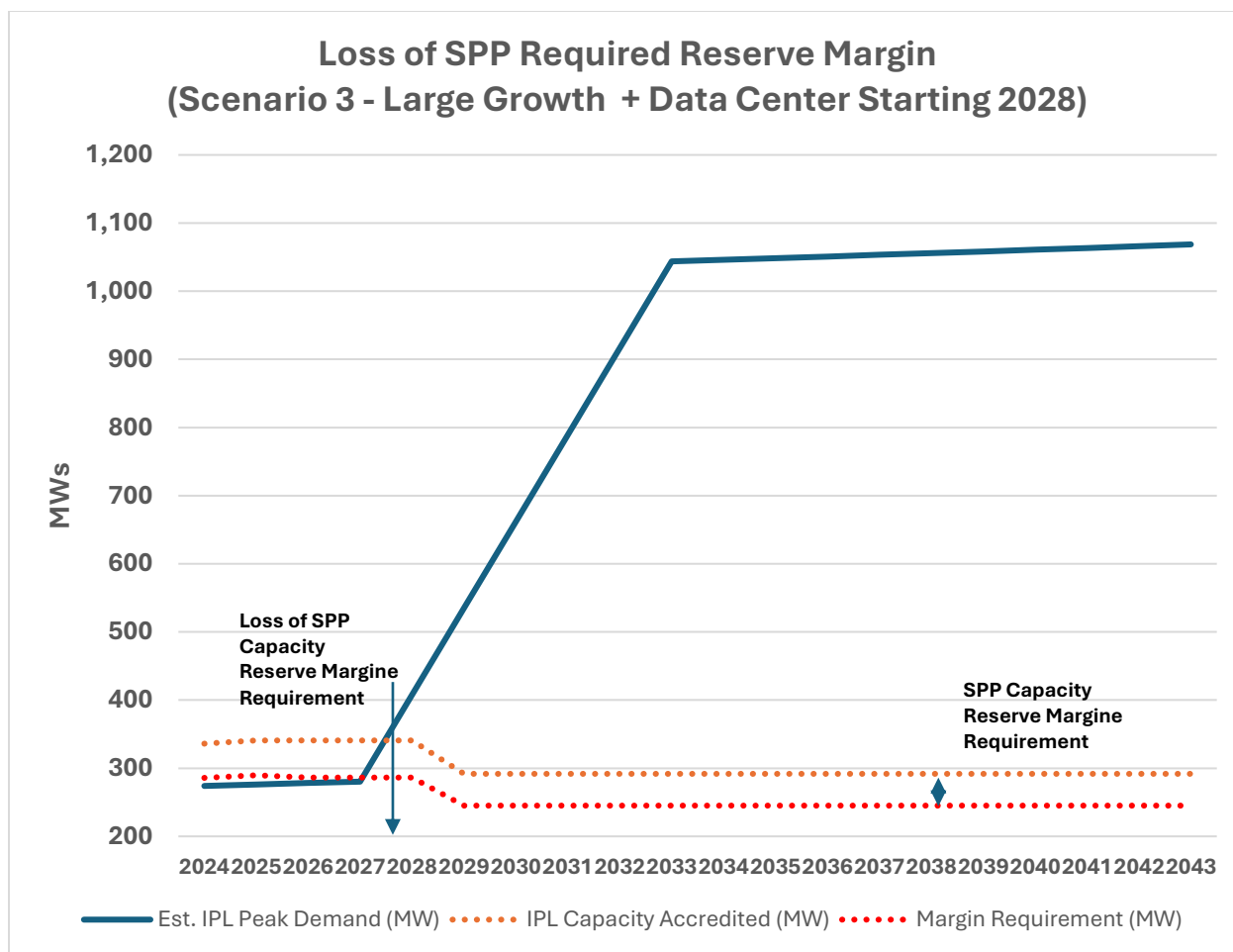
<sup>13</sup> 16% is planned for next 2026. 15% is current requirement.

- As thermal generation plants are retired within the SPP footprint:
  - Contracting for additional capacity will become more expensive, and it will also, in the short term, be harder to find available resources.
  - Capacity requirements will limit IPL's flexibility to unilaterally retire generating units without new build or contracting for additional capacity.

The following Loss of SPP Required Reserve Margin charts (Status Quo and High Growth + Data Center in 2028), shown below provide insight into when IPL will fall below the Southwest Power Pool (SPP) capacity reserve margin obligation (summer peak requirement of 15% until 2026, then 16%). As shown in these charts, even in the status quo scenario identified below, without timely action to increase capacity, IPL will not meet their capacity reserve obligation starting in 2031. However, in a scenario of adding a large customer, new capacity will be needed as early as 2028. IPL should develop additional analysis to determine the scale and timing of required additional capacity resources.

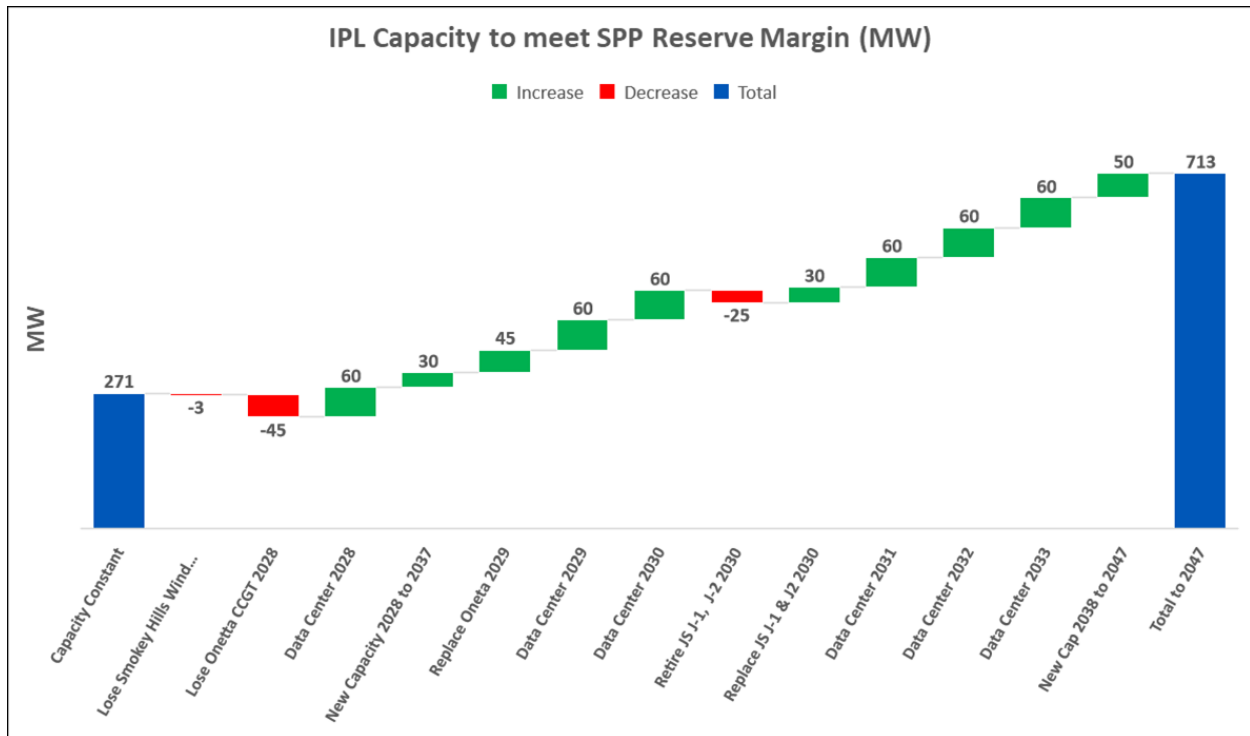




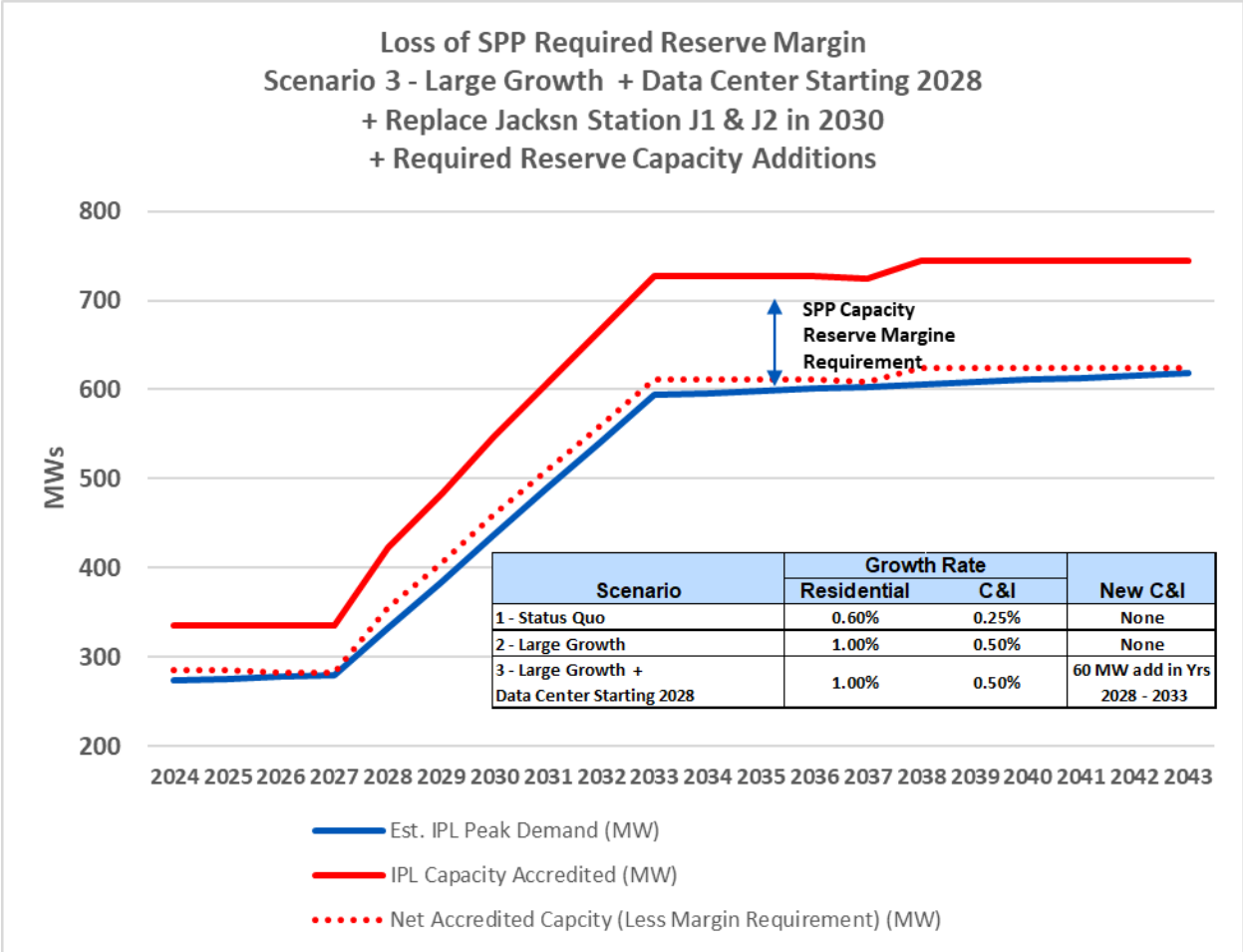


In order to meet the SPP Capacity Reserve Margin, DKMT performed an exercise of adding capacity due to load growth (primarily the envisioned 300 MW data center, and replacement capacity needed due to the retirement of PPA and an assumed retirement of Jackson Station J-1 and J-2 in 2030. This exercise does not represent a recommendation to retire the two Jackson Station units, but to provide additional insight into how and when extra capacity may be required to meet the SPP capacity obligations. The results of this exercise are shown in a stacked bar chart of capacity additions and removals. It also should be noted that this exercise did not attempt to select a generation technology or attempt to complete anything as sophisticated as an Integrated Resource Plan (IRP). The exercise simply provides insight into how the SPP Capacity Reserve Margin might be achieved.

It should also be noted that adding solar or wind capacity to meet the SPP capacity obligation is not practical. Currently SPP severely discounts solar and wind capacity.



This capacity addition/ replacement exercise shows how much capacity is needed to meet IPL's future growth, including reserve margins.



Key topics were identified through DKMT interviews and analysis for IPL’s power supply. These are shown in the table below along with notes on how the topic may impact IPL resource decision making.

| Key Topic                     | Notes on possible impact to decision making                                                                                                                                                                                                                                                                                                                             |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maintain a diverse portfolio. | <p>Least risk for dispatchable technologies are combined cycle gas turbines (CCGT) and combustion turbines (CT). These technologies are well understood including constructability, development time, and operating experience.</p> <p>CCGT and CTs provide dispatchable energy, and the capacity is not generally derated through the SPP accreditation processes.</p> |

| Key Topic                                                                         | Notes on possible impact to decision making                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Increase renewable energy.                                                        | SPP generation mix includes 29 GW of operating wind capacity and wind accounts for between 25% and 44% of total MWh. <sup>14</sup><br><br>From a SPP accredited capacity point-of-view, it is important to keep track of SPP analysis of Effective Load Carrying Capability (ELCC). For example, the ELCC for solar is 68% for summer and 33% for winter. <sup>15</sup> |
| Mitigate the financial risk of coal plants shutting down and associated PPA risk. | Coal plant financial risks include future impact of EPA's requirements for storing Coal Combustion Residual (CCR) (e.g., fly ash and bottom ash).                                                                                                                                                                                                                       |
| Transparency in cost of options for power.                                        | As real estate is to "location, location, location," generating resource decisions are based on "good data, good data, good data". It is, therefore, important to work with consulting organizations to develop quality, executable, and defensible decisions.                                                                                                          |

## Strategies

### Foundational

Both the load growth and resource requirement charts are to provide data points for DKMT's strategic plan. Prior to embarking on future resource acquisitions or construction, IPL should hire a resource planning consultant to develop a professional integrated resource plan that includes load modeling, market modeling, pricing and detailed resource options based on more comprehensive analytical modeling.

### Future

As discussed above, IPL's power supply options are constrained by the need to meet both energy (kWh) and capacity (KW) requirements. There are various options by which IPL can meet its power supply requirements, including the following.

<sup>14</sup> SPP Wind Energy statistics - <https://sl.bing.net/g4USrkfcg0q>

<sup>15</sup> [2022 SPP electric study wind and solar report.pdf](#)

| #  | IPL Power Supply Strategic Option                                                                                                                                                                                                                                                                               | Benefits                                                                                                                                                                                                                                                                                                                                                                                | Drawbacks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Risk to City and IPL                                                                                                                                                                                                                                                                                   |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | IPL owns and operates all of the power supply resources for the City.                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Meets the energy resource needs of the City.</li> <li>IPL has long-term control of all energy and capacity needs.</li> <li>Potential for revenue through energy and capacity sales. But revenue opportunities exist only if generation resources are reliable and efficient (heat rate for thermal assets at high end of technology).</li> </ul> | <ul style="list-style-type: none"> <li>Requires massive capital investment (likely several billion dollars) over a relatively short timeline.</li> <li>Very large O&amp;M investment is required to support all power generation.</li> <li>Requires additional personnel in plant operations and maintenance (typical combined cycle gas turbines plants require between 30 to 40 FTEs to operate, plus additional engineering, fuel purchasing, and other ancillary generation support services personnel).</li> </ul> | <p>Extreme</p> <p>Option not analyzed due to extremely high costs and risk.</p>                                                                                                                                                                                                                        |
| 2. | <p>IPL transitions to a hybrid operating model narrowing operations to only energy delivery (T&amp;D) and customer functions.</p> <p>Energy supply purchased solely through PPAs and/or directly from the SPP energy market.</p> <p>IPL incorporates a hybrid strategy that meets the needs of the City and</p> | <ul style="list-style-type: none"> <li>Reduces overall operating risks and narrows capital requirements to solely supporting the grid and customers.</li> <li>Allows focus to become primarily on economic development and expanding customer needs.</li> <li>Successful public power entities which have shifted to this model<sup>16</sup> (using WEIM) include Sacramento</li> </ul> | <ul style="list-style-type: none"> <li>Requires development of “best-in-class” energy supply procurement governance, power markets and risk management processes, models, and competencies.</li> <li>Would likely require SPP to develop an energy imbalance market like WEIM (Western Energy Imbalance Market) to service IPL’s Regional Transmission Operator (RTO) area.</li> </ul>                                                                                                                                  | <p>Extreme Risk if no Energy Imbalance Market (EIM) is available in IPL RTO territory.</p> <p>IPL would need to make a significant investment in establishing a trading operation or outsource to manage risk and meet regulatory requirements.</p> <p>Option not analyzed as SPP does not support</p> |

<sup>16</sup> [A seat at the trading table: Public power and the energy imbalance markets | American Public Power Association](#)

| #  | IPL Power Supply Strategic Option                                                         | Benefits                                                                                                                                                                                                                                                                                                                                                                             | Drawbacks                                                                                                                                                                                                                                                                                                                                                                                                                                           | Risk to City and IPL                                                                                                                                                                                                                                                                                                                                               |
|----|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | manages risk and market pricing.                                                          | <p>Municipal Utility District (SMUD), and Salt River Project (SRP).</p> <ul style="list-style-type: none"> <li>Colorado Springs Utilities does not currently participate in WEIM but plans to join WEIM over the next several years.</li> </ul>                                                                                                                                      | <ul style="list-style-type: none"> <li>Without “best-in-class” energy portfolio and risk management capabilities, customers are likely to be exposed to very high costs if catastrophic conditions (e.g., Uri)</li> <li>While SPP has an Energy Imbalance Market, it does not include the SPP RTO area supporting IPL.</li> </ul>                                                                                                                   | <p>an Energy Imbalance Market within the SPP RTO serving IPL.</p> <p>Maintain awareness of both APPA and SPP efforts on developing Energy Imbalance Markets that could support IPL’s territory.</p>                                                                                                                                                                |
| 3. | IPL maintains current portfolio of energy supply and energy delivery business activities. | <ul style="list-style-type: none"> <li>Allows building on current processes and expertise within IPL.</li> <li>Utilizing mixture of fully owned and fractional ownership of generating assets along with PPAs provides a balanced work management approach.</li> <li>Allows migrating / shifting to real-time market purchases as Energy Imbalance Markets are developed.</li> </ul> | <ul style="list-style-type: none"> <li>Requires improved financial and load modeling, and a more strategic approach to energy supply management.</li> <li>Requires quality and timely supporting data to effectively identify, assess, and articulate required energy supply decisions and the timeline to complete the decision process.</li> <li>Requires investment in human resources to effectively support the above requirements.</li> </ul> | <p>The starting point is maintaining IPL’s current energy market risk profile.</p> <p>Can provide significant flexibility in the scope and timing of repositioning the allocation of energy supply resources as assets age and markets change.</p> <p>Allows the opportunity for the City and IPL to support more sustainable or carbon free energy resources.</p> |

### *Generation Ownership Scenario*

The dynamics of the Southwest Power Pool have changed dramatically since the 2018 Master Energy Plan was developed. In 2018, ample reserve capacity was forecast through 2023. Today, SPP forecasts capacity shortfalls as soon as 2026 due to plant retirements and growth in

forecast peak demand. IPL has forecast incremental load growth since 2018 but now has opportunities for substantial load growth through new commercial opportunities. The ability of IPL to provide electrical capacity to new customers is directly tied to the City's prospects for economic growth.

Ownership of generation assets is a long-term capital-intensive commitment but can provide a physical hedge against volatility in the capacity pricing. While SPP does not have a capacity marketplace, it does have a resource adequacy requirement that must be met through bilateral contracts or ownership. As the amount of capacity available for contracting diminishes, its cost will rise dramatically.

IPL owns six combustion turbines and has 12.3% ownership of the Dogwood Energy Facility. As pointed out in the August 2021 IPL Generation Replacement Study, the SPP Generation Facility Replacement process allows for the replacement of existing generation up to the SPP transmission limit for a specific substation and can be completed within 6-18 months. The process for new generation outside the replacement process takes from 4-6 years.

If IPL were to consider replacing its combustion turbines with more efficient generation, it could add up to 28 MW of additional capacity through the expedited SPP Generation Facility Replacement Process.<sup>17</sup> Another advantage to this strategy is the potential to earn more SPP generation credits through increased utilization of the new generators.

Additional capacity beyond that described above, would need to be accomplished through the standard 4-6 years Generation Interconnection Process. As a municipal utility, IPL has the flexibility to partner with other entities so it would not have to pursue only sole ownership options. The looming capacity shortage affects all electric providers within SPP. IPL's recently released RFP for up to 300 MW of electrical capacity will provide valuable insight into the tradeoffs between contracted capacity and ownership.

In addition to pursuing greenfield development, IPL's Blue Valley site could be reused for a new generating plant as was proposed by ProEnergy. That RFP process received bids ranging from \$1,841/kW to \$824/kW for approximately 80 MW of generation. One of the drawbacks of smaller sized generators is the lack of economies of scale in pricing. The City's experience with its purchase of a small portion of Dogwood for \$596/kW illustrates this point.

If the City decides to pursue owning new generation, it may make more economic sense to purchase a portion of a larger power plant or partner with other utilities to build a power plant large enough to serve the combined needs of all parties.

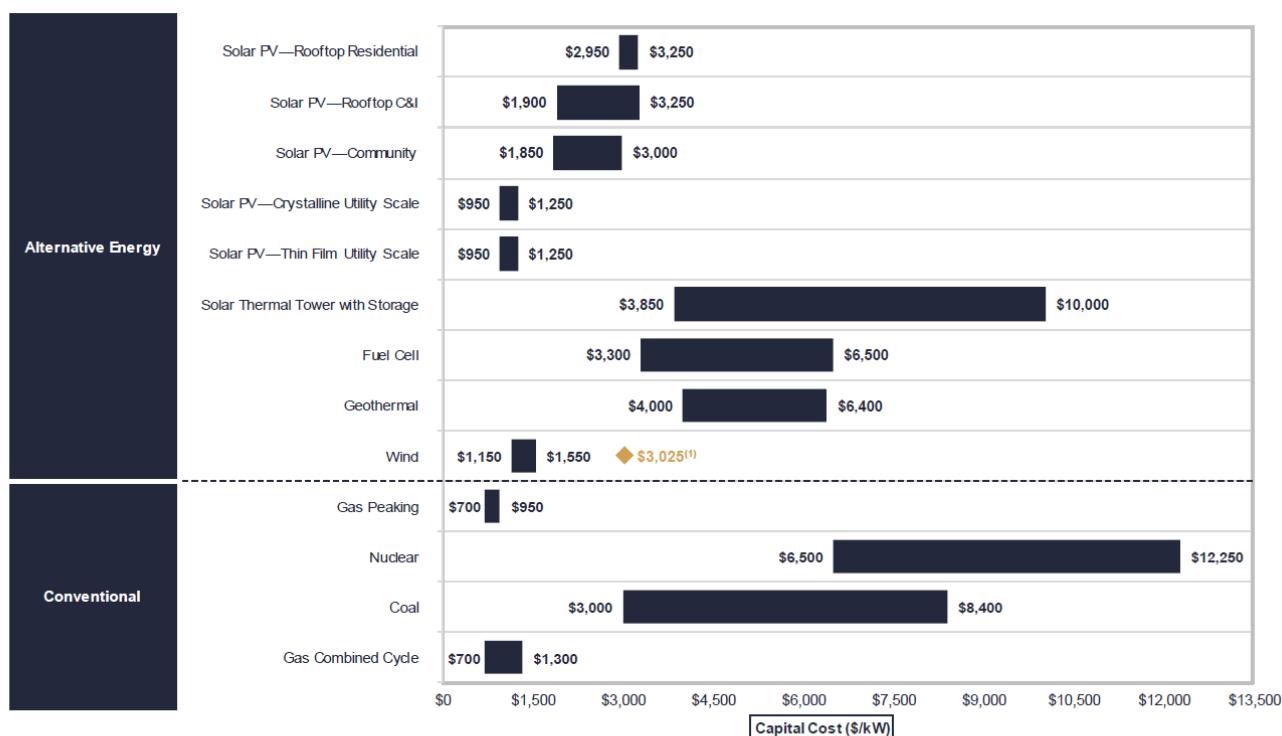
Because the issue at hand is electrical capacity, intermittent renewable energy resources such as wind and solar are not effective solutions. As noted above, renewable energy is abundant in SPP with wind supplying 29 GW of operating capacity. Wind accounts for between 25% and 44% of SPP's total MWh.

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<sup>17</sup> IPL Generation Replacement Study Substation H, I, J SPP Interconnection Limits

Municipal utilities are typically more agile than regulated investor-owned utilities, and they should benefit from tax-free financing, and quicker decision-making. They can also more easily partner with other municipalities or private firms to finance energy projects. The recently enacted Inflation Reduction Act opened the opportunity for local governments to monetize tax credits from clean energy projects and receive the value of the tax credits as direct payments. Similarly, the Department of Energy's Loan Program has numerous programs open to municipal governments to help finance energy projects with the benefit of federal loan guarantees. Programs such as these may help reduce the cost of financing a new generation project, especially renewable or clean energy resources that might not otherwise be an economical choice.

The following figure provides insight into the overnight cost (\$/KW) of different generating technologies.



LAZARD  
Copyright 2018 Lazard

Source: Lazard estimates.  
(1) Represents the estimated midpoint of the total capital cost for offshore wind.

Figure 7 Overnight Costs for Generation

## Purchase Power Agreement Option

A strategy of contracting for all capacity and energy resources has the advantage of reducing fixed O&M costs for city owned generation. However, it increases the risk of exposure to market dysfunction and foregoes the opportunity to earn revenue from city owned generation. In SPP,



energy is very cheap and is expected to stay that way over the next 20 years due to the large amount of wind generation<sup>18</sup>. A strategy of just buying energy from the market without a PPA would ensure IPL is getting the lowest-cost energy possible.

As previously mentioned, the SPP market requires resource adequacy but does not compensate members directly for capacity. The most efficient plants are dispatched first and can earn revenue to cover a portion of their fixed costs. The risk of contracting for capacity is that IPL will have to compete with other members for increasing scarce capacity options in SPP and contracts, such as Oneta, require renewal at the end of the contract. IPL recently issued an RFP for up to 300 MW of capacity to serve optional new loads. The prices reflected in responses to that RFP will allow IPL to analyze whether it is cheaper to contract for capacity or build additional capacity.

As mentioned in the Financial Strategy section, IPL makes capacity payments for the right-to-take capacity from IATAN 2 until the end of its life and NC2 through 2049, both coal plants require IPL to make payments to cover fixed costs whether they are producing power or not.

- To hedge this risk and potentially lower IPL's overall cost, IPL should evaluate an option of issuing bonds to essentially pay off the debt on IATAN 2 and NC2 and lower IPL's cost of PPAs. This could potentially mitigate the financial risk of early closure. The bonds issued by IPL would be put in an escrow, from which capacity payments would be made. The actual debt payments for those bonds, in aggregate, would be lower than the cost of the capacity payments, depending on the term and interest rate. It is recommended this be a long term strategy when interest rates are lower to pay off PPA capacity early, if needed, and set a term that manages the risks, without increasing IPL's financial burden.
- Alternatively, IPL could offer to negotiate a prepayment of expenses (based on the present value of future payments or some other calculation) to lower the ongoing cost of the contracts.

In order to evaluate any of the above strategies IPL must first:

- Determine if the existing PPAs could be prepaid, and if so, would it reduce costs or risks.
- Work with their financial advisor and bond counsel to evaluate options and tools to execute an early pay off.

### **Hybrid Scenario**

At the time IPL was contemplating building peaking units at the Blue Valley site it laid out a detailed hybrid generation scenario which is shown below. This plan should be updated to

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<sup>18</sup> DNV Consulting 20 year price forecast for SPP.

reflect current market conditions and evaluated to see if it is still the lowest cost option for IPL customers.

## Possible Resource Timeline

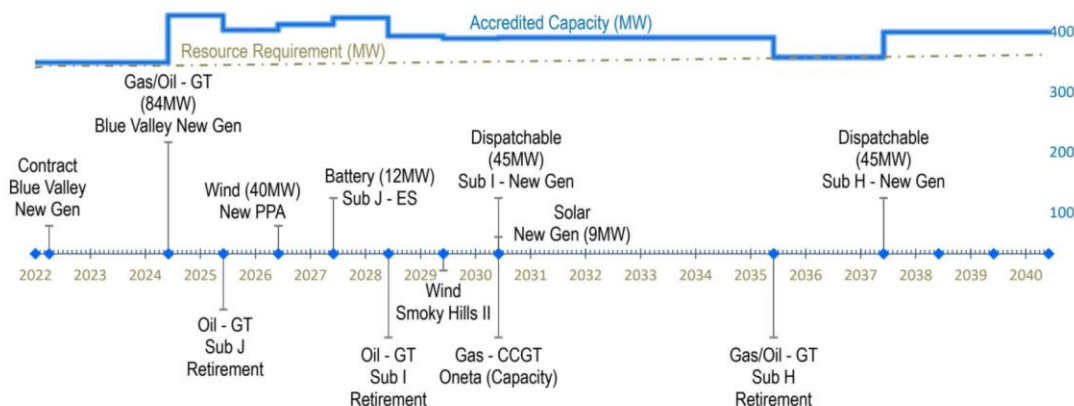


Figure 8 IPL Hybrid Generation Plan

## Resource Requirements

As discussed above, there are several power supply options for IPL to explore. Near-term options are impacted by the number of opportunities to contract for resources and the duration of the SPP generation queue. Without a comprehensive generation study, costs are very uncertain given the number of variables. Long-term plans need to be aligned with the strategic plan and support efforts to make IPL rates more competitive. In either case, it can take from 6 months (to develop and issue an RFP for power) to 6 years (to build a power plant) to secure additional resources, which means IPL needs to begin the process today to be ready for the future.

# Operations Strategy

## Background

### Transmission and Distribution

#### *Measuring electric reliability performance*

In the United States, electric reliability is determined through several measures which are defined by IEEE Standard 1366 – Reliability Indices<sup>19</sup>. We will focus on three of the measurement indices:

1. **SAIFI (System Average Interruption Frequency Index)**: This measure, which provides insight into the frequency of outages, defines how often the average utility customer experiences an interruption. For example, an annual SAIFI of 1.00 would mean that the average customer would see one outage a year while a SAIFI of 0.25 would mean only 25% of customers would experience one outage a year. A SAIFI greater than 1.00 would mean that the average customer would experience more than one outage per year.
2. **CAIDI (Customer Average Interruption Duration Index)**: CAIDI measures the average time, in minutes, required to restore service after an interruption. Practically, it provides insight into how long it takes to restore customers who actually have the outage (not the “average” customer). Technically, the outage duration starts from the time of the interruption (not when the outage is called into the utility) until the customers power is restored.
3. **ASAI (Average Service Availability Index)**: Sometimes called the service reliability index, ASAI is the ratio of the number of hours (per month) where service is provided over the total number of hours per month (about 730 hours per month).

#### *How reliability data is captured*

Interruptions (the event) and outages (the customer without power) are captured by a utility either manually or automatically.

#### *IPL reporting of customer outages*

IPL does not have an AMI system installed; therefore, they manually capture customer outage information in two primary ways.

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<sup>19</sup> <https://site.ieee.org/boston-pes/files/2019/03/IEEE-1366-Reliability-Indices-2-2019.pdf>

1. Customers call the dedicated IPL outage number (816-325-7550). This number, which is the best outage reporting method, allows direct transfer of significant customer information to IPL's Outage Management System (OMS).
2. Customer reported outages: if a customer calls customer service (CS), the CS rep cannot transfer the call directly due to the outage management system (OMS) using the phone number of CS as the source of the outage. The OMS is programmed to use the caller number as the location ID. As a result, the caller is required to call back using the outage number to report a problem. Customers calling the City of Independence's CS call center, who don't want to call back on the outage number, require manual intervention by a customer service representative to ensure the caller number is entered into the OMS which can delay OMS notification. The frequency of synchronizing updated information between the Customer Service information and the OMS contributes to this problem.
3. Difficulty in reporting and outage was a complaint by a large customer who was unable to reach IPL staff to report a significant outage. The customer had to ultimately send staff to IPL's offices to notify them of the outage.

In addition to the manual nature of IPL outage reporting, the IPL process suffers additional challenges due to inaccurate information relating the caller-ID to the service address. Customers are required to call the Customer Service department to update information regarding the phone number assigned to the service address. During 2023, an average of 71% of calls coming into the OMS were "unresolved" (e.g., could not assign a service address of the outage). This significantly slows down the process of accurate and timely identification of the location of the interruption causing the outage(s). DKMT understands how this has occurred at IPL and finds the same problems at other non-AMI utilities. It would be very difficult to develop and maintain a timely quality database correlating service location with customer telephone numbers without significant effort, and likely with the need for additional Customer Service resources.

Additionally, the current IPL outage reporting process adds significant uncertainty to determining when the outage begins and when it ends, as it is dependent on the linemen finding the interruption location, working to restore power, and then manually closing out the work order. If the outage occurs at night during a severe storm, the lineman is focused on working safely and restoring as many customers as possible, and not on the timely and accurate manual notification of a single restoration work order.

#### *IPL distribution infrastructure and reliability*

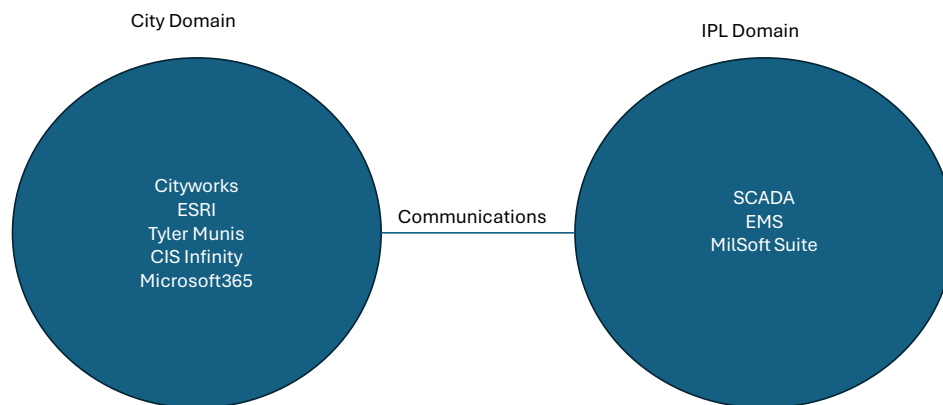
DKMT assessed the overall material condition of IPL's distribution infrastructure. The asset assessment was based on a representative sample of the system (e.g., not a statistically based sample), and was conducted by direct expert observation by both a journeyman/lineman and an electrical engineer. In the judgement of the assessment team, they observed no indications that the system could not support the internally reported reliability performance.

DKMT concludes, as developed through customer interviews, City of Independence community surveys, analysis of both IPL internal and external reliability data (see Appendix G), and our qualitative assessment of the distribution infrastructure, that IPL electric reliability is found to be very good.

## Technology

### Overview of the Technology Environment

The City of Independence (City) and Independence Power & Light (IPL) share the responsibilities for maintaining the technology environment. Provided below is an overview diagram of the two primary domains in which the software and solutions reside.



### City Domain

The City maintains a number of applications that are available to all City departments for use and provides the following functions:

- Accounting
- Human Resources and Payroll
- Procurement and Materials Management
- Asset Management
- Office 365
- Geographic Information System

While the separate domains are maintained by each of the entities, IPL provides dark fiber points of presence (POP) to all the City departments and facilities and manages the telecommunications network.

The CIS Infinity system is maintained by the City and is used by the Water Department to provide all customer billing for services based upon meter readings obtained by IPL employees.

CIS Infinity also does all customer accounting and supports call center services provided for both water and power.

For the purposes of this Strategic Plan, DKMT will focus on systems affecting operations and customer service delivery.

### **IPL Domain**

Within its domain, IPL maintains certain applications that are subject to rules and regulations established by the National Electric Reliability Corporation. These rules are established to assure that each entity can meet certain reliability standards for all generation and transmission owners and operators. While many of these standards apply to physical rules and protocols for operation of those assets, there are certain other standards that apply to Critical Infrastructure Protection (CIP). These standards apply specifically to Supervisory Control and Data Acquisition (SCADA) which is used to manage the Transmission network and key assets in the Distribution network. The Energy Management System (EMS) is subject to these same CIP security standards but is also subject to Inter Control Center Protocols (ICCP) which are established by the Southwest Power Pool (SPP) to dispatch power, purchase power, and participate in the SPP power market.

A critical component that IPL uses to manage its day-to-day operations is a suite of software provided by Milsoft Utility solutions. Major components of this suite include the following:

- Windmill – software that creates an electronic model of all the devices on the distribution network including all substations, primary feeders, and other switching devices. This model is used in conjunction with OMS, discussed below.
- Outage Maps – used to create both internal and external maps.
- Dispatch/Outage Management System – the primary tool in identifying and managing outages that occur on the system. Based on calls from customers, IPL identifies which feeders serve the customers that are out and uses that information to dispatch crews to the suspected lines and or devices connected to the customers with outages.
- Porsche/Outage Call Manager – Integrated Voice Response (IVR) software used to manage outage calls from customers.
- Crew Call – Used to identify crews available and assign them to outages.

The Milsoft suite has effectively served the needs of IPL, as demonstrated by their excellent operation reliability statistics discussed in the Reliability section of this report. However, when configured properly, significant additional capabilities can be achieved by providing an integrated connection between OMS and the CIS/Infinity system to identify outages. Under the current configuration there are certain problems with the data in CIS (e.g., customer phone numbers) and the linking of customers to feeders and devices on the distribution network, this function is not currently available.

In a somewhat unusual arrangement, IPL performs all meter reading and uses the ITRON meter reading solutions and Oracle applications to maintain the data, while the Water Department

provides all billing and customer service, including the call center which handles customer enquiries and takes/transfers all customer outage calls.

### **Shared Applications**

The city also has licensing agreements for certain software that are shared with the other departments including IPL. Most significant among those is ArcGIS provided by ESRI. IPL maintains its own data sets within this application to create maps. Other applications include Dossier and Fuel Master which is used by the Fleet Division asset management and fuel tracking.

### **Assessment of the Current Environment**

The technology used by IPL to manage its generation, transmission, and distribution operations has proven to have been effective. The EMS has been used effectively to participate in the SPP power market and dispatch IPL generation assets, resulting in profits to IPL from the sale of power. SCADA, the Milsoft suite of applications, and other software used to plan, design, and maintain the distribution system has resulted in IPL receiving the RP3, highest rate for reliability, from the American Public Power Association's (APPA). **APPA** recognizes utilities that demonstrate high proficiency in reliability, safety, workforce development, and system improvement. An RP3 designation is a sign of a utility's dedication to operating an efficient, safe, and reliable distribution system.

### **Advanced metering infrastructure (AMI)**

As of 2022, U.S. electric utilities have installed approximately 119 million advanced metering infrastructure (AMI) systems.<sup>20</sup> Among these, residential customers account for approximately 88% of total AMI installations, and about 73% of residential electric meters are AMI meters.

AMI meters, sensing the loss of power, automatically report outages as soon as the interruption occurs. The report is "timestamped" so that, even if there is a delay in the utility receiving the report, the actual start time is captured. In addition, when the power is restored, the AMI meter reports the time of the restoration. A part of the AMI system is Meter Data Management (MDM). MDM removes all manual work associated with outage reporting. In addition, the MDM is directly connected to an Outage Management System (OMS) which, based on meter reports, estimates the place(s) where the interruption occurred. In addition, the OMS will automatically create and send a work order to the utility's field journeymen to initiate restoration. Once the field determines the cause of the interruption (lightning strike, car hitting a pole, etc.) the OMS provides an estimated time to restoration, which is normally available to the customer. AMI removes the location constraint that IPL currently experiences since the meter is assigned to a unique service address, and therefore, when reporting an outage, the system is not dependent on a caller's ID.

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<sup>20</sup> [Frequently Asked Questions \(FAQs\) - U.S. Energy Information Administration \(EIA\).](#)



## **Benefits of an AMI Implementation**

As demonstrated by the Smart Grid Investment Grant (SGIG) Program, the following benefits were identified:

- Reduced costs for metering and billing from fewer truck rolls, labor savings, and reduction in safety incidents.
- More accurate and timely billing.
- Experience has shown that the more accurate meters result in an increase of approximately 3% in revenues.
- Fewer customer disputes.
- Improvements in operational efficiencies.
- More customer control over electricity consumption, costs, and bills from greater use of new customer tools (e.g., web portals and smart thermostats) and techniques (e.g., shifting demand to off-peak periods).
- Lower utility capital expenditures and customer bill savings resulting from reduced peak demand and improvements in asset utilization and maintenance.
- Lower outage costs and fewer inconveniences for customers from faster outage restoration, more precise dispatching of repair crews to the locations where they are needed.

Implementation of an AMI environment is a complex and costly process that requires a 3 to 5 year time period for a successful implementation.

## **Prior IPL Efforts for AMI Implementation**

Beginning in 2015, the City began a process to evaluate the feasibility of an AMI solution. This process continued through the Feasibility Study, the issuance of a Request for Proposal (RFP), evaluation of proposals and the selection of a vendor. However, for a combination of issues including costs, community concerns, and union concerns, the City decided not to pursue the AMI implementation.

Based on interviews and data analysis, DKMT identified the following strategic priorities:

1. To be a unified utility.
2. Considered an industry leader.
3. Attract creative people with innovative ideas to solve problems.
4. Be more efficient, modern, and competitive.
5. High performer.

6. Recruit, retain, and train a highly skilled workforce and be considered “Best in Class.”
7. Transparency in reliability calculations.
8. Implement AMI and other standard technologies (update to current version of Microsoft applications, automated mapping tools and online field access, automated switching) to support a reliable, efficient and customer centric system.
9. Hardened systems that are resilient, more underground lines.
10. Enhanced cybersecurity.
11. Collaborate with new development.
12. Strong emphasis on safety.

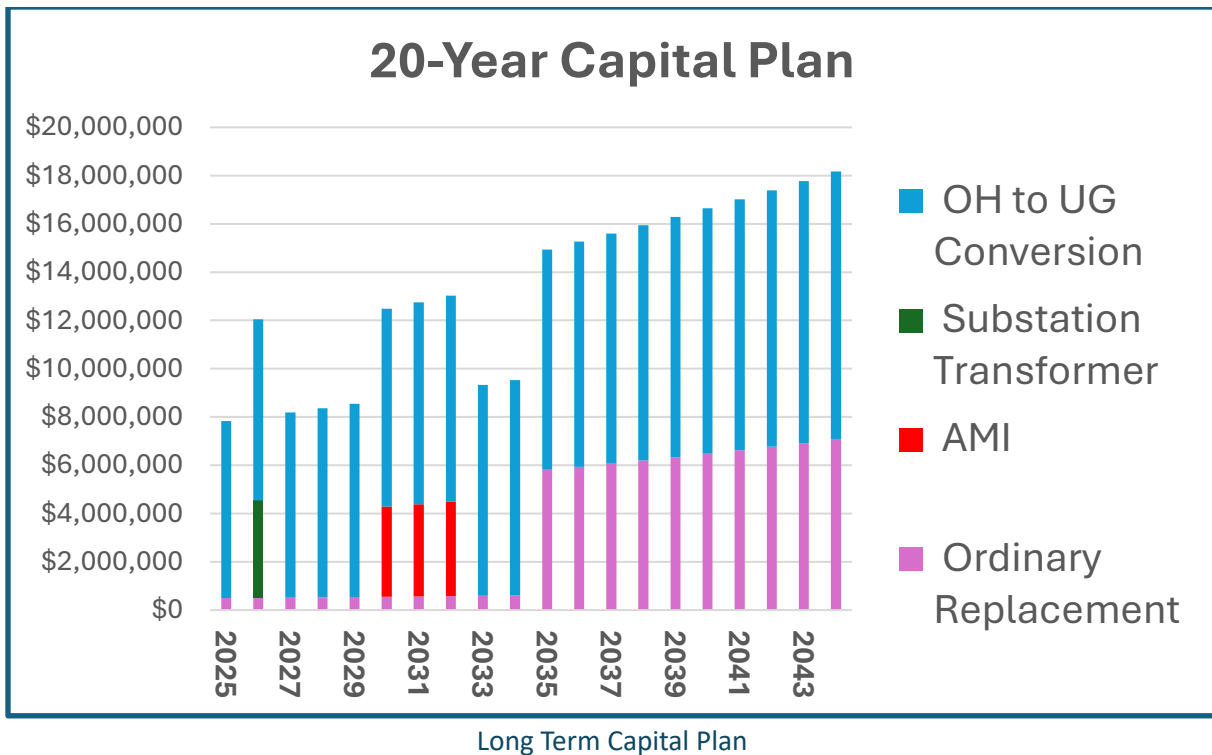
## Strategies

### Foundational

In order to ensure IPL maintains a resilient reliable system there must be a Long-Term Capital Plan for replacements and upgrades that considers the age and performance of assets and financial constraints of the utility. The following describes DKMT’s recommendations:

1. Ordinary Replacements – system equipment replacements based on age and condition of assets and expected life.
2. Critical Upgrades and Replacements – equipment and systems assessed to be between 30 to 40 years in service or in the lower end of fair condition.
3. Growth
4. New Systems
  - a. Meter Conversion to AMI
  - b. Overhead to Underground Conversions
  - c. Spare 161/69kV Substation Transformer

The following chart is a graphic representation of the recommended capital plan options for upgrading and replacing the existing T&D infrastructure and maintaining its current high level of reliability. This is a basic plan and assumes no significant new requirements or customers would be added to the system. The budget for this plan has been incorporated into the financial model for the purpose of projecting cash flows and rate changes.



## Technology

Based upon interviews and observations from the development of the IPL strategy, there are many opportunities that exist in the areas of outage identification, restoration, and communication with customers. Short-term recommendations include the following:

- Update the Milsoft model to trace all feeders to the customer account meters.
- On a regular basis, validate customer phone numbers for ease of outage location identification from call-ins.
- Milsoft to Cityworks integration for damage assessments.
- CIS infinity to Cityworks integration for utility field work and meter reading activity.

These efforts can provide specific improvements in identifying outages, determining which customers are affected, and improve dispatch of crews to respond to outages in a more effective way.

## AMI

As discussed in previous sections, the most impactful long-term activity includes the implementation of an Automated Metering Infrastructure (AMI). This represents the best practices in those utilities who have undertaken this program.

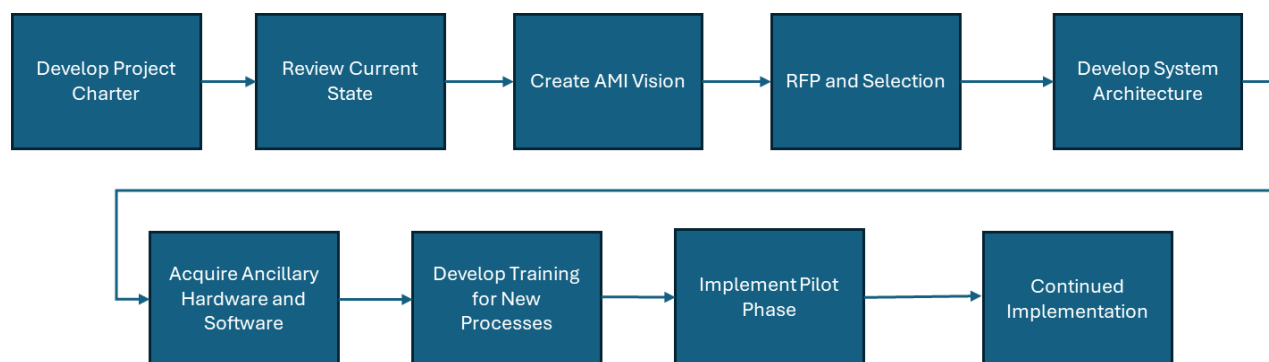
As part of the American Reinvestment and Recovery Act of 2009, the Department of Energy received grant money called Smart Grid Investment Grants (SGIG). Deployment of AMI and customer systems accounted for more than two-thirds of the \$7.9 billion total SGIG investment. SGIG projects invested in new communication networks and information management systems that form the backbone of AMI. Results include the following:

- 16.3 million smart meters – 29% of total U.S. smart meters installed by 2014.
- 250,000 Programmable Communicating Thermostats (PCTs).
- 400,000 Direct Load Control (DLC) devices.
- 100,000 In-Home Displays (IHDs).
- 417,000 – participants in time-based rate and incentive programs.
- 9 – customer web portals.

The SGIG projects demonstrated that AMI and customer systems can achieve substantial grid impacts and benefits for both customers and utilities.

### Recommended Next Steps

In order to begin the journey for implementation of AMI at the City, it is critical to create a vision of the functionality of the AMI-enriched services to be provided for the benefit of the City and its community. Standard project activity and time frame are described below and can take between 3-4 years.



## Future

### Cybersecurity

As an owner and operator for both transmission and generation assets, IPL is required to meet certain reliability standards that are required by the National Electric Reliability Corporation (NERC), which has been charged by the Federal Electric Regulatory Commission (FERC) with

enforcement of the prescribed reliability standards. Cybersecurity has been identified as one of the top strategic risks listed by executives as they look to the future. Interviews indicate that no issues have been identified in a recent review. However, IPL must outsource EV charging infrastructure because it cannot meet cybersecurity requirements. Cyber risks will continue to increase, and security measures will continue to be upgraded. IPL must have staff to stay current with methods and tools to protect utility systems and meet any future regulatory requirements.

## Resilience

At present, infrastructure resilience and outage response times are reasonable. However, utilities across the country are assessing the capabilities of their systems with respect to surviving extreme events and minimizing restoration time. IPL should continue to adhere to its current design and construction standards; reviewing wind, ice and temperature loading conditions on an annual basis to address potential and experienced extreme events is prudent. Consistent vegetation management is one of the most important mitigation measures for maintaining and improving the resilience of the system. The Capital Plan also includes acquiring a backup 161/69kV substation transformer as a key resilience measure due to the reliance on the 161/69kV system transformer capacity and long lead times for acquisition of a replacement in the event of failure of one of the existing transformers.

## Safety

A discussion of safety in the context of this report is limited to the safety of the public with respect to transmission and distribution facilities. IPL should continue to ensure that electrical clearance criteria are met and replace aging equipment to minimize potential mechanical failures that could affect the community. Again, vegetation management is a key component to maintaining safe clearances and reducing the potential for faults during storms.

## Staffing – New Hires and Retention

Hiring and Staffing for the future – incorporating new technologies, training, critical thinking, and succession planning: Where and how to recruit talent (e.g., new innovative resource pools like working with local HS and community colleges to develop specific skills and partner to provide internships), and competitive pay. New technologies and tools are changing the skills needed for a modern workforce. Experienced employees are aging out and retiring. Hiring and retaining employees is even more challenging given the diversity of options and pay opportunities. IPL and the City, working with employment experts, should explore innovative work options and alternative pay structures that are more comparable to the businesses IPL

must compete with to recruit talent. Because IPL is a City department, creating competitive pay plans is a challenge when not consistent with City pay structures. Loss of talent is a reality for Independence and the key to implementing most all the options proposed in this report is having a dedicated skilled workforce. An independent board oversight could facilitate a compensation evaluation and decision, as it would not be City centric.

## Resource Requirements

As discussed above, AMI (costs and savings) and the long term capital plan are significant resource requirements that need to be funded to maintain excellent reliability and put IPL on a level playing field with other regional utilities. These costs are incorporated into DKMT's financial model to show the impact on rates. DKMT assumed, given the magnitude of the investments, part will be debt funded which allows the costs to be spread over the life of the assets and the cost born by rate payers benefiting from those investments. Other technology strategies that optimize existing systems are assumed to be included in existing budgets for software maintenance.

Future strategies require resources to upgrade skills and perform new tasks. Some of this can be met by retraining existing employees and upgrading their skills, as well as attrition opening up opportunities to recruit for the jobs of the future.

## Summary, Budget, and Timetable for Strategic Plan

DKMT used IPL's financial model and modified it for purposes of projecting budget impacts of key strategies. Appendix D provides more detail on the financial impact of the Resource Requirements from each chapter of the report, along with the timing of those impacts.

In summary, if the strategic options, along with changes in financing strategies, are implemented, IPL may not need a rate increase until 2028. IPL appears to have a healthy financial outlook with fixed obligation DSC exceeding targets. The caveat to this will be the timing and source of new generation resources as well as other events that may not have been anticipated. Because this is a high level financial projection, it is recommended that IPL invest in a more detailed financial planning exercise that incorporates a professional generation plan with load forecasts, market forecasts, and the power supply options presented here. This should be reviewed and adjusted annually to reflect new information.

## Additional Long-Term Issues and Future Strategies to Consider

Once IPL achieves the baseline described in previous sections, the opportunities for additional strategic plans increase significantly. The following are some additional long term strategies. However, these cannot be implemented without addressing the financial, rate, technology, power supply, and staffing strategies to bring IPL up to current utility operating standards.

Cultural transformation to a customer centric, technologically advanced, and innovative organization (timeframe 20 years):

- Value – efficiency to utility and added value to customers, cost savings, unified values and operations culture, leading utility of its size.
- Cost – leadership training and follow up (lead by example).

### Future Tariff Design

Electric industry rate designs are anticipated to significantly change because of electrification, Distributed Energy Resource (DER) saturation, increased adoption of electric space heating, increased information made available to customers through the adoption of Advanced Metering Infrastructure (AMI), and changes in the cost structure. Additionally, customers and the utilities that serve them have access to immense quantities of information about customers' consumption, market prices and operation factors (e.g., congestion) providing opportunities for pricing design which benefit both customers and utilities.

The consequences of not adopting advanced rate design will include the following.

#### Increased Pressure on Rates

Failure to adopt advanced rate designs will trigger additional rate increases for IPL which could otherwise be avoided. The rate increases will be triggered by the following factors:

- Adoption of Distributed Energy Resources (DER) could be economically advantageous to the system as a whole or could trigger cost-shifting and increases in rates. In fact, Independence is seeing growth in permit applications and installation of rooftop solar. Rates will need to be redesigned in order to support the economic adoption of DER.
- The SPP wholesale power market provides IPL customers with an economic source of energy reflecting real-time prices. Failure to take advantage of the SPP price signals when prices are low removes the opportunity for IPL customers to consume low-cost energy. In contrast, sending customers a price signal to not consume when wholesale prices are high saves them money and builds trust in the utility.

#### Customer Defection to Other Energy Sources

Customers increasingly have energy options. In the case of IPL, these options could include natural gas from Spire, propane from local distributors and various DER options. IPL's failure to adopt opportunities for advanced rate designs could trigger customer defections and lost opportunities to attract new customers.

#### Ways to Support New End-Uses

Electrification is expanding the use of electric power. The economic expansion of electric power will reduce IPL's rates as sales expansion provides contributions to cover the fixed costs of the system. Examples of new end-uses include Electric Vehicles (EV), and electric heating supplied through high-efficiency heat pumps.

Provide Mechanisms for Customer Choice – Providing mechanisms where customers can control their energy usage and economically adopt new end-uses. Examples of customer choice mechanisms include innovative rate structures, DER adoption and renewable energy options.

#### Advanced Metering Infrastructure

Adoption of AMI is critical to support Advanced Rate Design. The ability to communicate information about the real-time cost of electric power and the end-uses of electricity by the customer are essential in being able to create pricing signals, provide customers with information to manage their bills and adapt the utility to the customer's changing habits and needs. IPL will be required to make a significant investment in resources in order to support Advanced Rate Design.





# Appendices

A – I

## Appendix A – List of Interviewees

### City Leadership

- Zachary Walker, City Manager
- Adam Norris, Assistant City Manager
- Jim Nail, former IPL Director
- Joe Hegendeff, current IPL Director
- Tom Scannel, Community Development

### IPL PUAB

- Les Boatwright
- Anthony Giaramita
- Mike Talcott
- Steve McLuckic
- Brad Chance
- Sheri Tindle

### Community Leaders

- Jason White, Brent Schonelmayer, Roger Hershey -Indy Energy
- Dee Pack – Cargo Largo
- Doug Cowan – CSI cares
- Jodi Krantz – Chamber of Commerce
- Trent Squires, Chris Chancelor – Northpoint
- Chad McGregor, Kevin Jefferies, Eric Green – IBEW local 53
- Greg McGhee – Independence ISD

### Other

- Chris Lover - PFM

## Appendix B – Input Matrix

*Ideal state for the utility from employees:*

- *A governing body of well-educated professionals who are responsive to the needs of the utility.*
- *The ability to retire and replace 300 MW or more of generation in a cost-effective way.*
- *A well-informed and educated public that understand and support the decisions that the utility makes.*
- *Employees that want to work for IPL and have the skillsets that support strategic priorities, succession planning.*
- *The best reliability in their class of municipal utilities.*
- *Data-driven business decisions.*

|                         | Financial                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Customer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Power                                                                           | Operations                                                                                                                                                                                                                                                                                                                                                 | Governance                                                              |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b><i>IPL Staff</i></b> | <ul style="list-style-type: none"> <li>- Simplified rates</li> <li>- Fully staffed at competitive salaries</li> <li>- Able to buy needed equipment and stay up to date on state of the industry</li> <li>- Strong financial reserves</li> <li>- Streamlined purchasing processes</li> <li>- Valued input to regulatory bodies</li> <li>- IPL staff does not have access to City budget allocated for shared services, difficult to manage/ transparency issue</li> </ul> | <ul style="list-style-type: none"> <li>- Trusted Energy Partner, build better customer relationships</li> <li>- Better and more services at lower rates (DSM, solar, battery, key accounts, energy audits, expanded IHEAP, fiber)</li> <li>- Customer and children education programs</li> <li>- Grow C&amp;I customers</li> <li>- Empowered customers through modern technology</li> <li>- Streamlined billing process</li> <li>- Affordable rate stabilization</li> <li>- Able to offer economic incentives to attract business</li> <li>- Integrated energy response</li> </ul> | <ul style="list-style-type: none"> <li>-Diverse generation portfolio</li> </ul> | <ul style="list-style-type: none"> <li>- Unified utilities</li> <li>- Industry leader</li> <li>- Succession plan</li> <li>- Empowered and educated employees</li> <li>- Upgraded modern distribution system</li> <li>- AMI and updated outage management system needed</li> <li>- Diamond RP3 reliability</li> <li>- Trusted mutual aid partner</li> </ul> | <ul style="list-style-type: none"> <li>- Run like a business</li> </ul> |

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|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
|  |  | <ul style="list-style-type: none"> <li>-Perhaps consider having Customer Service open longer than 8-5, M-F</li> <li>- While customers can see bills online cannot get information on usage, history, trends, or comparison to prior years; no visibility to customer service orders “My Meter” one solution.</li> <li>- Ordinances, bill graphics, start stop robustness, phone system antiquated and does not offer call back, automated sales tax calculation system</li> <li>- No measurement tracking or KPIs for customer programs to evaluate their success such as % of turnoffs avoided, savings of bills, etc.</li> <li>- EV charging contracted out because IPL does not have the technology firewalls to support</li> </ul> |  |  |  |
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|                     |                                                                                                                                                                                                                               |                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                |                                                                                                                                                                                              |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>City Council</b> | <ul style="list-style-type: none"> <li>- Funding of future initiatives maybe difficult</li> <li>- Perception IPL is higher cost &amp; poor generation mix</li> <li>- Use as an eco dev tool with community support</li> </ul> | <p>Better non-technical, non-engineering communication</p> <ul style="list-style-type: none"> <li>- IPL needs to communicate its value to community and how it can help generate jobs</li> </ul> | <ul style="list-style-type: none"> <li>- History of IPL and City still influences distrust</li> <li>- Are current PPA's a bad deal, lack of control over plant operations but still pay</li> <li>- Need oversight and return on these investments</li> <li>- Want to see impact of fully owned generation plan or keep T&amp;D with no generation (contract for all supply)</li> <li>- Skilled staff</li> <li>- Pricing of a single turbine as an option</li> <li>- Is buying into greenbelt express an option</li> <li>- Long term liability of ash ponds, latan and Nebraska City</li> </ul> | <ul style="list-style-type: none"> <li>- AMI Cybersecurity and investment in technology (still on Windows 7 and XT)</li> </ul>                                                 | <ul style="list-style-type: none"> <li>- Governance with subject matter experts</li> </ul>                                                                                                   |
| <b>PUAB</b>         | <ul style="list-style-type: none"> <li>- Stable rates that are adjusted on a regular basis</li> <li>- Use IPL as an Economic Development tool with high reliability and low rates</li> </ul>                                  | <p>Understandable bills</p> <ul style="list-style-type: none"> <li>- Educated customer base</li> <li>- Easier to use customer services</li> <li>- App based</li> </ul>                           | <ul style="list-style-type: none"> <li>- Operate generation independently vs Purchase Power Contracts for supply</li> <li>- Have a plan for</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>- AMI/AMR</li> <li>- High reliability with a diagnostic tool at customer premise</li> <li>- Hardened systems for resilience,</li> </ul> | <ul style="list-style-type: none"> <li>- Governance model that removes city politics from running the utility as a business</li> <li>- Transparency at all levels or organization</li> </ul> |

|                          |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                              |
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|                          | <ul style="list-style-type: none"> <li>- Need to leverage grant opportunities</li> </ul>                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>- Do more to help customers reduce bills</li> <li>- Weatherization?</li> <li>- Need subsidies to put more solar on rooftops, heat pumps, etc.</li> </ul>                                                                                                                                                    | <ul style="list-style-type: none"> <li>future/more generation</li> <li>- 15% legislated goal for renewables, is IPL there?</li> <li>100% renewable would be a good LT goal</li> </ul>                                                                                                             | <ul style="list-style-type: none"> <li>move away from overhead lines and underground</li> <li>- Planned cybersecurity</li> <li>- Need for creative people to produce ideas to make things happen</li> </ul>                                                | <ul style="list-style-type: none"> <li>and governance</li> </ul>                                                                                                                                                                                                             |
| <b>City Leadership</b>   | <ul style="list-style-type: none"> <li>- Adequate reserves</li> <li>- Utility rates cover its payments</li> <li>- Funds infrastructure</li> <li>- Use as a development and redevelopment tool for the City to create a better balance in customer make up</li> </ul>                             | <ul style="list-style-type: none"> <li>- Innovative economy</li> <li>- Business attraction and retention</li> <li>- engaged community</li> <li>- Communicate internally and externally</li> <li>- Simplify communication to the public on needs, issues, etc.</li> </ul>                                                                           |                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>- Make IPL, efficient, modern, and competitive as possible</li> <li>- High performing organization</li> <li>- Recruiting and retaining highly skilled workforce</li> <li>- Want to be best in class</li> </ul>      | <ul style="list-style-type: none"> <li>- Governance model review and need for decision making on critical issues</li> </ul>                                                                                                                                                  |
| <b>Community Leaders</b> | <ul style="list-style-type: none"> <li>- Need a 20% cost reduction or something less to make rates for all customer classes less than surrounding areas</li> <li>- Transparency in negotiations with businesses and rates, but open to Economic Development options IPL could provide</li> </ul> | <ul style="list-style-type: none"> <li>- C&amp;I rates not designed for economic development</li> <li>- IPL rates not lowest, wide area of interest</li> <li>- Prior corruption, FBI involvement, concerned this is a cultural problem with IPL- how do you change this?</li> <li>- Need weatherization programs along with rebates for</li> </ul> | <ul style="list-style-type: none"> <li>- Would like to move forward with renewables in a responsible fashion</li> <li>- Concerned about coal plants shutting down early and plan</li> <li>- Public wants to know what each generation option cost and rate impact, but in a simplistic</li> </ul> | <ul style="list-style-type: none"> <li>- Need a stable staff with a broader view of the industry</li> <li>- Transparency in reliability numbers and how determined</li> <li>- AMI and other technology solutions used by most modern utilities.</li> </ul> | <ul style="list-style-type: none"> <li>- Governance not working, poor relationship with council, not effective or strategic</li> <li>- Council has enough challenges with low socioeconomic issues and budget, IPL focus takes away time from their other duties.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>- Competitive rates top priority</li> <li>- Should apply for ARRA funds to support programs</li> </ul> | <p>energy efficiency and demand side management to help customers reduce bills. Believe the PILOT creates a disincentive to help customers reduce bills.</p> <ul style="list-style-type: none"> <li>- Customers want information to help them control their bills but will need help and education on how to best do that.</li> <li>- Need more customer focus, eco dev rates, outreach to learn C&amp;I customer needs, lack of incentives like lighting upgrades and others that are typically offered by other utilities</li> <li>- Would like to see a cohesive eco dev strategy between the City, chamber, and IPL</li> <li>- Need energy efficient housing for low income</li> <li>- need low-income weatherization</li> <li>- Customer difficulty at times getting response to outage reporting</li> </ul> | <p>easy to understand manner.</p> <ul style="list-style-type: none"> <li>- Preference for capacity contracts for new power.</li> <li>- Very concerned about power plant contracts and associated risks</li> <li>- Interest in reducing carbon footprint but need more advanced solar and storage along with incentives for large customers</li> <li>- Green power increasingly important</li> <li>- Need more PPAs to help be climate resistant</li> </ul> | <ul style="list-style-type: none"> <li>- Good reliability</li> <li>- Collaborative with new development</li> <li>- Need better safety emphasis</li> <li>- Convert from manual to automated maps/drawing for ease of access in the field, field computers to update and not rely on paper and call in to know where crews are located</li> <li>- Automated switching</li> </ul> | <ul style="list-style-type: none"> <li>- Would like to see best in class governance-council needs to be intentional in recruitment</li> <li>- Option to combine two public power organizations to improve governance and efficiencies</li> <li>- Council approval of any eco dev rate is a disincentive to create them</li> </ul> |
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|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |  |
|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
|  |  | <ul style="list-style-type: none"> <li>- Consolidated billing when customer has multiple meters vs a bill for each meter</li> <li>- Communication on programs and services not reaching all large customers</li> <li>- IPL interruptible rate has no way to automatically switch customer off when capacity needed</li> <li>- Would like IPL to be proactive, show up, explain decisions/actions, responsive</li> </ul> |  |  |  |
|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|

## Appendix C – Description of IPL Reliability Awards

Reliable Public Power Provider (RP3) designation<sup>21</sup> – IPL earned, in 2023 for the third straight year, the diamond RP3 designation. This is the highest possible ranking within APPA recognizing IPL as only one of two Missouri public power utilities that have demonstrated proficiency in four key disciplines: reliability, safety, workforce development and system improvement.

Certificate for Excellence in Reliability<sup>22</sup> – IPL was recognized in 2023, based on EIA data in 2018-2022, for achieving a System Average Interruption Duration Index (SAIDI) in the top quartile, including, or excluding Major Event Days (MEDs or ME days). SAIDI quantifies the average outage duration experienced by each customer served.

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<sup>21</sup> [APPA 2023 RP3 Award to IPL, May 3, 2023](#)

<sup>22</sup> [Certificate of Excellence in Reliability | American Public Power Association](#)

## APPENDIX D – Impact of Certain Changes

### Background

As discussed in the IPL Strategic Plan, certain recommendations were made to set IPL up for the coming years. DKMT used IPL’s “do nothing” financial model and reflected certain changes to revenues, operating expenses, capital expenditures, and debt financing.

The changes include the following:

- Update to Revenues and Operating Expenses for 2022 and 2023 actuals
- Staffing additions
- Capital additions
- Debt Financing
- AMI implementation

Explanations for each of those changes are provided below.

### Staffing Additions

Based upon a review of IPL’s organization, recommendations were made for additional staffing. The additional staff and additional costs are detailed in the table below.

| Position                                 | Salary     | 2025       | 2026         | 2027         | 2028         | 2029         | 2030         | 2031         | 2032         |
|------------------------------------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Financial Analyst                        | \$ 90,000  | \$ 135,000 | \$ 135,000   | \$ 135,000   | \$ 135,000   | \$ 135,000   | \$ 135,000   | \$ 135,000   | \$ 135,000   |
| Rate Analyst                             | \$ 65,000  | \$ 97,500  | \$ 97,500    | \$ 97,500    | \$ 97,500    | \$ 97,500    | \$ 97,500    | \$ 97,500    | \$ 97,500    |
| Communications/Marketing Manager         | \$ 80,000  | \$ 120,000 | \$ 120,000   | \$ 120,000   | \$ 120,000   | \$ 120,000   | \$ 120,000   | \$ 120,000   | \$ 120,000   |
| Key Account Manager                      | \$ 65,000  | \$ 97,500  | \$ 97,500    | \$ 97,500    | \$ 97,500    | \$ 97,500    | \$ 97,500    | \$ 97,500    | \$ 97,500    |
| Energy Program Developer                 | \$ 100,000 | \$ 150,000 | \$ 150,000   |              |              |              |              |              |              |
| Energy Program Staff                     | \$ 50,000  |            | \$ 75,000    | \$ 75,000    | \$ 150,000   | \$ 150,000   | \$ 225,000   | \$ 225,000   | \$ 225,000   |
| HR Training Manager/Coordinator          | \$ 100,000 | \$ 150,000 | \$ 150,000   | \$ 150,000   | \$ 150,000   | \$ 150,000   | \$ 150,000   | \$ 150,000   | \$ 150,000   |
| Technology Web and Application Developer | \$ 75,000  | \$ 112,500 | \$ 225,000   | \$ 225,000   | \$ 225,000   | \$ 225,000   | \$ 225,000   | \$ 225,000   | \$ 225,000   |
| Data Analysis                            | \$ 65,000  |            |              |              | \$ 97,500    | \$ 97,500    | \$ 195,000   | \$ 195,000   | \$ 195,000   |
| Total Salary and Benefits                |            | \$ 862,500 | \$ 1,050,000 | \$ 900,000   | \$ 1,072,500 | \$ 1,072,500 | \$ 1,245,000 | \$ 1,245,000 | \$ 1,245,000 |
| Add Inflation at 2%                      |            |            | \$ 879,750   | \$ 1,071,000 | \$ 918,000   | \$ 1,093,950 | \$ 1,093,950 | \$ 1,269,900 | \$ 1,269,900 |

### Update for FY 2022 and 2023 Actuals for Revenues and Expenses

Since the IPL model includes an escalation for revenues and operating expenses to provide for inflation with the starting point in the model based on estimates for those years, the updates to actuals as presented in the audited financial statements in 2022 and 2023 set a new starting point of 2023 for model expense and revenue escalation.

In the case of revenues, IPL estimated customer growth at approximately 1% while customer consumption was reduced by .7%, the net impact is a growth rate for kWh sales of .3%, which DKMT used as the revenue escalation factor.

For operation expenses IPL used individual growth percentages by FERC account. On average, this escalation percentage was approximately 2.2%.

### Modification of Capital Improvements based upon DKMT recommendations

DKMT performed an overall condition assessment of IPL assets and developed annual amounts for capital expenditures. Those values were used to replace IPL forecasts of plant additions.

### Implementation of an Automated Metering Infrastructure

IPL previously (2017) went through a process to approve an AMI system implementation. That effort was discontinued but using the costs from that vendor (inflated to today's dollars), DKMT was able to evaluate the impact of that implementation. Changes were made for the following areas:

- Three per cent increase in revenues due to more accurate meter reads,
- An increase in O&M expense for AMI of about \$700,000 per year,
- Conservative estimate of savings from reduced vehicle turns, labor, and worker compensation.

There will be more savings that can be captured once the AMI system is in place.

### Use of Debt Financing

In IPL's financial model, it was assumed that all capital improvements (CIP) are funded from current year revenues with no consideration to financing any of those investments with debt. DKMT substituted the amounts funded from operations to 50% of the revised CIP amounts. In addition, DKMT assumed that 50% of those CIP expenditures, and the implementation of AMI will be funded by issues of Tax-Exempt Commercial Paper (TECP). For purposes of DKMT analyses, the TECP debt accumulated during the first three years is then replaced with 30-year bonds.

### Summary of the Results

Prior to any adjustments in the IPL model, rate increases of 7% and 14% would be required over the period from 2026 through 2030. With the adjustments provided, IPL's key financial indicators are relatively robust with Debt Service remaining above the targeted debt service coverage of 1.20 and adequate days cash hand, as well as exceeding the risk based targeted reserve of \$25 million are shown below.

| <b>Fixed Cost Coverage Ratio Calculation</b> |                 |                 |                 |                 |                 |                 |                 |                 |  |
|----------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|
|                                              | 2025            | 2026            | 2027            | 2028            | 2029            | 2030            | 2031            | 2032            |  |
| Operating Revenues                           | \$ 137,210,630  | \$ 139,244,415  | \$ 142,211,930  | \$ 143,421,695  | \$ 143,810,456  | \$ 144,199,592  | \$ 144,578,664  | \$ 145,090,053  |  |
| Interest and nonoperating re                 | \$ 4,077,226    | \$ 2,525,826    | \$ 2,525,826    | \$ 2,525,826    | \$ 2,525,826    | \$ 2,525,826    | \$ 2,525,826    | \$ 2,525,826    |  |
| Revenues available                           | \$ 141,287,856  | \$ 141,770,241  | \$ 144,737,756  | \$ 145,947,521  | \$ 146,336,282  | \$ 146,725,418  | \$ 147,104,490  | \$ 168,243,279  |  |
| Operating and Maintenance                    | \$ 111,191,635  | \$ 113,808,522  | \$ 117,485,631  | \$ 120,861,034  | \$ 122,704,111  | \$ 125,691,788  | \$ 128,760,197  | \$ 131,931,293  |  |
| Purchased capacity                           | \$ (13,508,201) | \$ (13,503,067) | \$ (13,499,841) | \$ (13,515,680) | \$ (13,341,350) | \$ (13,475,582) | \$ (13,453,292) | \$ (13,444,832) |  |
| Transfer (PILOT)                             | \$ 11,715,454   | \$ 11,900,121   | \$ 12,169,572   | \$ 12,279,418   | \$ 12,314,718   | \$ 12,350,051   | \$ 12,384,471   | \$ 12,430,905   |  |
| Net cash operating exp                       | \$ 109,398,888  | \$ 112,205,577  | \$ 116,155,362  | \$ 119,624,773  | \$ 121,677,479  | \$ 124,566,257  | \$ 127,691,377  | \$ 115,209,101  |  |
| Cash available for DS                        | \$ 31,888,968   | \$ 29,564,664   | \$ 28,582,394   | \$ 26,322,749   | \$ 24,658,803   | \$ 22,159,161   | \$ 19,413,114   | \$ 53,034,178   |  |
| Debt Service                                 | \$ 8,623,344    | \$ 10,749,922   | \$ 10,749,172   | \$ 10,748,672   | \$ 10,747,922   | \$ 10,751,422   | \$ 10,748,422   | \$ 10,753,672   |  |
| Capacity payments                            | \$ 13,508,201   | \$ 13,503,067   | \$ 13,499,841   | \$ 13,515,680   | \$ 13,341,350   | \$ 13,475,582   | \$ 13,453,292   | \$ 13,444,832   |  |
| Total treated as Debt                        | \$ 22,131,545   | \$ 24,252,989   | \$ 24,249,013   | \$ 24,264,352   | \$ 24,089,272   | \$ 24,227,004   | \$ 24,201,714   | \$ 24,198,504   |  |
| Fixed cost coverage                          | 1.44            | 1.22            | 1.18            | 1.08            | 1.02            | 0.91            | 0.80            | 1.29            |  |
| Fixed cost coverage target                   | 1.20            | 1.20            | 1.20            | 1.20            | 1.20            | 1.20            | 1.20            | 1.20            |  |
| Amount required to meet 1                    | \$ 26,557,854   | \$ 29,103,586   | \$ 29,098,815   | \$ 29,117,222   | \$ 28,907,126   | \$ 29,072,404   | \$ 29,042,056   | \$ 29,038,204   |  |
| Shortfall/(Excess)                           | \$ (5,331,114)  | \$ (461,078)    | \$ 516,421      | \$ 2,794,473    | \$ 4,248,324    | \$ 6,913,244    | \$ 9,628,943    | \$ 2,213,261    |  |
| % Increase                                   | -4%             | 0%              | 0%              | 2%              | 3%              | 5%              | 7%              | 2%              |  |

As can be seen above, IPL's cash flow is sufficient to cover fixed obligations with no shortfall until 2027. As it stands, IPL will not need to have a rate increase until FY2028. It is likely that the addition of AMI

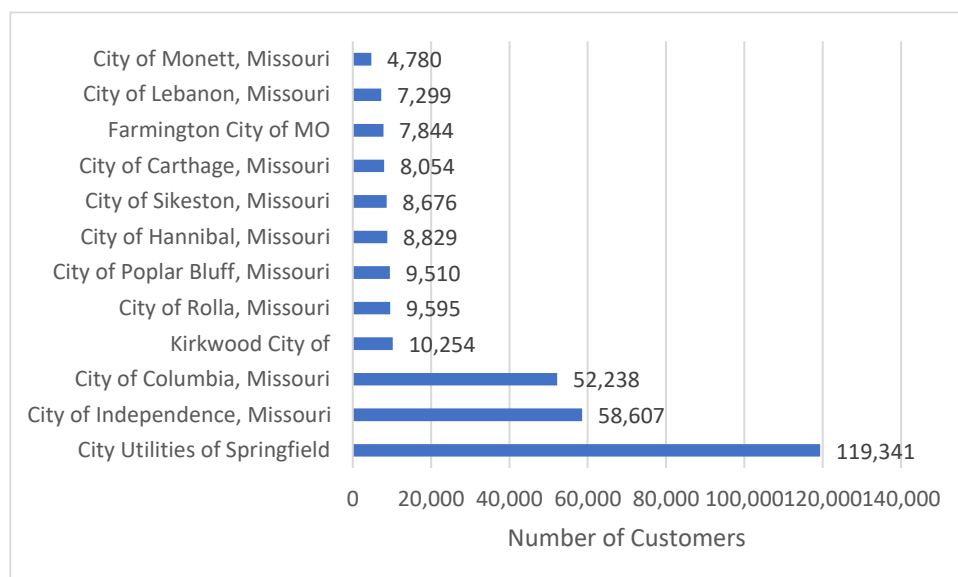
and technology integration could result in enough savings to extend the need for a rate increase beyond 2028. In addition, access to certain grants through the Federal government could reduce the amounts required to meet fixed cost coverages, reduce costs and ultimately the need for future rate increases. Every \$1.3 to 1.6 million increase in grants, revenue or decreased operating expense equates to a 1% reduction in rates.

DKMT did not extend the model projections beyond 2032. Were that projection to be performed, it can be expected that both revenues and operating expenses would increase by about 2% per year.

## Appendix E – Rates Comparison Details

Twelve municipal utilities in Missouri report information supporting the calculation of average revenue per kWh. Figure 2 lists these municipal utilities and the number of customers served.

*Figure 9 – Missouri Municipal Utilities - Number of Customers Served - 2022*

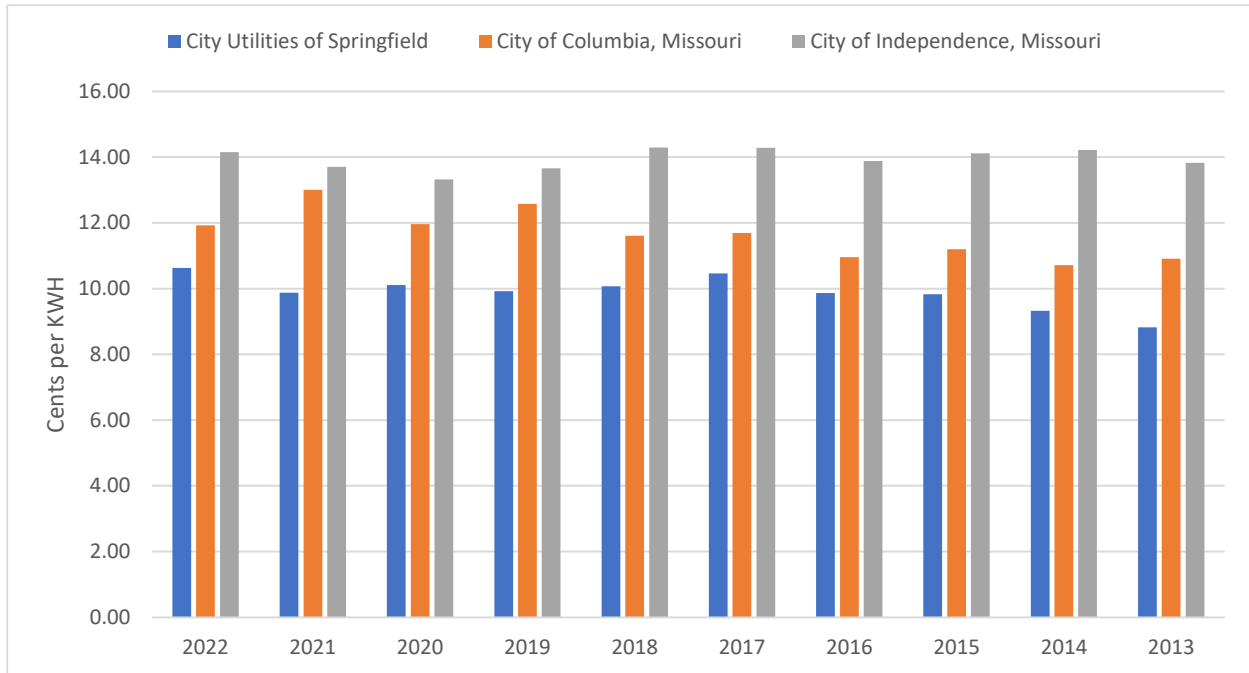


The above figure illustrates that IPL is one of three larger municipal utilities in Missouri, which includes Springfield and Columbia. The next largest municipal utility in Missouri is Kirkwood, which is less than 20 percent the size of IPL. It is unreasonable to compare smaller municipal utilities to larger organizations due to differences in their operations and the economies of scale possessed by the larger utilities. Therefore, the municipal average revenue analysis was completed by comparing IPL to Springfield and Columbia.

Detailed Average Price Analysis (Data is sourced from S&P Global Database)

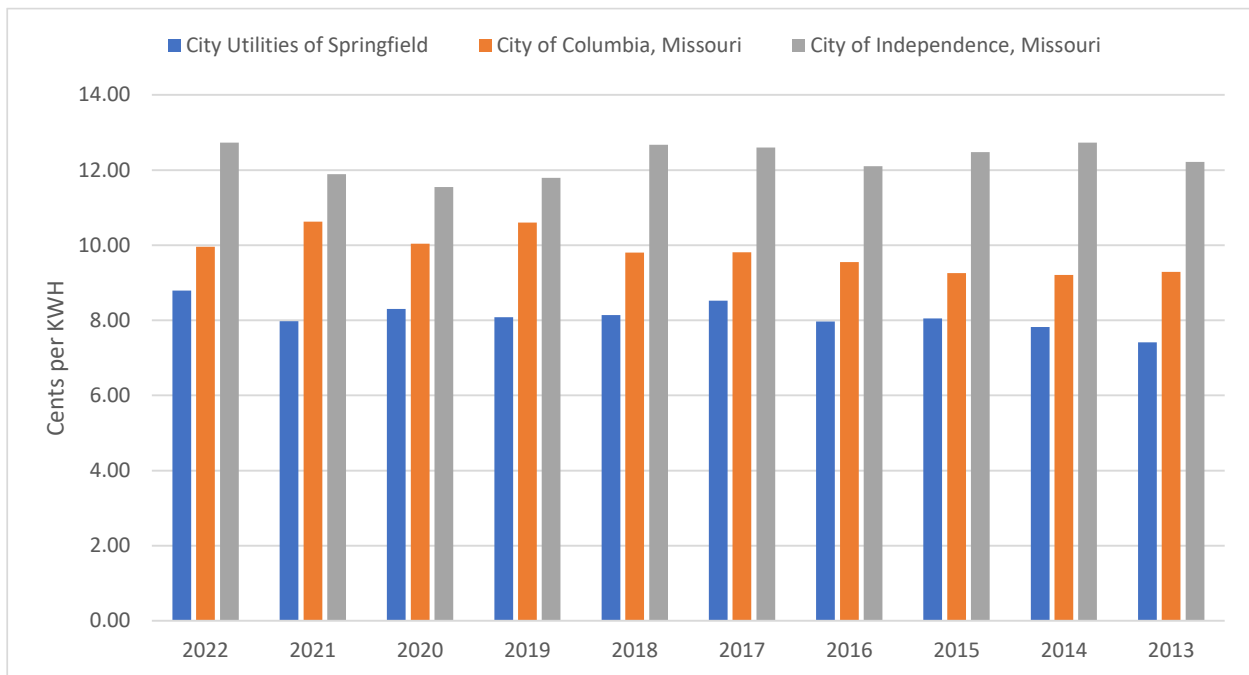
A comparison of residential average revenue for the 2013-2022 time period is provided in Figure 10 below.

Figure 10 – Residential Average Revenue per kWh



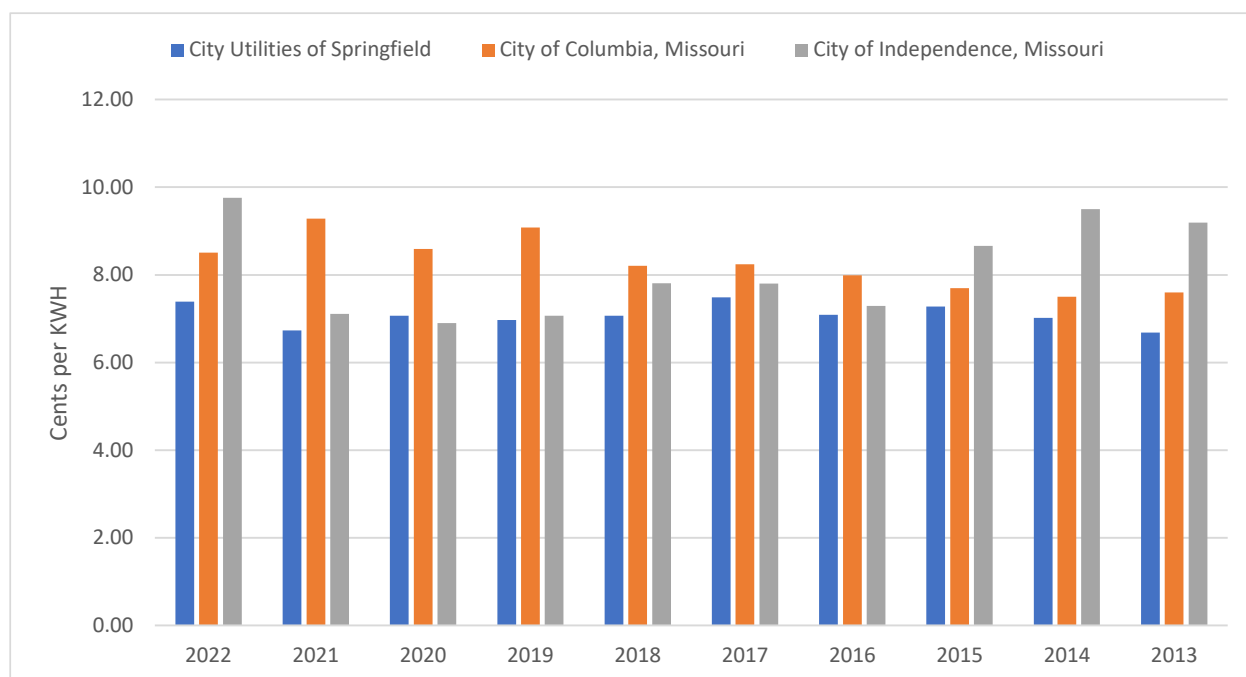
IPL's residential average revenue per kWh is currently 33 percent higher than Springfield and 19 percent higher than Columbia.

Figure 11 – Commercial Average Revenue per kWh



IPL's commercial average revenue per kWh is currently 45 percent higher than Springfield and 28 percent higher than Columbia.

Figure 12 – Industrial Average Revenue per kWh



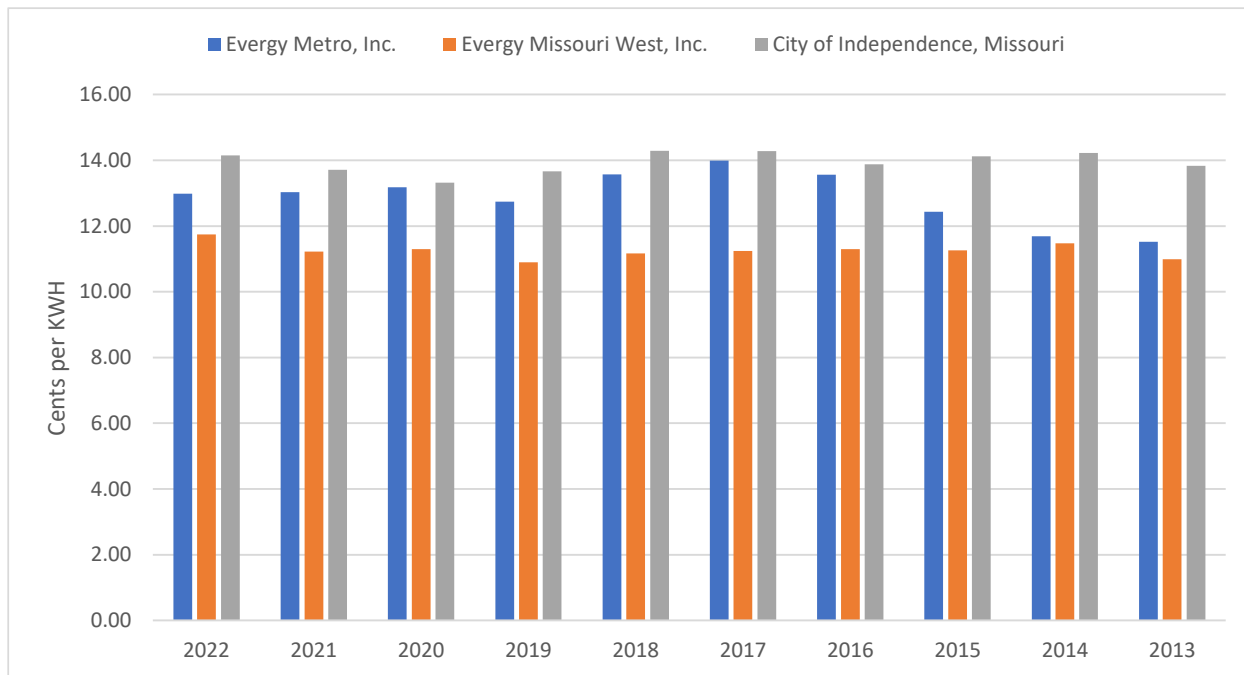
IPL's industrial average revenue per kWh is currently 32 percent higher than Springfield and 15 percent higher than Columbia.

IPL's total retail average revenue per kWh is currently 44 percent higher than Springfield and 28 percent higher than Columbia, as shown in the Financial Strategy section of the report.



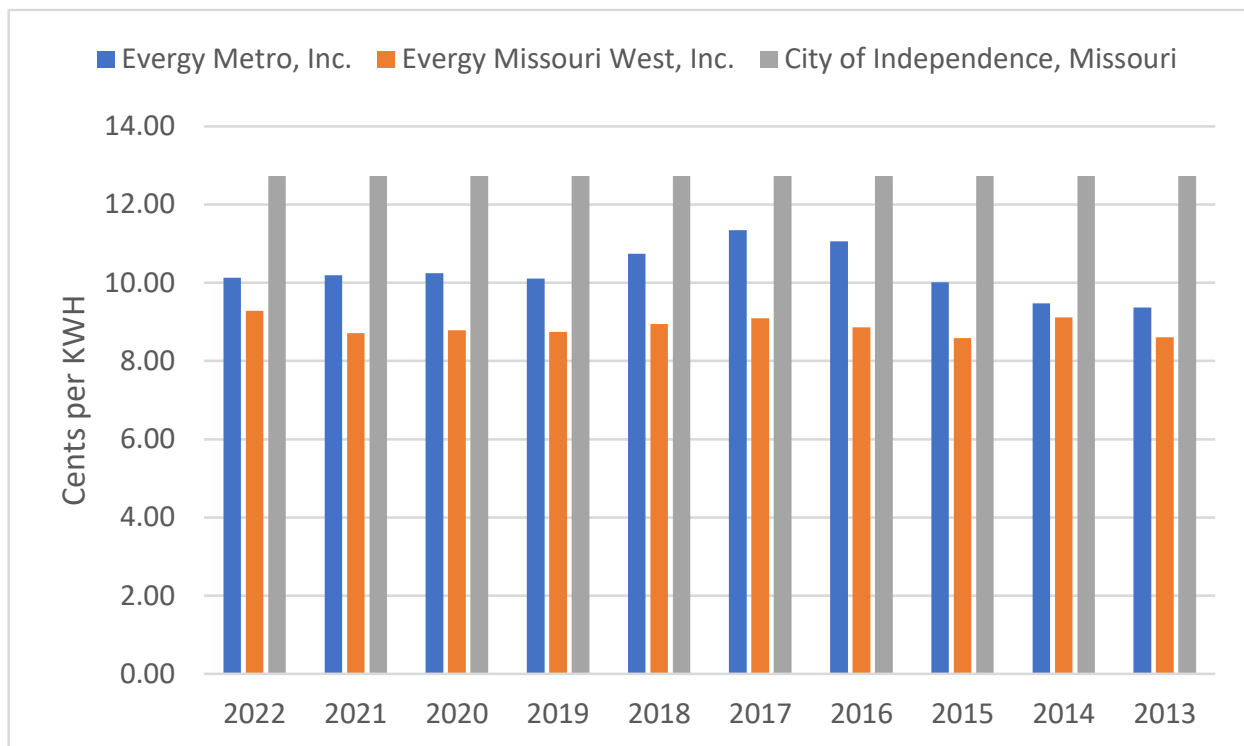
## Comparison to Evergy's Average Revenue per kWh

Figure 13 -Residential Average Revenue Comparison – Independence versus Evergy



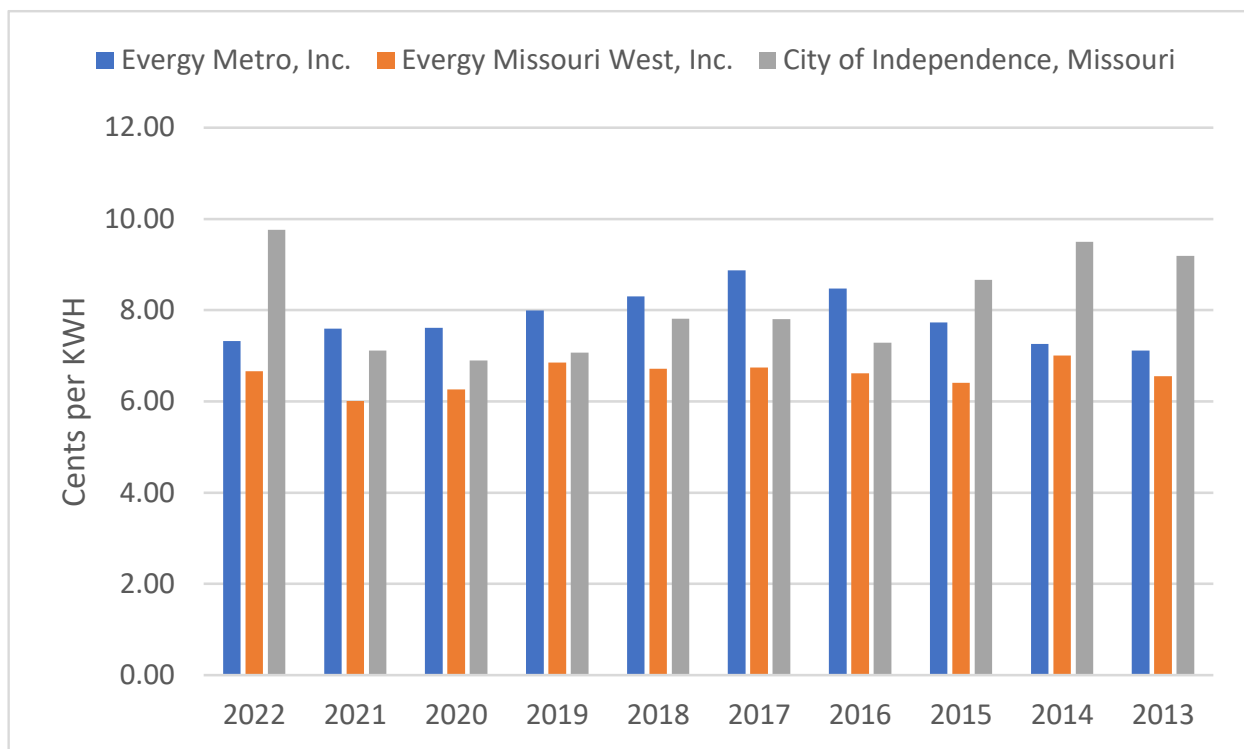
IPL's residential average revenue per kWh is currently 9 percent higher than Evergy Metro and 20 percent higher than Evergy Missouri West.

Figure 14 – Commercial Average Revenue Comparison – Independence versus Evergy



IPL's commercial average revenue per kWh is currently 26 percent higher than Evergy Metro and 37 percent higher than Evergy Missouri West.

Figure 15 - Industrial Average Revenue – Independence versus Evergy



IPL's industrial average revenue per kWh is currently 33 percent higher than Evergy Metro and 47 percent higher than Evergy Missouri West.

## Appendix F – Description of Customer Programs

Customer Programs – Customer Programs include both commercial and residential programs.

- **Commercial Rebates** – Commercial rebates, both Prescriptive and Custom, are designed to help businesses implement energy efficiency measures that can reduce electric use and operating costs by offering financial incentives to offset the initial investment. Customers are eligible for up to \$20,000 or 30% of the project. IPL offers \$125,000 in rebates annually which are fully utilized.
- **Residential Rebates** – One of the programs is designed to help customers replace their existing air conditioners and heat pumps with energy efficient units. Customers can receive between \$109 - \$384 for air conditioner rebates and \$259 - \$701 for heat pump rebates. The minimum SEER is 14.5 for A/C and heat pump rebates. IPL has a budget of \$200,000 annually for residential rebates which are never fully used.
- **Surge Protection** – Protects our customer against surges which may enter a home through **electric power lines**. The cost is \$4.95/month for customers to have this service. Typically, there is about one claim annually. IPL had about 700 customers subscribed with a total of 5 claims.
- **Home Energy Loan Program** – Independence HELP is a partnership between the City of Independence Power & Light Department, City Credit Union to provide low-interest loans for eligible energy efficiency measures. Those who may qualify are owner-occupants of residences located in the City of Independence that are installing new heating and cooling systems, hot water heaters, air sealing and insulation, windows, and exterior doors.
- **I-Share programs** - The I-Share program has been in existence for over 20 years. The programs pay the customer's utility bill as a one-time assistance. Over the last several years funding has been increased to help meet the demand for higher bills along with the ever growing population that could use the assistance. IPL budgets \$60,000 annually for I-Share and all budgeted funds are used annually to assist customers with their utility bills.

Eligibility requirements are:

- Income cannot exceed 150% of the Federal Poverty Level (About \$24,000 for a family of 2).
- Customer must be utility account owner.
- Customer is eligible for I-Share assistance once a year.
- **IRAP** - The IRAP program has been in existence for over 20 years. The program pays ½ of the customer's utility bill on a continuing basis. Over the last several years funding has been increased to help meet the demand for higher bills along with the ever-growing

aging population that could use the assistance. IPL budgets \$230,000 annually for IRAP and all budgeted funds are used annually to assist customers with their utility bills.

Eligibility requirements are:

- Income cannot exceed 150% of the Federal Poverty Level (About \$24,000 for a family of 2).
  - Customer must be over 62 years of age or disabled.
  - Customers are re-certified annually.
- Community Solar Farm – The City of Independence Power & Light has an 11 Megawatts Community Solar Farm that customers, both residential and commercial can become subscribers. IPL currently has a total of 299 customers subscribed (about 50% of the capacity) with 203 residential and 96 commercial customers, using 5,655 kw. The cost to subscribe is \$2.47 per unit, each unit is 144 kWh. When customers subscribe to the Solar Farm, they lock their current rate in for 15 years. The community solar program is currently 50% subscribed.
- Weatherization – IPL funds \$50,000 a year to Truman Habitat to assist customers who don't qualify for assistance through the loan program. The cost to do an assessment is shared equally with Spire gas with an average home needing \$8500 in improvements.
- Marketing/Community Involvement - Support Services staff partners with multiple organizations in the City of Independence to provide education and support. The Independence School District has multiple events each year that IPL supports and sponsors through the FORD Next Generation program. Support Services staff also provides education to students and their parents on energy conservation, electrical safety, and career path opportunities.

## Appendix G – Reliability Data

### SAIFI Performance

As stated earlier, the System Average Interruption Frequency Index measures how often the average utility customer experiences an interruption. DKMT performed an analysis of IPL monthly customer and outage data for fiscal year (FY) 2019 through FY2024 (February). The outage data did not include major event (ME) days<sup>23</sup>. Because IPL provided our team with monthly data, we were able to estimate calendar year (CY) SAIFI as shown in below.

*Table 1 - Estimated IPL SAIFI w/o ME Days*

| CY2019 | CY2020 | CY2021 | CY2022 | CY2023 |
|--------|--------|--------|--------|--------|
| 0.034  | 0.029  | 0.053  | 0.024  | 0.031  |

The five-year average IPL SAIFI is 0.034. This means, on average, less than 4% of IPL customers experienced an outage, for non-Major Event days, each year between 2019 and 2023. As a benchmark, first quartile 2022 IEEE SAIFI performance was 0.84<sup>24</sup>. Therefore, even if there are significant challenges with data quality because of IPL’s non-AMI outage processes, IPL’s SAIFI performance is extremely good. We believe interruptions are so infrequent on non-ME days that IPL’s customers understand that interruptions and outages do occur.

DKMT also developed a more localized benchmark peer group from cooperatives, investor owned, and municipal utilities located in IA, KS, and MO (within 250 miles of the City of Independence), with greater than or equal to 25,000 customers, and who report SAIFI performance from 2019 through 2022 to the US Energy Information Administration. EIA Form-861 data<sup>25</sup> reports on a calendar year basis; so, DKMT estimated calendar year SAIFI statistics based on month-by-month customer counts and outage data.

As shown below, IPL SAIFI performance is the best in the peer group. Even if one doubled or tripled IPL’s SAIFI statistics to reflect the potential uncertainty of outage data due to the non-AMI OMS process described earlier, it would not change IPL’s ranking as best among peers’ performance.

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<sup>23</sup> [IEEE defines Major Event Days](#) (MEDs) through a statistical analysis using daily calculated System Average Interruption Duration Index (SAIDI). While the link provides a good, detailed discussion of the MED methodology, MEDs “... represent those events of such a reliability magnitude that a crisis mode of operation is required to adequately respond.” Practically, think of an ME day as one which results from a very severe thunderstorm or ice storm affecting IPL customers.

<sup>24</sup> [IEEE Benchmark Year 2023 Results for 2022 Data, 2023 Distribution Reliability Working Group Meeting, July 19, 2023, Orlando, FL.](#)

<sup>25</sup> [Annual Electric Power Industry Report, Form EIA-861.](#)

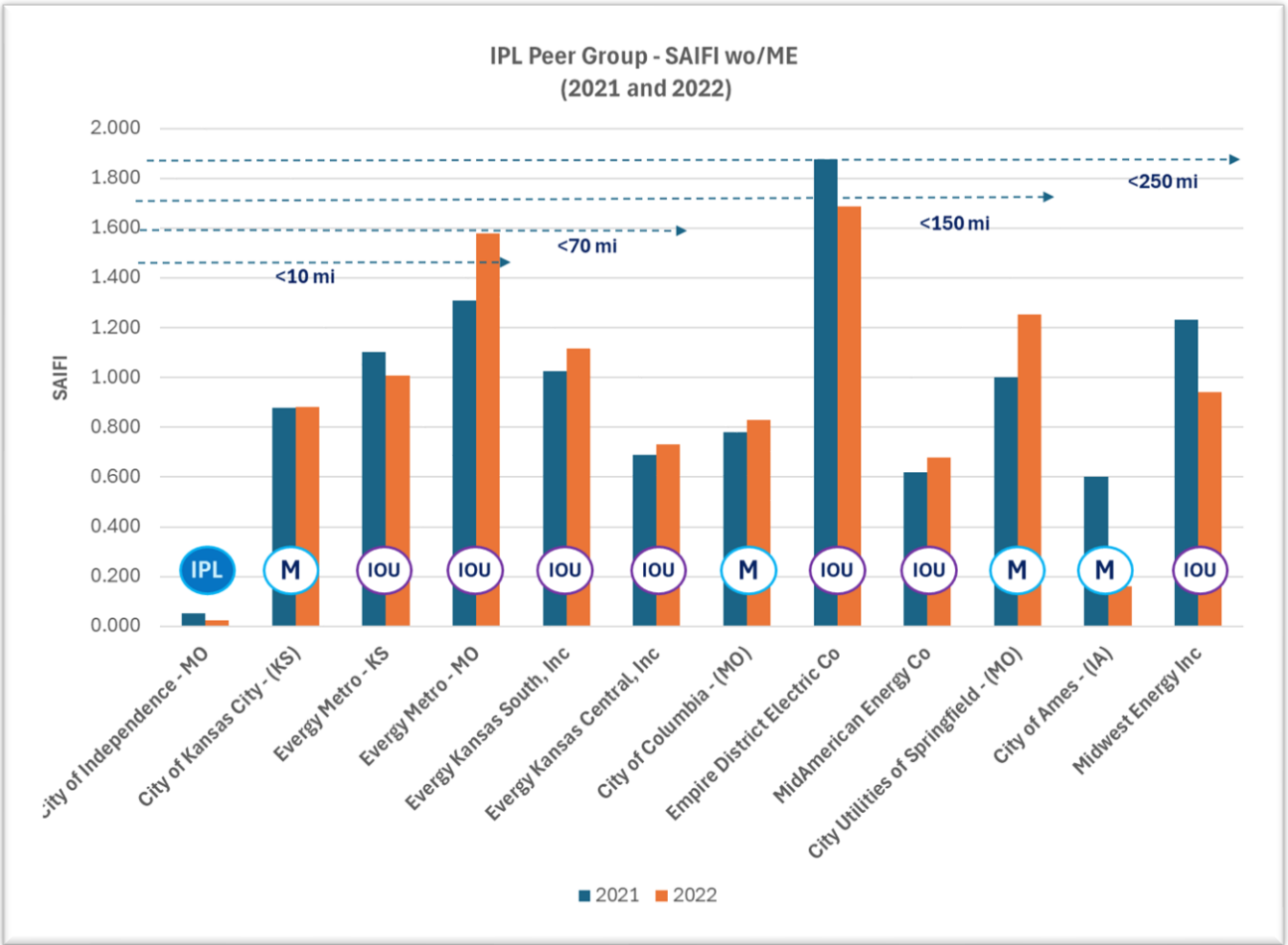


Figure 16 - IPL Reliability Peer Group CY 2021 and CY 2022 SAIFI performance.

## CAIDI Performance

DKMT reviewed IPL Customer Average Interruption Duration Index (CAIDI) performance between FY2019 and FY2023. We note that IPL internally reports CAIDI performance monthly for the fiscal year from July 1 through June 30. We did not estimate calendar year-end CAIDI statistics, as we believe the month-over-month data offers adequate insight into IPL's CAIDI performance.

The figure below shows a surface graph of IPL's CAIDI performance month by month between FY2019 and FY2023. We note that there is a high variability in CAIDI, which is due to severe weather events that do not reach ME day status. For the five-year period, the monthly average CAIDI was 98.58 minutes. During this same period, there are four monthly average CAIDI indices greater than 150 minutes. These occur when expected (spring, late-summer, and January/February).

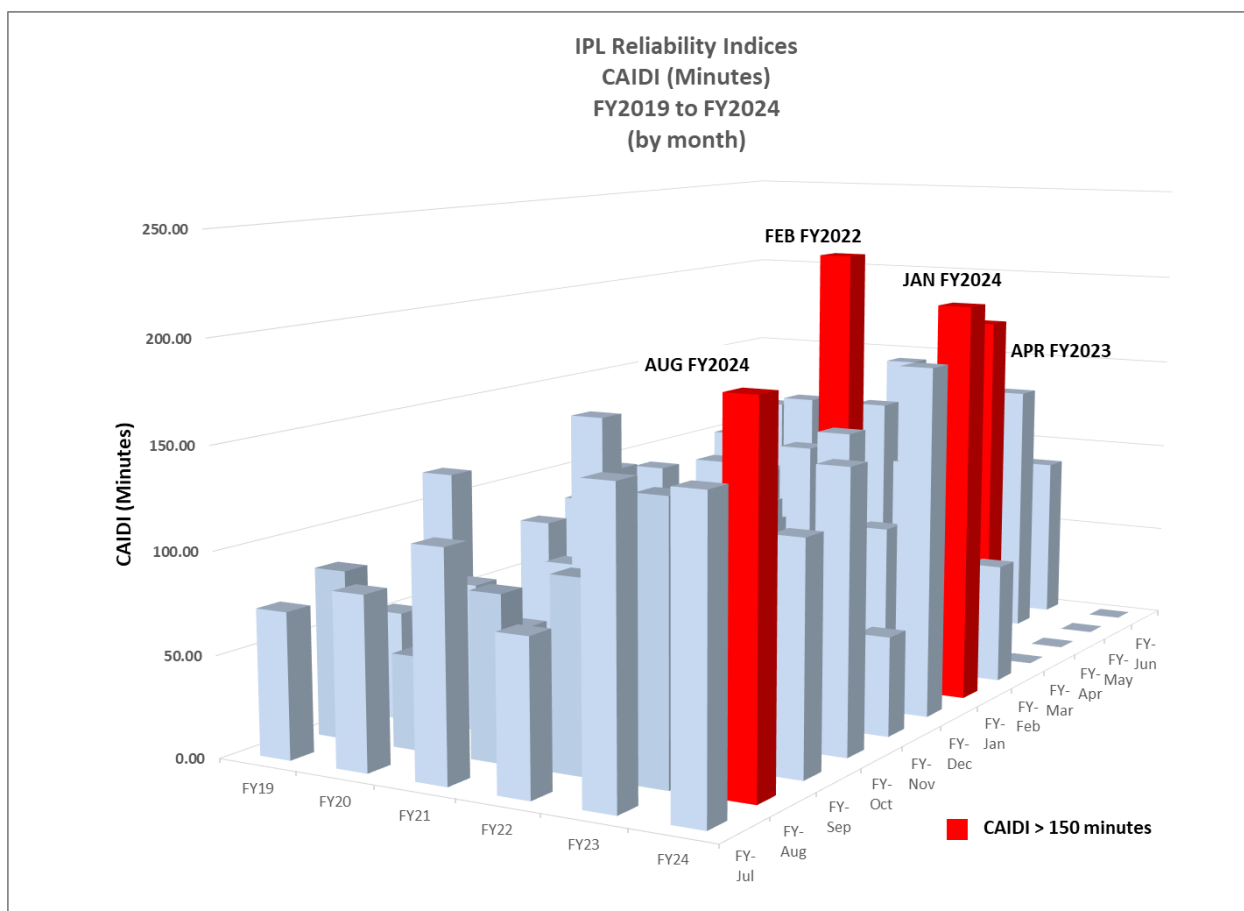


Figure 17 - IPL CAIDI FY-2019 through (FY2024(FEB))

**ASAI Performance**

Finally, we reviewed IPL's Average Service Availability Index (ASAI) during the fiscal five-year period of FY2019 through FY2024. The overall average "up time" for the distribution system was 99.994% with a low of 99.982% and a high of 100%.



## Appendix H – AMI Implementation Timeline Detail

### **Total Expected Implementation Time 3 to 5 Years**

#### ***Step 1—Charter and create AMI project—One month.***

A Charter for the project should be documented, team members selected, and a high-level plan for implementation should be developed. During this phase, the Steering Committee will establish a plan for implementation. Included in the plan is whether AMI will be phased in or fully implemented over the entire system. Most utilities use a phased-in approach with the first phase being used as a pilot project to prove the functionality and identify any challenges that will be faced in future system feeder implementations.

During the previous AMI project, an AMI Evaluation Committee was formed. The Committee consisted of the following members:

- Power & Light Department Acting Director
- Water Department Director
- Water Pollution Control Department Deputy Director
- Power & Light Department Utility Project Development Manager
- Water Department Distribution Engineering Manager
- Power & Light Department Systems Program Supervisor
- Power & Light Department Communications Supervisor

For this effort, it is recommended that representation from the Billing and Customer Service functions be added.

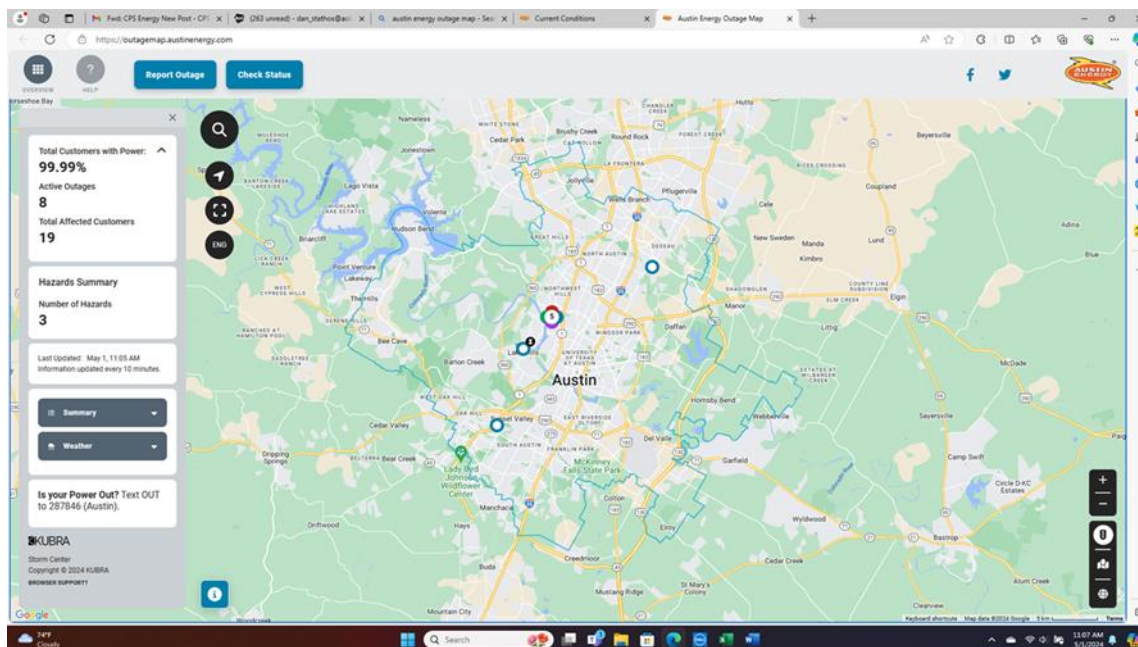
#### ***Step 2—Review the Current State—One Month***

The Committee needs to identify the current systems, the services they provide, and the data used. Current processes also need to be documented and critical data identified. All of this should be documented for use in identifying gaps that may exist once the vision is developed.

#### ***Step 3—Develop a Vision of an AMI-enhanced Environment—Two Months***

This effort should include review of some of the best practice utilities that currently have a fully implemented AMI environment. This review will include identifying the types of information that can be provided to both fully support distribution system operations, and customer-facing data that can be used to manage the system and enhance a customer portal more efficiently. This effort is to perform a search for utilities that are known for best practices in the use of their data. As an example, provided below is a system outage map that is used by Austin Energy to keep customers informed as to the location and status of outages. Austin Energy also has a number of portal services that customers can use to understand their consumption patterns

and assist in identifying opportunities for reducing their consumption and energy costs. The Committee should identify AMI best practice utilities and review their current functionality with those entities.



#### ***Step 4—Begin the RFP issuance, evaluation, and selection process—4 Months***

Because the City has gone through this process previously and appears to have an effective approach, this effort should be continued using those same activities.

The overall process will be complicated and could take anywhere from three to five years to complete. New hardware will be introduced on both the IPL and Water systems, as well as on customer premises. The work activities will change and impact the responsibilities of certain work groups, including customer care and meter readers will find a change in their responsibilities, focusing more on meter testing, troubleshooting, and data management and analysis.

#### ***Step 5—Design the System Architecture—One Month***

Collaborating with the selected vendor, design the hardware and software infrastructure that will be needed to support the new environment. This will help to identify what additional hardware and software will be needed.

#### ***Step 6—Acquire Ancillary Hardware and Software—One Month***

The AMI architecture will require additional hardware, equipment, and software solutions. Hopefully, this equipment will be identified once the vision, and the solution provider processes are complete.

#### ***Step 7—Training for the AMI Environment—Two Months***

The transition to the new AMI-enhanced environment will require training for the new activities. Full-time meter reading duties will be reduced, however, there will be new activities that former meter readers can take on, those activities include the following:

- New meter replacement
- Meter testing in house
- Field meter testing
- Data analysis
- Monitoring for usage at vacant locations
- Field trouble shooting

As part of the Pilot implementation, training for the new activities will be required and modified as lessons are learned from the Pilot Implementation.

#### ***Step 8—Pilot Implementation—One Year***

Most utilities have implemented their AMI-enhanced systems in a phased manner. A Pilot phase is typically used by selecting one or two primary and secondary feeders to begin the implementation. Of course, certain systems that support the infrastructure need to be implemented during the Pilot phase. This allows for all functions of the AMI-enhanced environment to be tested and changes made as required.

#### ***Step 9—Continued AMI implementation—One to two years***

Based upon the lessons learned from the Pilot implementation, changes can be made to the processes for the remaining implementation. IPL can also identify additional information requirements for customer facing capabilities.

## Appendix I – Capital Budget to Actual 2019-2023

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| Power and Light - Open Capital Projects |                                     |                 |                       |                |              |              |                       |                            |
|-----------------------------------------|-------------------------------------|-----------------|-----------------------|----------------|--------------|--------------|-----------------------|----------------------------|
| As of June 30, 2020                     |                                     |                 |                       |                |              |              |                       |                            |
| PROJECT                                 | PROJECT TITLE                       | ORIGINAL BUDGET | NET BUDGET AMENDMENTS | REVISED BUDGET | REQUISITIONS | ENCUMBRANCES | ACTUALS               | AVAILABLE BUDGET           |
| 200815                                  | T&D Sys IMPROVEMENTS                | \$ 50,000.00    | 222,330.07            | 272,330.07     | -            | 115,965.06   | 29,000.00             | 127,365.01                 |
| 200824                                  | Prod Plt MISC PROJECTS              | -               | 68,257.76             | 68,257.76      | -            | -            | -                     | 68,257.76                  |
| 200828                                  | FIBER OPTIC PROGRAM                 | 50,000.00       | 201,642.46            | 251,642.46     | -            | -            | 143,747.53            | 107,894.93                 |
| 201106                                  | 69 KV SUBSTATION FACILITIES         | 120,000.00      | 496,591.31            | 616,591.31     | -            | 70,736.74    | 160,229.44            | 385,625.13                 |
| 201201                                  | MCI REDEVELOPMENT                   | -               | 71,452.22             | 71,452.22      | -            | -            | -                     | 71,452.22                  |
| 201306                                  | NEW SUBSTATION S                    | -               | -                     | -              | -            | -            | -                     | -                          |
| 201310                                  | SUBSTATION J UPGRADE/IMPROVE        | -               | -                     | -              | -            | -            | -                     | -                          |
| 201405                                  | SUBSTATION SECURITY PROJECT         | -               | 356,374.58            | 356,374.58     | -            | -            | 92,885.50             | 263,489.08                 |
| 201505                                  | SUBSTATION L SWITCHGEAR REPLAC      | -               | 92,342.57             | 92,342.57      | -            | -            | -                     | 92,342.57                  |
| 201507                                  | SUBSTATION I SWITCHGEAR &           | -               | -                     | -              | -            | -            | -                     | -                          |
| 201509                                  | NEW BILLING Sys                     | -               | 155,136.13            | 155,136.13     | -            | 22,475.34    | 133,088.77            | (427.98)                   |
| 201510                                  | Sys OpS / DISPATCH                  | -               | 265,769.39            | 265,769.39     | -            | 116,181.85   | 140,074.87            | 9,512.67                   |
| 201512                                  | ADVANCED METERING INFRASTRUCTU      | -               | 3,825.00              | 3,825.00       | -            | -            | -                     | 3,825.00                   |
| 201513                                  | BV ASH POND CLOSURE                 | -               | 620,913.45            | 620,913.45     | -            | -            | -                     | 620,913.45                 |
| 201602                                  | BV GENERATOR HYDROGEN               | -               | 186,830.00            | 186,830.00     | -            | -            | -                     | 186,830.00                 |
| 201603                                  | 69 KV Trans LINE REBUIL             | -               | 903,898.34            | 903,898.34     | -            | 227,527.86   | 264,902.03            | 411,468.45                 |
| 201604                                  | Sys OpS / UPS UPGRAD                | -               | 96,538.87             | 96,538.87      | -            | -            | -                     | 96,538.87                  |
| 201605                                  | Sys OpS WORK AREA                   | 213,500.00      | 468,732.86            | 682,232.86     | -            | -            | -                     | 682,232.86                 |
| 201606                                  | NEW FINANCIAL MANAGEMENT SYS        | -               | 200,000.00            | 200,000.00     | -            | -            | -                     | 200,000.00                 |
| 201702                                  | Prod FACILITIES IMPROVE             | 150,000.00      | 250,000.00            | 400,000.00     | -            | -            | -                     | 400,000.00                 |
| 201703                                  | BV GROUND WATER                     | -               | 732,786.31            | 732,786.31     | -            | 207,123.05   | 238,078.24            | 287,585.02                 |
| 201705                                  | H5 MAJOR INTERNAL INSPECTION        | -               | 1,304,873.34          | 1,304,873.34   | -            | -            | -                     | 1,304,873.34               |
| 201706                                  | SUBSTATION K SWITCHGEAR &           | 1,110,000.00    | 5,370,381.95          | 6,480,381.95   | -            | 3,962,651.20 | 2,478,379.98          | 39,350.77                  |
| 201707                                  | MASTER PLAN-FUTURE GENERATIO        | -               | 32,500.00             | 32,500.00      | -            | -            | -                     | 32,500.00                  |
| 201708                                  | RATE STUDY                          | -               | 300,000.00            | 300,000.00     | -            | -            | -                     | 300,000.00                 |
| 201709                                  | Depr STUDY                          | -               | 150,000.00            | 150,000.00     | -            | -            | -                     | 150,000.00                 |
| 201710                                  | Mo CITY DIVESTITURE                 | -               | 1,494,505.50          | 1,494,505.50   | -            | 610,599.64   | 883,905.36            | 0.50                       |
| 201711                                  | SOLAR INSTALLATION-PHASE II         | -               | 1,479,408.60          | 1,479,408.60   | -            | -            | 46,987.73             | 1,432,420.87               |
| 201801                                  | Sub M T1 Transformer Repair         | -               | 132,375.00            | 132,375.00     | -            | -            | -                     | 132,375.00                 |
| 201802                                  | SUBSTATION H6 MAJOR INSPECTION AND  | -               | 1,039,517.52          | 1,039,517.52   | -            | -            | 324,816.58            | 714,700.94                 |
| 201804                                  | SUBSTATION E SWITCHGEAR REPLACEMENT | 950,000.00      | (5,860.00)            | 944,140.00     | -            | 453,865.00   | 469,100.00            | 21,175.00                  |
| 202004                                  | Above Ground Fuel Storage Tanks     | 41,800.00       | -                     | 41,800.00      | -            | -            | -                     | 41,800.00                  |
| 202005                                  | Blue Valley - Eckles Rd 161kV Trans | 267,000.00      | 26,556.50             | 293,556.50     | -            | 205,156.27   | 84,411.54             | 3,988.69                   |
| 9669                                    | SERVICE CTR FACILITY IMPROVE.       | -               | 169,339.67            | 169,339.67     | -            | 21,009.50    | 99,255.50             | 49,074.67                  |
|                                         | <b>Project Ledger</b>               | \$ 2,952,300.00 | 16,887,019.40         | 19,839,319.40  | -            | 6,013,291.51 | 5,588,863.07          | 8,237,164.82               |
|                                         |                                     |                 |                       |                |              |              |                       |                            |
|                                         |                                     |                 |                       |                |              |              |                       |                            |
|                                         |                                     |                 |                       |                |              |              | <b>General Ledger</b> | <b>Current Year Budget</b> |
|                                         |                                     |                 |                       |                |              |              | Budget                | \$ 19,839,319.40           |
|                                         |                                     |                 |                       |                |              |              | Less Expenditures     | 5,588,863.07               |
|                                         |                                     |                 |                       |                |              |              | Less Encumbrances     | 6,013,291.51               |
|                                         |                                     |                 |                       |                |              |              | Total Available       | \$ 8,237,164.82            |





# IPL STRATEGIC PLAN

Presented August 15  
2024





# Agenda

- Introduction
- Approach
- Vision
- Strategies
  - Financial Strategy
  - Customer Strategy
  - Power Supply Strategic Scenarios
  - Operations Strategy
- Financial forecast

# Introduction

DKMT Consulting was retained to perform two independent studies. The first was a Cost-Benefit Analysis. The second report is a Strategic Plan which is presented here.

# APPROACH

# DKMT Overall Approach

- Held Strategic Planning Sessions with Staff
- Met with City leadership
- Met with PUAB member
- Met with City Council members
- Met with various representatives from the community
- Analyzed data from IPL and industry sources

With the objective of identifying common priorities to drive strategic planning.

# What We Heard

- Need for better governance
- Data driven decision making
- Transparency
- Run IPL like a business
- IPL as an economic development tool
- Ability to replace and retire generation
- A place where employees want to work and be their best

# What We Heard cont'd

- Best in class reliability
- Improved communication/educated customers
- Rates – simplified, competitive and low cost
- More programs supporting low income customers which reduce usage (weatherization, energy efficiency)
- Better and more services (24 hour, DSM, Solar rebates, Battery, Key Accounts, Commercial lighting rebates)
- Improved ease of doing business with IPL (technology)

# What We Heard cont'd

- Green Power
- More tools to service customers and help customers manage their bills
- AMI (Advanced Metering Infrastructure) enabled technology

# What We Learned

- Difficult to access consistent financial data, forecasts not regularly updated, staff has no or limited access to budgets for managing.
- Rates are higher than neighboring utilities.
- Ratemaking is a cross between data driven and political decision making.
- Utility economic development rates and programs are not competitive.
- Lack of modern technology and AMI has limited IPL's ability to provide current industry standard services.
- Lack of evaluation and monitoring tools limits the understanding of what programs are successful and achieve specific goals.



# What We Learned

- Critical need to address future power resources.
- Lack of AMI limits efficiencies and increases cost of operations.
- High staff turnover is a problem

## ***Conclusion***

*IPL's initial strategy needs to focus on bringing the utility up to modern standards for a utility its size (foundational strategies), before considering implementation of the suggested future strategies.*

# VISION

# Vision of an Ideal State for IPL

- IPL is operated in a business-like manner for the benefit of the community.
- A well-informed public that understands and supports the decisions made by the utility.
- A governing body of well-educated professionals who are responsive to the needs of the utility.

# Vision of an Ideal State for IPL

- Business decisions are based both on quality data and qualitative experience.
- Continue to have best reliability in their class of utilities.
- A plan for rates to be equal to or lower than neighboring utilities
- Economic Development Programs that support commercial and industrial growth.

# Vision of an Ideal State for IPL

- Employees that want to work for IPL and have the skillsets that support strategic priorities, which includes succession planning.
- Modern technology to support communication, increase efficiency, and expand customer-enabling services to manage electricity usage.
- The ability to add or replace resources in a cost-effective way.

# STRATEGIES

# Strategic Plan Priority Areas

- *Financial Strategy*
- *Customer Strategy*
- *Power Supply Strategic Scenarios*
- *Operation Strategy*

*Note: Governance is a significant strategic area and is addressed in a separate presentation*

# WHAT'S WORKING AND NOT WORKING TODAY



# Keep Doing!

- Excellent Reliability
  - Positive customer perception
  - National recognition
- Customer Services
  - Responsive to Developers
  - Multiple payment options
  - Low Income Assistance
- Employees
  - Dedicated and resourceful

# What Needs Improvement

- Data Based Decision Making
- Strategic Planning
- Financial Information and Support
- Economic Development
- Technology

# FINANCIAL STRATEGY

# The Plan – Let's Start With The Basics

## ***Foundational Strategies***

Know and understand the cost of doing business

- Establish budgets, goals, and monitoring processes that support transparency and accountability.
- Update financial forecasts regularly to monitor the need for future rate adjustments.
- Timely, complete, and accurate reporting
- Financial/rate decisions need to consider reserve funds, debt service coverage, ability to cover costs, bond ratings, and ability to fund strategic initiatives.
- Streamlining administrative processes to create efficiencies and facilitate decision making.

# Foundational Strategies

Once costs are understood, they can be managed and facilitate strategic decisions.

- Update IPL cost of service studies, annually, to identify cost drivers and move revenue allocation closer to the cost of service.
- Simplify and continue to modernize rate design
- Provide customers with rate choices based on how and when they use electricity, to facilitate management of their usage and bills.

# Foundational Strategies

Implement changes supported by good data analytics

- Cost studies and rate design updating, more equitable
- The SPP market provides energy, on average that is 40% renewable and is a resource for customers with stated green energy goals.
- Strategic Economic Development Rider
  - Discounts predicated on job creation or increased tax revenue
  - Make available to all business types
  - Increased load should not increase risk if costs are properly assigned (transmission & distribution charges + generation based on market + IPL margin)

# Future Strategies

- Debt fund capital plan to ease financial burden and allocate long term investment costs appropriately to future customers using those assets. Can lower rates and provide strategic funding.
- Pursue outside funding sources, DOE and IRA grant and loan programs to offset investments in innovation
- Leverage the value of Public Power for Economic Development
  - Develop rates and services to attract businesses
  - Non-firm interruptible rate options, market-based pricing

# Future Strategies

- Future Rate Design
  - Time of Use rates and demand charges
  - EV rates
  - Space heating – heat pump incentive rates
  - Demand response incentive rates



# Resource Requirements

- Staffing
  - Financial analysts
  - Technology support to upgrade and integrate systems
  - Rate design expertise

# CUSTOMER STRATEGY

# Foundational Strategies

- Communication and Extension of Service Offerings
  - Make it easy to do business with IPL
  - Proactive customer solutions – be present and transparent
  - Communication and active outreach, using multiple mediums
  - Build better customer relationships, Key Account Management
  - Create a unified value system, regularly communicate it, and implement personnel practices supporting ethics and transparency.
  - Evaluate all current programs for expansion or change based on established and monitored performance metrics.

# Foundational Strategies

- Communication and Extension of Service Offerings
  - Help customers reduce bills, have more control over decisions on how and when electricity is used, through technology, programs, and rates.
  - Leverage utility rates and services to enhance economic development and attract new jobs, strengthen and diversify the economy and spread costs over more users to lower rates.

# Foundational Strategies

## Technology Enabling Customer Service Tools

- Outage Management Systems integrated with existing tools
- Billing system enhancements (consolidate bills, historic usage and bill comparison, graphic options)
- Website and App Customer tools
- AMI

# Future Strategies

- Once the foundational strategies are in place – expand customer knowledge and engagement utilizing modern technology to enhance participation and ownership in IPL's future direction.
- After AMI is implemented, evaluate combining incentives and rate plans (heat pump rebates + heat pump off peak rate) to motivate customers to consume electricity more efficiently, reducing the need for additional future power supply.

# Future Strategies

- Website and app used to message customers on usage increases, high bill warnings, outage updates all require AMI.
- Bill savings through remote control of thermostats in extreme temperature situations, tariffs to incent efficient use, and tools that allow customers to monitor their usage real-time.
- Technology is viewed as an investment, not just an expenditure, which adds long term value.
- Automation and regular reporting of customer program performance.

# Resource Requirements

## Staffing

- Key Account Managers
- Professional Marketing and outreach personnel dedicated to IPL
- IPL based HR professional to develop cultural alignment program
- Staff or consultant to evaluate, develop or modify customer programs
- Staff, hired over time, to implement and monitor programs, as they grow
- Technology support for AMI, OMS, Website, APP and help desk



# POWER SUPPLY STRATEGIC SCENARIOS

# Background

- DKMT was asked to present 3 power supply scenarios
  - 100% IPL owned generation
  - No IPL owned generation, all purchased power contracts
  - A hybrid scenario, similar to what exists today

# Background Cont'd

- Currently IPL has adequate resources
- Under a status quo scenario they will need new resources as early as 2028
- If more than 10 to 13 MW of load is added or generation retired, replacement power will be needed sooner
- The power capacity market in SPP is limited
- 4-6 years to construct a new generation resource

# Foundational Strategies

- In order to prepare for the future, most integrated utilities rely on an integrated resource plan which projects load growth by customer type, evaluates the power market, considers distributed generation and energy efficiency, develops options depending on the need for power and financial capacity.
- IPL has a basic plan but needs to invest in a detailed integrated resource plan to be ready to respond to future demand, plant retirements, and PPA expiration. IPL has a short timeline to act.

# Strategic Scenarios

- **IPL owns 100% of its power supply resources**
  - Benefits – would meet the energy needs of the City, Long term control, revenue potential to sell into the market
  - Drawbacks – large capital and O&M investment, staffing resources and training on new technology
  - Risk – Extreme from a cost and obsolescence

# Strategic Scenarios

- **All power is purchased, and IPL is only a T&D utility**
  - Benefits – reduces operating risk, allows focus to narrow on economic development and meeting customer needs
  - Drawbacks – must invest in “best in class” energy management systems including governance, processes, models, would likely require SPP to develop an Energy Imbalance Market (EIM).
  - Risk – Extreme financially and operationally if no EIM, fully exposed to the whims of the market – good and bad.

# Strategic Scenarios

- **IPL maintains current diverse portfolio of owned and purchased power.**
  - Benefits – can build on current processes and expertise, can utilize a mix of fully owned and fractional ownership of generation assets, balanced with PPAs, allows migration to a real time market purchase as an EIM develops.
  - Drawbacks – requires improved financial and load modeling with a longer-term strategic approach to adding power supply, investment in skills to support resource planning and market monitoring.

# Future Strategies

- Increase renewable or green energy
  - SPP Market is about 40% renewable energy so any increase in market purchases adds to IPL's renewable portfolio.
  - Invest in Demand Response, Energy Efficiency, and Distributed Energy Resources to help customers reduce bills and slow the need for future generation to meet growth.



# Future Strategies

- To hedge the risk of coal plant shutdowns (Iatan 2 and NC2) evaluate options to pay off fixed capacity payments earlier.
- Negotiate a prepayment option to shorten long term PPA commitment.
- Join with other municipal organizations under a separate governance to develop a lower cost power supply option.

# OPERATIONS STRATEGY

# Foundational Strategies

- Excellent Reliability – continue investing in infrastructure and undergrounding
- Outage reporting and management tools are antiquated, inefficient (require manual intervention) and not customer friendly – upgrading and integrating current software to optimize the full capabilities of the technology will bring IPL up to modern day standards.
- Implement AMI to bring IPLs data capture and response up to modern day standards.

# Future Strategies

- Cybersecurity investment – poses one of the largest risks to utilities, prevents IPL from developing its own EV infrastructure due to cyber risk, and has growing regulatory requirements.
- Resilience – strengthen IPL's ability to respond to unexpected event, driven by weather, pandemic, cyber attacks, and more, by developing plans, performing simulations, and evaluating system resilience.

# Future Strategies

- Safety – Evaluate and take actions to minimize risk to the public of electricity encounters.
- Hiring and Retention – a utility is only as good as its employees. As IPL implements its strategic plan, new skills and technologies will be essential. Planning for the aging out of the workforce and developing recruiting strategies is a challenge faced by the industry. Evaluating compensation structures, benefits, as well as recruiting techniques will be critical to helping IPL be a place employees want to work and have the skillsets to do a good job.

# Resource Requirements

- Capital Investment in AMI and other technology enhancements will be partially offset by efficiency savings.
- Capital asset replacement and upgrade are reflected in the financial forecast developed by DKMT.
- Future strategies will require retraining and upgrading current employee skillsets. In addition, using attrition to create openings to recruit employees with new skills for the future can be a strategy for managing some of the O&M impacts.

# **FINANCIAL FORECAST OF STRATEGIC PLAN IMPACTS**

# Financial Model

- DKMT used IPLs base financial model, updating for actual costs through 2023, revised growth projections to resemble historic trends and adjusting for anomalies, and added financial impacts of the foundational strategies. Capital was funded 50% debt and 50% current revenues.
- DKMT incorporated long term PPA fixed capacity payments, which are essentially debt, into a calculation of fixed coverage (similar to Debt Service Coverage with added capacity payments) as a means of evaluating financial health.



# Results

- The updated financial model shows, with status quo growth, no need to increase rates until 2028.
- However, this strategy could change if financial indicators deteriorated, or IPL wanted to implement a more methodical rate change process to avoid significant rate impacts.
- Finances are healthy. Debt Service Coverage and Fixed Coverage both exceeded targets, while maintaining a \$25 mill reserve.

# Caveats

- The financial model did not incorporate the cost of new generation or the addition of a large industrial customer.
- DKMT recommends a more formal financial planning process be developed which incorporates an integrated resource plan and is updated at least annually. This will provide real time scenarios and impacts of major decisions on rates and financial indicators.

# Questions ?



# **SPARE SLIDES FOR REFERENCE**

# Additional Future Strategies

- Cultural Transformation – unified mission, vision and values
- Future Tariff Design to support Distributed Energy Resources, incent customers to use electricity when costs are low because they can get real time cost signals.
- Ways to support new end uses – expansion of electrification from EVs, high efficiency heat pumps, and the desire for customers to chose a rate that fits their lifestyle must be addressed to avoid customer defection to other power sources.

**Independence Power and Light**

**Electric Utility Governance White Paper**

**Purchase Order: 24000832**

**Prepared for:**

**City of Independence, Missouri**

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August 6. 2024

DKMT Consulting LLC was engaged to provide an independent analysis of the costs incurred and the benefits received from the City of Independence's ownership of Independence Power and Light, as well as a strategic plan and a review of electric utility governance models. The purpose of this document is to inform decision-makers and stakeholders in their evaluation of alternative governance models for IPL.

In the American Public Power Association's book, *Governing for Excellence — Raising the Bar on Public Power Governance*, author Jeff Tarbert notes that "today's (industry) evolution is driven not by anti-monopoly-leaning economists or the philosophical preferences of regulators. The prime movers today are new technologies, changing markets, innovative non-utility entrants, and changing customer expectations. Customer expectations will sustain this transition. Declining electric sales, increasing penetration of renewable energy, and community choice aggregation are three other forces stretching the industry and public power governance models.

There are two main public power utility governance models. A 2015 survey by APPA showed that smaller public power utilities tended to be governed by city councils, while larger members more often are governed by independent or semi-independent boards. Independence Power and Light is not a small utility. The 2024 APPA industry statistical report shows IPL ranked 56th in the number of customers and 95<sup>th</sup> in net generation among all public power entities in the country.

APPA data shows that independent boards perform the majority of governance functions among public power utilities with more than 50,000 customers.

The following table summarizes the functional authority breakdown by types of governance structure.

**Governance Functions <sup>1</sup>**

|                                            | <b>Independent<br/>Boards</b> | <b>Council</b> | <b>Other</b> |
|--------------------------------------------|-------------------------------|----------------|--------------|
| Set retail rates                           | 70%                           | 30%            | 0%           |
| Approve utility budget                     | 70%                           | 30%            | 0%           |
| Set salaries of key utility officials      | 87%                           | 9%             | 4%           |
| Issue long-term bonds                      | 57%                           | 39%            | 4%           |
| Make financial investments for the utility | 78%                           | 4%             | 18%          |
| Approve PPAs                               | 83%                           | 4%             | 13%          |
| Exercise the right of eminent domain       | 52%                           | 39%            | 9%           |
| Hire and fire utility personnel            | 57%                           | 0%             | 43%          |

In the city council model, the utility is a unit of the city government. The city council functions as the utility governing board and regulator, setting electric prices and deciding on important matters. In the independent board model, the utility is governed by an independent or semi-independent board.

The city council model offers a public power utility's customer-owners the opportunity to vote for candidates who will ensure that the community's views are implemented. Having to face the voters on election day nurtures accountability. A drawback to this model and an elected board model is that it does not remove politics from the governance of the municipal utilities. During a call with the City of Springfield, MO, it was mentioned that one of the primary reasons for their success was that their governance model removed politics from utility-related decisions and has strong protections to keep them out. For example, their charter states:

*Section 16.5. - Restrictions on the board.*

*Not more than six members of the said board shall belong to the same political party, and the administration of such board shall be in all respects entirely nonpartisan. No member of the said board shall, during his term of office thereon, be a candidate for office, nor shall he hold any other office, either school board, city, county, state, or federal during his official term; nor shall he be a member of any party organization or committee to further the candidacy of any person for municipal public office. Upon becoming a candidate for public office or accepting any of the offices aforesaid, during the term, he shall be deemed thereby to have immediately resigned as a member of the said board, and his membership shall be thereby ipso facto vacated.*

*A member of the board shall be prohibited for a period of one (1) year after leaving his position on the board from being hired as an employee of the board.*

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<sup>1</sup> APPA Governing for Excellence — Raising the Bar on Public Power Governance



## **Other Governance Structure Examples**

There are a number of other governance structures that are used within public power:

In Seattle, the Mayor appoints the General Manager (GM) of the electric utility and the GM is accountable to the Mayor and City Council. In addition, Seattle has a City Light Review panel, comprised of citizens, whose function is to solely review and assess Seattle City Light's strategic plan and provide an opinion to council. They also review rates not covered in the code and provide an opinion to the mayor, as well as assist in engaging the public. Annual rate increases are tied to the CPI and the city can control staffing of the utility through the HR and budgeting process.

Long Island Power Authority—the Governor of New York appoints a Board. Board members represent the areas served by LIPA, and make all decisions concerning policy, rates, and financial performance. The utility itself is managed by an Executive Director.

CPS Energy of San Antonio—This Board is an independent board comprised of appointed citizens approved by city council and represent each of the four geographic quadrants of the city. Board members are appointed for five-year terms which can be renewed for an additional five years. This particular structure is called for by covenants within the Bond Resolutions. While the Mayor of San Antonio is an ex-officio voting member of the Board, neither the mayor, nor any members of the City of San Antonio management, participate in the policies or operational activities of CPS Energy. In addition to approving Board members, City Council participation is restricted to approval of rate adjustments, debt issuance, and condemnation proceedings.

City Utilities of Springfield—City Utilities is governed by an 11-member Board of Public Utilities appointed by the Springfield City Council to serve three-year terms. The Board establishes policies on how to best serve customers and sets the long-term direction for the utility as outlined in the City Charter.

The following table summarizes the pros and cons of various governance models.

| <b>Strategic Function</b>     | <b>City Council</b>                                                                                                                                                                                                                                                                                                                                                   | <b>Advisory Board</b>                                                                                                                                                                                                                                                                                                       | <b>Independent Board</b>                                                                                                                                                                                                                                           |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Budget Approval/Oversight     | Pro – in small community<br>Con for large utilities with significant budgets – council lacks time and expertise to focus on utility specific issues. The utility budget is reviewed and monitored along with every other department of the city which limits the amount of resources council can devote to strategic planning, monitoring, and reviewing performance. | Pro – when used properly, Advisory Board can have the time and resources to review budget and make informed recommendations to council, which if Advisory Board (AB) is delegated responsibilities and trusted by council, it can prove to be a useful resource.                                                            | Pro – the Utility is the sole focus of the Independent Board which has the time and resources to review the budget, ensure alignment with strategic goals, and work with the utility to establish accountability and reporting metrics for monitoring performance. |
| Rates                         | Pro – council has ultimate accountability for implementing rates that meet the needs of the community.<br><br>Con - However, because of the limited time and expertise of council, deliberations can be lengthy, politically driven and the process not always understood, resulting in less than optimum decisions.                                                  | Pro – AB can devote time and through experience, have a deeper understanding of how rates are developed and the drivers of change and rate design. If used properly can be a resource for recommendations to the council.<br><br>Con – no decision-making authority and council can choose to disregard AB recommendations. | Pro – because the board is independent, the rate review can be less politically driven, and more business focused. Allowing for financially driven changes and potential for innovation in rate design. More flexibility and nimbleness in decision making.        |
| Strategic Planning/Innovation | Pro – council working jointly with the utility to develop a strategic plan and monitor the                                                                                                                                                                                                                                                                            | Pro – similar to an independent board, if delegated authority to develop strategic                                                                                                                                                                                                                                          | Pro – Because Independent Boards either come with specific expertise or                                                                                                                                                                                            |

| Strategic Function | City Council                                                                                                                                                                                                                                                   | Advisory Board                                                                                                                                                                                                                                                                                                                                                                  | Independent Board                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | <p>utility allows it to drive strategies that closely align with the community's values.</p> <p>Con – because it can be a lengthy process due to time availability of council, the product and process can be less optimal and targeted toward innovation.</p> | <p>plans, monitor, and report results to council, can be effective and a good liaison between community and utility.</p> <p>Con – if not delegated authority to develop and monitor strategic planning and goals, responsibility falls on city council. This is another item added to an already overburdened council and tends to not be a priority until things go wrong.</p> | <p>develop it during their tenure, they are focused only on the utility and can be better informed on trends, business drivers and needs of the community and the utility. The board has the time to devote to strategic planning and understanding the needs and impacts of the community. An independent board can also focus on public outreach and communication, serving as a liaison between utility and oversight. Therefore, more closely aligned with the overall community. Utilities governed by an independent board are more likely to have regular community engagement and be more innovative than other utilities with council forms of government. (Ex: CPS Energy, LCRA)</p> |
| Membership         | <p>Must be a city resident and no experience requirement other than what is required to run for office.</p>                                                                                                                                                    | <p>Typically, a resident of the city because appointed by the council but can have more flexibility. Council can establish experience requirements.</p>                                                                                                                                                                                                                         | <p>By charter can be both resident or non-resident if focus is on recruiting specific expertise or it may require representation of different sectors of the community, such as geographic or</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Strategic Function | City Council | Advisory Board | Independent Board                                                                                                             |
|--------------------|--------------|----------------|-------------------------------------------------------------------------------------------------------------------------------|
|                    |              |                | customer type.<br>Governing document<br>can establish job<br>requirements that<br>most benefit their role<br>for the utility. |

### Board Member Roles

Regardless of the model, according to APPA, a board or city council member must master four different roles to oversee a municipal utility effectively. First, they need to recognize they are a Trustee and have legal and fiduciary responsibilities to ensure the utility remains financially stable. Second, they are a Regulator and have responsibilities to ensure the utility meets local, state, and federal regulations concerning environmental, safety, and market regulations. Third, they are a Representative of the community and must ensure that the community's desires are reflected in the utility's strategic planning process. Lastly, they are an Advocate for public power and need to promote the benefits of public power. All these roles require different skill sets, and a well-functioning board will have individuals who have varying degrees of competence in each of these roles.

The board needs to keep foremost in mind that the goal of public power governance is not profit maximization. Rather, it is to ensure that the utility:

- Covers the cost of operations.
- Meets debt service requirements and funds infrastructure and technology needs.
- Provides service that is highly reliable and responsive.
- Goals, plans and programs reflect the priorities of the community.
- Supports compensation plans sufficient to attract and retain a skilled workforce.
- Sustains the organization's financial stability by meeting standards of liquidity, funding necessary reserves, and protecting against risk.
- Charges fair, competitive, and transparent rates for service

The electric utility industry is complex and changing rapidly. Board member tenures must be long enough for them to educate themselves in the industry and seek training on specific issues. Board members are not expected to nor is there a desire for them to make decisions better left to utility management.

It is important that the board "stay in its lane" and that utility management does the same.

This Board is typically responsible for setting strategic direction and approval of a multi-year strategy which should reflect the community's goals and ambitions related to green energy/energy mix, electrification, customer service standards, and rate objectives. This Board is involved in defining what the utility should be providing to the citizens and utility customers.

The Board has the power to hire and fire the utility's General Manager and should trust management to carry out the strategic plan it adopted. Some governance models have an independent auditor, general counsel, comptroller, or secretary reporting to the board in addition to the General Manager to ensure third-party oversight.

Utility Leadership responsibilities include the following:

- Independently manages day-to-day utility operations,
- Supports the development of the Utility's strategic plans to support the city's strategic goals.
- Develops the budget to achieve those goals and manages the utility's financial reporting system.
- Ensure a well-trained workforce.
- Defines and models the culture of the utility, focusing on service.
- Develops and maintains an effective Safety Culture
- Updates Board and Council on progress toward achieving those goals and strategies.
- Meets the Board-Level established key performance targets.
- Sharing services as appropriate for the benefit of the city

According to APPA, there are five things that a successful board must do to have effective governance.

1. Meet Legal and Fiduciary Responsibilities

Board members need to ensure that they understand their oversight function, ethics laws, meeting and record-keeping requirements, communication protocols, and open records requirements.

2. Assure an effective General Manager

The Board has the power to hire and fire its head manager and is responsible for setting his or her performance goals. There should be a formal written process for evaluating General Manager performance, and performance measures should be tied to the utility's strategic goals. There should be clear and written delineations of authority regarding management and board responsibilities. For example, typically, senior managers who report to the General Manager are not interviewed by the Board prior to their hiring; that responsibility rests solely within the purview of the General Manager.

Apart from positions that report to the board, salary levels are typically the responsibility of the GM. The board approves the budget and should require the GM to provide regular reports on the financial status and operations of the utility, as well as performance in achieving strategic objectives.

3. Set strategic direction and priorities.

The board is responsible for developing the utility's strategic direction and long-term priorities in collaboration with outside experts, utility management, the financial community, the City Council, and the public. The Board should establish a formal strategic planning process that is updated at least every five years or sooner as conditions dictate. As part of the strategic planning process, the board should implement performance measures and targets that utility management is expected to achieve. For example, if lower rates are the most important measure of performance, what is the benchmark for measuring success?

The strategic plan guides utility management decisions and provides outside stakeholders a means to measure utility management performance.

4. Monitor performance.

The most frequently exercised board responsibility is monitoring utility performance. At least monthly, the General Manager should provide the board with a written status report on utility performance. Standard reporting items should include actual costs to budgets, reliability, working capital, and staffing.

The utility should oversee its financial reporting system, which should be aligned with the FERC chart of accounts (which allows comparability to other utilities) or a similar management reporting system. Regular reporting on budget to actual performance, cash reserve levels, debt service coverage and other debt or management requirements allows the board to exercise fiscal oversight. In addition, analysis of variances and corrective action or changes to plans should be presented to the board, when needed.

PILOT, inter-fund transfers, and shared services with the city should be reported monthly on the utility's cash flow statement. For IPL, this could look something like the table below.

| Fund Transfer Activity                                 | Last Year       | YTD            | Budget YTD     |
|--------------------------------------------------------|-----------------|----------------|----------------|
| IPL Transfer to Water Dept for Customer Services       | \$ (2,451,852)  | \$ (1,225,926) | \$ (1,471,111) |
| IPL Transfer to Finance and Administration for Support | (2,893,851)     | \$ (1,446,926) | \$ (1,736,311) |
| School District Transfer to IPL for Fiber Support      | \$ 230,000.00   | \$ 115,000     | \$ 138,000     |
| Water Department Transfer to IPL for Meter Reading     | (2,092,268)     | \$ (1,046,134) | \$ (1,255,361) |
| General Fund Contribution                              | \$ (1,168,553)  | \$ (584,277)   | \$ (701,132)   |
| PILOT                                                  | \$ (14,000,000) | \$ (7,000,000) | \$ (8,400,000) |

Capital projects, PPA performance and other salient attributes should also be reported on as agreed to by the board and utility management.

Ideally, the utility would create a dashboard of performance metrics, in conjunction with its oversight board, which are presented at regular intervals informing the board and the public about IPL's performance.

5. Evaluate and improve governance performance!  
Lastly, the board should evaluate its performance on an annual basis and identify areas for improvement in its current oversight functions.

## Current State

### ***City Governance for IPL***

As with most public utilities, governance is typically addressed as part of the individual City Charter. Under the current Independence City Charter, governance organizations include:

- The City Council, which is composed of seven elected members, is responsible for oversight of all governmental activities. Their major responsibilities include:
  - To appoint and remove the City Manager
  - To enact municipal legislation relating to any or all subjects and matters within the powers of the City.
  - To adopt the budget, provide revenues, and make appropriations; regulate salaries, wages, and other compensation of officers and employees; and regulate all other fiscal affairs of the City.
  - To sell and convey any and all property belonging to the city both personal and real, after ample opportunity for competitive bidding,
  - To adopt in its entirety or in parts a master plan for the physical development of the city and its environs and to make changes therein.

- To appoint or elect and, with or without cause, remove the members of the personnel board, of the city planning commission, of the board of adjustment, of the public utilities advisory board, and of the board of ethics, and other quasi-legislative, quasi-judicial, or advisory officers and authorities, now or when and if established; and to provide the method of appointing or electing and removing them; and
- To create, change, and abolish all offices, departments, and agencies of the city government other than the offices, departments, and agencies created by this charter; and to assign additional powers, duties, and functions consistent with this charter to offices, departments, and agencies created by this charter.

The City Council has other powers and responsibilities, but those listed above are most relevant to the issue of governance in the City.

- The City Manager's responsibilities include management of the day-to-day operations of the City's departments. Section 3.3 describes the City Manager's powers and duties. "The city manager shall be chief administrative officer and head of the administrative branch of the city government. The city manager shall execute the laws and ordinances and administer the government of the city and shall be responsible therefore to the council."
- The Public Utility Advisory Board (PUAB) is addressed in Section 3.15. "There shall be a public utilities advisory board, composed of seven (7) members appointed by the council for overlapping four (4)-year terms." The powers of the PUAB include the following:
  - May initiate on its own or upon request of the Council or City Manager investigations of public utilities operated within the City.
  - May conduct public hearings on matters relating to public utilities and, through its chairperson, administer oaths and affirmations.
  - May obtain from any city department, officer, and agency and from any public utility operated within the city any available information that is required for its work.
  - May recommend to the executive or legislative officials of the city, programs for the financing, use, ownership, service, operation, or franchising of public utilities operated within the city, including but not limited to recommendations regarding rate adjustments, long-range planning, the employment and termination of the services of consultants to the city, the review of



recommendations made by consultants to the city, the issuance of debt obligations of the City and the construction of new and expansion of existing facilities; and

- Shall report its findings and recommendations at least annually, to the council, the people of the City, the City Manager and the respective director(s) of the public utility operated within the City.

In addition, Section 3.18 requires that the Council consult with the PUAB, giving the Board ample time to evaluate recommendations of the IPL Director, and consider their recommendations. In circumstances where the Council does not adopt PUAB recommendations, the Council is required to give their reasons for the decision.

The majority of the powers of the PUAB are centered on audit, investigative, or enforcement type actions and are not typical of oversight board primary functions. However, what is significant is the provision to provide recommendations related to programs, financing, use, rates, etc. These are more in line with advisory boards but has not been a focus or delegation of authority to the PUAB.

- Electric Utility Director responsibilities include the development of strategies in the best interests of the city and the community, as well as of the day-to-day operations of IPL.

Section 3.17 of the City Charter states as follows:

“The municipally owned and operated electric system is a public utility and shall be operated in a businesslike manner.

The electric utility shall not be operated for the benefit of other municipal functions and shall not be used directly or indirectly as a general revenue producing agency for the city, but it may pay to the city an amount in lieu of such taxes as are normally placed upon private business enterprises. After providing for depreciation accruals and amortization of bonds, and for reasonable accumulation of surplus, the electric utility shall apply all annual profits to rate reductions.

The electric utility and such other public utilities and enterprises as the city may acquire shall be operated from funds separate from the general fund. An accounting system for each such fund shall be established within the general accounting system of the city and shall be so set up and maintained as to reflect annually or as often as the council may require the financial condition of the enterprise and its income and expense.”

What is also notable about the charter, is it does not preclude the utility from investing in programs that support economic growth which benefit the community.

## **Observations**

Based upon interviews in both this engagement and the previous study performed by DKMT, we have observed the following concerning the governance of IPL.

- Through the election process there is a significant turnover of council membership, which leads to a lack of continuity in the understanding of issues facing IPL. If the city established an independent utility board with members appointed by the council for 3-4 year terms this could address this issue, along with staggered terms facilitating smooth succession and knowledge transfer, as well as limiting political drivers to decision making.
- The council has significant oversight responsibilities for every major aspect of the City, which limits the amount of time they can devote to IPL, the City's largest asset.
- The council lacks ownership for the strategic direction of IPL. There appear to be no council-adopted plans for IPL beyond the current fiscal year nor accountability for performance. An independent utility board would have the strategic plan for IPL as a singular focus.
- There is no process for tying a revenue requirement to electric rates. An independent board would have control over the finances of all utilities it oversees and would be tasked with developing a transparent rate process.
- IPL's financial records are opaque and the city controls IPL financial information. An independent board would oversee IPL finances and issue bonds with the concurrence of the City Council.
- Under current governance, it is difficult for IPL to assist with the economic development of the city. The Board should have the power to promote energy efficiency and support economic development within the City of Independence.
- The Public Utilities Advisory Board is underused based on the charter authority.
- Administrative requirements for Council decisions prolong and hinder common management functions, i.e., equipment purchases etc.. A Board with business or utility specific expertise should have the power to enter into PPA's and sign contracts which may be able to streamline this process.

- Utilities governed by independent boards, with targeted expertise, tend to be more progressive, engaged with their community and able to implement innovation to serve their community.

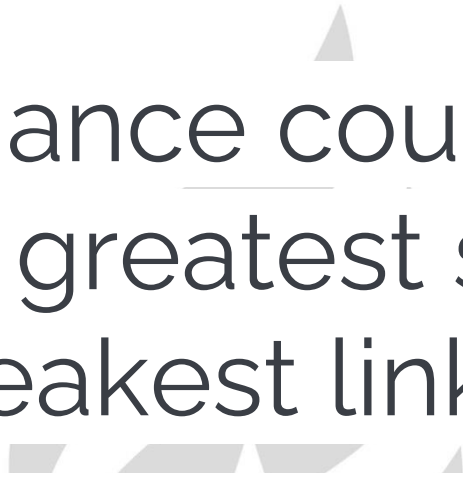
# IPL Governance White Paper

Presented August 15  
2024



# Introduction

DKMT Consulting was retained to perform two independent studies. The first was a Cost-Benefit Analysis. The second report is a Strategic Plan with a separate Governance whitepaper presented here.



“board governance could be a public  
power utility’s greatest strength or its  
weakest link.”



Excellence in Public Power Governance by APPA  
2019

# Public Power Governance Models

- There are two main public power utility governance models:
  - *City Councils*
    - *Advisory Boards*
  - *Independent Boards*

\* APPA Governing for Excellence — Raising the Bar on Public Power Governance

# City Council Model

In the city council model, the utility is a unit of the city government. The city council functions as the utility governing board and regulator, setting electric prices and deciding on important matters.



# City Council Model with Advisory Board

A modification of the City Council model is the creation of a Utility Advisory board, which is appointed by council and is advisory only. The Advisory Board has the ability to focus on utility issues only and can take a deeper dive into utility budgets, rates, and strategic planning, as well as monitor performance. However, because an Advisory Board does not make decisions, the cons of council oversight may still exist, depending on the council. The City of Independence is using this model.

# Independent Board Model

In the independent board model, the utility is governed by an independent or semi-independent board. The board members may represent sectors of the service area and are typically approved by City Council. The board sets policy and strategic direction, sets rates, hires the Utility General Manager or CEO, and monitors utility performance, some actions require council approval.

# Governance Model Use

- 70% of Utilities the size of IPL use the Independent Board Oversight Governance Model.
- Of the 30% who have City Council Oversight, majority require city manager to have some background in utilities.

# **PROS AND CONS OF EACH GOVERNANCE MODEL**

# Pros and Cons of Council Oversight

## ***Budget, Rates, Strategic Planning and Innovation***

Pros - Council oversight, typically of small utilities, insures the utility and community are closely aligned with less complexity. Council has ultimate accountability for decisions.

Cons - Councils have many competing priorities which limits the time to develop industry expertise and delve into the complexities of running a utility, often resulting in lengthy and politically driven decision making process. Data and long term impacts may not be the driving factor, to the detriment of the community and utility.

# Pros and Cons of Independent Board Oversight

## ***Budget, Rates, Strategic Planning and Innovation***

Pro – Boards either develop or are selected because of their expertise and have the time and resources to delve into industry issues and trends to help inform their decisions. In addition, Boards have the time to conduct public outreach to align the long term strategies, such as economic development, to the community's priorities, as well as, monitor performance on a regular basis.

# Pros and Cons of Independent Board Oversight

## ***Budget, Rates, Strategic Planning and Innovation***

Pro – Boards will focus on strategic alignment, without competing priorities, establish performance metrics and accountability. Independent board decisions are more data driven and not politically driven. They tend to be more flexible and nimble in their decision making process. Many cities, as an added level of accountability require a final approval by council.

# EXAMPLES OF GOVERNANCE MODELS



# City Council Model

- **Seattle City Light** —The Mayor appoints the General Manager (GM), who is accountable to the Mayor and City Council. Automatic annual rate increases are tied to the CPI, and the city can control the utility's staffing through the HR and budgeting process. SCL also has a review panel comprised of citizens to review its strategic plan.

# Independent Board Model

- **Long Island Power Authority** —The Governor of New York appoints a Board. Board members represent the areas served by LIPA and make all decisions concerning policy, rates, and financial performance. An Executive Director manages the utility.

# Independent Board Model

- **CPS Energy of San Antonio**—An independent board comprised of appointed citizens approved by the city council who represent each of the four geographic quadrants of the city. Neither the mayor nor any members of the City of San Antonio management participate in the policies or operational activities of CPS Energy. City Council participation is restricted to approval of rate adjustments, debt issuance, and condemnation proceedings.

# Independent Board Model

- **City Utilities of Springfield**—City Utilities is governed by an 11-member Board of Public Utilities appointed by the Springfield City Council to serve three-year terms. The Board establishes policies on how to best serve customers and sets the long-term direction for the utility as outlined in the city charter. They establish annual budgets and rates, that are ultimately approved by council, who can only propose alterations to rates but not change the budget. The board has condemnation rights and hires the utility manager.

# ROLES OF BOARD MEMBERS

# Board Member Roles

- **Trustee** - legal and fiduciary responsibilities to ensure the utility remains financially stable.
- **Regulator** responsibilities are to ensure the utility meets local, state, and federal regulations concerning the environment, safety, and market.
- **Representative** of the community and must ensure that the community's desires are reflected in the utility's strategic planning process.
- **Advocate** for public power and promotes the benefits of public power.

# Board Responsibilities Are to Ensure the Utility

- Is financially sound and creates the utility budget
- Monitors the utility's financial reporting system
- Provides service that is highly reliable and responsive.
- Goals, plans, and programs reflect the priorities of the community.
- Charges fair, competitive, and transparent rates for service.

## In Addition, Boards

- Set strategic goals and monitor utility performance meeting those goals.
- Hire/Fire/Monitor the GM's performance.
- Monitor the Board's performance.



# **IPL GOVERNANCE OBSERVATIONS**

# IPL Governance Observations

- Turnover of council membership leads to a lack of continuity in the understanding of issues facing IPL.
- The council has significant oversight responsibilities for every major aspect of the City, which limits the amount of time they can devote to IPL.
- The council lacks ownership for the strategic direction of IPL.
- There is no process for tying a revenue requirement to electric rates.

# IPL Governance Observations

- IPL's financial records are opaque and the city controls IPL financial information.
- Under current governance, it is difficult for IPL to assist with the economic development of the city.
- The Public Utilities Advisory Board is underused in its current form.
- Administrative requirements for Council decisions prolong and hinder common management functions.

# 10 Tips for Governance Excellence

1. The board steps back from managing how things get done and focuses on desired results.
2. The board speaks as one with written policies. Board members recognize that their power only rests with the board as a body.
3. The CEO has the authority to push back if individual board members try to manage his or her work.
4. The board holds the CEO accountable for achieving the desired results by regularly receiving reports.
5. The CEO is empowered to reasonably interpret the board's policies.

# 10 Tips for Governance Excellence

6. The board regularly reviews the written strategic directives to ensure they are still appropriate.
7. The board regularly evaluates the CEO's performance as well as its own performance.
8. The roles of the board members, the board chair and committee chairs are all spelled out in writing.
9. Board agendas are clearly prepared, as is the process for items being placed on an agenda.
10. All board members need to be engaged in developing, refining and monitoring the board's policies.

“For a successful board-management relationship, trust has to be at the top of the list,”. “There also must be open sharing of information back and forth, and there must be a clear delineation of the board’s and management’s respective responsibilities.”

From Excellence in Public Power Governance by APPA 2019

# Questions ?



# Backup Slides

## Governance Functions for Utilities with more than 50K Customers\*



|                                            | Independent Boards | Council | Other |
|--------------------------------------------|--------------------|---------|-------|
| Set retail rates                           | 70%                | 30%     | 0%    |
| Approve utility budget                     | 70%                | 30%     | 0%    |
| Set salaries of key utility officials      | 87%                | 9%      | 4%    |
| Issue long-term bonds                      | 57%                | 39%     | 4%    |
| Make financial investments for the utility | 78%                | 4%      | 18%   |
| Approve PPAs                               | 83%                | 4%      | 13%   |
| Exercise the right of eminent domain       | 52%                | 39%     | 9%    |
| Hire and fire utility personnel            | 57%                | 0%      | 43%   |

\* APPA Governing for Excellence — Raising the Bar on Public Power Governance





## MEMORANDUM

DATE: August 26, 2024

TO: Mayor and Members of the City Council

FROM: Susanne Holland, City Clerk

SUBJECT: Boards and Commissions Report

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### **Independence Square Advisory Board**

- A recommendation has been made to reappoint Trevor Tilton and Sean Fite to the Independence Square Advisory Board
- Staff requests direction to add a resolution to the next regular meeting, for the appointment of these individuals to the above board.

### **Board of Adjustment**

- A recommendation has been made to appoint Cody Adkinson to the Board of Adjustment
- Staff requests direction to add a resolution to the next regular meeting, for the appointment of this individual to the above board.