

Scope of Services Description

Invest in Independence Power & Light (IPL) Strategic Plan

INTRODUCTION:

Independence Power & Light (IPL) is a municipal electric utility, established in 1901 to provide the residents and businesses of Independence, Missouri (City) with safe, reliable, and affordable electric service in a manner that is responsive to the needs and interests of the City's inhabitants. The City owns IPL and IPL operates as a separate utility. IPL operates generation, transmission, distribution, and interconnection facilities to meet the electric service requirements of the customers of IPL.

On April 5, 2023, the City Council directed the City Manager to initiate a process to evaluate all options relative to the future ownership model of IPL. This scope of services is to perform a long term (20 year) utility future requirements study as set forth in RFQ #23061. The RFQ states that the Future Requirements Study will provide the minimum following informational tasks:

Informational Tasks

1. Provide a twenty-year Revenue Requirement Projection.
2. Perform an all-source long-range capital and O&M investment strategy including generation, capacity requirements, transmission & distribution continued maintenance and upgrades, technology solutions and implementation, and customer service improvements.
3. Recommend a strategic investment plan including impacts to rates and revenues, future bonds or funding requirements, and overall costs.
4. Activities regarding this study should be coordinated with a separately selected public engagement firm for public information campaigns, town hall style forums, and fliers, mailers, and other customer engagement and information materials to educate citizens and City Council on the results of the analysis.

APPROACH:

To execute the Informational Tasks listed above, the following tasks will be completed:

Task 1 – Review Data and Information

Data and information will be requested, reviewed, and discussed with IPL representatives. A data request will be provided to IPL staff and then an on-site meeting will be conducted with the appropriate IPL departments to explain the data request and to learn what information in addition to that requested might be available from IPL. The initial on-site meeting will be scheduled for two consecutive days and will be for the purpose of meeting with the IPL project manager and identifying the staff members who will be providing the information to Sawvel.

We would expect that at the initial on-site meeting, the IPL project manager would invite stakeholders including City Management and the public engagement firm, if appropriate, and would discuss how information would be provided to each study consultant and determine when communications would be needed with the public engagement firm. Sawvel will give an overview of the study tasks to inform IPL staff regarding the use of the data and information requested. The first meeting will include an in-depth meeting with key IPL staff members who oversee electric generation and power supply matters, including coordination with Southwest Power Pool (SPP).

A second on-site meeting will be conducted with the IPL staff in charge of other key departments following the initial meeting. The second meeting will occur after receiving data and information that was requested and discussed in the first on-site meeting with IPL staff.

Task 2 – Prepare Sales and Load Forecast

A 20-year customer sales forecast will be prepared using information collected in Task 1 for the years 2024 through 2043. The forecast will be based on (1) historical trends in energy sales for each customer class, and (2) discussions with IPL personnel regarding the outlook for customer growth or change throughout the service area during the 20-year planning period. Information will be requested for current and projected Electric Vehicle (EV) use in the service area and customer-owned generation such as rooftop Solar Photovoltaic systems and related battery systems. The forecast will include EV and Solar PV projected use and will be used to modify the base customer sales forecast. The forecast will be provided to IPL staff for review and comments before finalizing the forecast.

The forecast for the Strategic Plan will be presented in the following formats:

1. Total system peak demand and energy requirements (including all customer sales, free services, plant use, unaccounted for and losses) for economic evaluation of power supply options.

2. Energy sales by rate schedule or customer class for preparation of the financial forecast revenue projections.
3. Loads by substation or designated areas within the IPL service area for evaluation of the distribution system.

Task 3 – Evaluate Power Supply Costs

The first step in evaluating power supply costs will be to obtain data and information for IPL’s power supply system through Task 1. This information will include the capacities of existing and planned power resources both owned and purchased. The remaining life/contract expiration dates of each resource will be important in determining future resource needs.

The second step will be to compare the power supply resource capabilities to the 20-year load forecast in Task 2. This comparison will help to determine when additional power supply resources may be needed in the future during the 20-year planning period.

The subtasks to Task 3 are:

1. Evaluate existing power supply arrangements/contracts.
2. Develop planning criteria and goals such as reliability and renewable energy goals, fuel diversity, etc.
3. Identify the amount of needed power supply resources by resource type.
4. Evaluate available power supply resource options to meet the identified power supply resource needs, including:
 - a. Existing generation, including rehabilitation, or upgrading
 - b. Off system power supply options known by IPL, Missouri Joint Municipal Electric Utility Commission (MJMEUC) or Sawvel including participation in proposed projects and purchase power arrangements
 - c. Construction of new generation in the City

A description of these four components of the evaluation of power supply options is provided below:

- ***Evaluate Existing Power Supply Resources/Contracts***

Sawvel anticipates coordinating with IPL on this task and that IPL will obtain much of the data for this task from MJMEUC, Omaha Public Power District (OPPD) and from internal information about its owned generating units and purchase power arrangements.

- ***Develop Planning Criteria and Resources Goals***

Sawvel will establish planning criteria and goals through discussions with IPL staff in the initial meeting. Criteria would include planning reserves, reliability measures, renewable energy goals, fuel diversity and other considerations that may be important to IPL customers.

- ***Identify Needed Power Supply Resources***

Spreadsheet models will be prepared to compare the projected peak demand and energy requirements of IPL (including planning reserves and impact of energy efficiency/customer owned generation) compared to IPL's existing and needed capacity and energy resources. Part of this analysis will involve evaluating the resource energy mix of the power supply resources. The resource energy mix involves identifying resources that are baseload, intermediate and peaking resources. Furthermore, the analysis will evaluate the current fuel diversity of the power supply system.

Information will be requested about new resources that IPL may be considering for future purchase or investment. This will be an important subject to be discussed in the first on-site meeting.

The following will be considered in the updating of the spreadsheet regarding the identification of needed power supply resources:

1. Rehabilitation and/or upgrading of existing resources based on observation and engineering judgment.
2. Off system power supply options including participation in proposed units and purchase power arrangements. Sawvel anticipates coordinating with IPL and MJMEUC in identifying available power supply resource options.
3. Construction of new generation in the City. Sawvel will review industry standards and publications for the following generation technologies that Sawvel and IPL deem appropriate:
 - a. Reciprocating engines and combustion turbines for peaking purposes.
 - b. Wind turbines
 - c. Solar
 - d. Batteries

Sawvel will prepare power supply resource plans which will use different combinations of the power supply resources mentioned above to meet the City's peak demand and energy requirements. No more than three power supply resource plans will be evaluated for the next step of evaluating power supply costs.

This Study **does not** include the development of a detailed environmental impact statement to assess air quality and other environmental regulatory compliance implications of current and potential new regulations.

- ***Evaluate Resource Plan Power Supply Costs***

A production simulation model (EnCompass) will be used to model each of the selected power supply resource plans for the 20-year planning period. The EnCompass model uses operating parameters and costs of each resource in each of the selected power supply resource plans, including all purchased power related costs, contract terms, fuel costs, fuel diversity, fuel efficiency, heat rates, outage rates, other variable costs, and fixed operating and other costs.

For IPL's existing resources, the operating parameters and costs for the EnCompass modeling will be provided by IPL. Sawvel will request IPL's production simulation model data inputs. For new off system power supply options, the operating parameters and costs will be provided by industry contacts and our knowledge of the marketplace and availability of projects to participate in, including renewable resources. For construction of new generation in the City, Sawvel will review industry publications to estimate operating parameters and costs.

Each power supply cost model run will be reviewed and assessed using the following criteria and information:

- Operating considerations and projected capital costs
- Fuel diversity and efficiency.
- Delivered price to IPL.
- Renewable energy

An economic comparison of the power supply cost model runs will be analyzed. This Study **does not** include the preparation of a Request for Proposal, resulting solicitation or screening of responses regarding available power supply resource options.

Task 4 – Assess Condition of Transmission and Distribution System

Sawvel will request information in Task 1 about the Transmission and Distribution system. A second on-site meeting will be conducted to obtain information about the condition of the system, reliability, historical and projected capital improvement expenditures and operation and maintenance costs. Sawvel will tour IPL's transmission and distribution system and substation and interconnection facilities on a reconnaissance level basis with IPL personnel and will observe the condition of the system and areas where capital improvements maybe planned to meet new customer growth.

Sawvel will request equipment costs for items such as service transformers, poles, underground cable and other related equipment that would aid in estimating future capital improvements and equipment replacements.

This Study **does not** include any transmission and distribution system power flow evaluations. Sawvel will discuss with IPL staff the capability or limitations of IPL's interconnections with the surrounding regional transmission systems to support power importation into the City's service area. However, this Study **does not** include detailed analyses of any regional impacts to the SPP transmission system which must be evaluated by SPP as part of any future aggregate system study process.

Task 5 – Customer Service and Technology Solutions

Sawvel will request information in Task 1 about customer service-related items and existing and planned technology improvements. Sawvel will interview IPL staff responsible for customer service and technology at the second on-site meeting. Topics of discussion may include, but are not limited to, time-of-day rates, payment options, monthly bill format, outage alerts, smart grid devices, etc. Based on a review of the information provided in response to Task 1 and interviews with staff, Sawvel will prepare recommendations for customer service and technology improvements and upgrades.

Task 6 – Prepare Financial Forecast for Economic Evaluation of the Strategic Plan Scenarios

The 20-year Strategic Plan will contain a power supply plan and a plan for the maintenance, improvements and/or extensions of the transmission and distribution system, customer service-related costs, and technology solutions. Based on the findings in Tasks 3, 4 and 5, Sawvel will design no more than three strategic planning scenarios using the selected power supply cost model runs and appropriate transmission, distribution and technology solution plans. These planning scenarios will be evaluated, analyzed and reviewed.

The planning scenarios will flow into the financial forecast to provide a 20-year Revenue Requirement Projection to evaluate options relative to the future ownership of IPL. Sawvel will develop a financial forecast Excel spreadsheet showing historical data and projections for the 20-year planning period 2024 through 2043.

The financial forecast uses the load forecast, adjusted for assumptions regarding customer owned generation, and compares electric system revenues to revenue requirements or expenditures. Revenues are generally comprised of revenues from existing rates, other operating revenues, interest income and non-operating income. Revenue requirements will include the following:

1. Power supply costs by resource (operation and maintenance expenses and capital improvements) in the planning scenarios
2. Transmission and distribution system costs (operation and maintenance expenses and capital improvements) in the planning scenarios
3. Other operating and maintenance expenses, including technology solutions and implementation and customer service improvements
4. Existing debt service and projected debt service estimated for improvements and/or extensions of the IPL electric system identified as appropriate for debt funding.
5. Investment plan including future bonds and funding of other capital improvements from revenues.
6. Transfers
7. Fund balances representing reserve fund requirements and/or cash reserve buildup.

Sawvel will use the financial forecast spreadsheet to compare revenues from existing rates to projected revenue requirements. If revenue adjustments are needed, Sawvel will estimate revenue adjustments including amount of adjustment and timing. Based on the economic evaluation provided in the financial forecast, Sawvel will suggest to IPL which planning scenario to pursue.

This Study **does not** include a cost-of-service study or rate design changes and/or improvements to any customer class.

Task 7 – Prepare Reports

Sawvel will prepare a draft report in electronic format. This report will include the load forecast described in Task 2, an estimate of the life of existing generation, review of the existing power supply arrangements/contracts and the identification of needed power supply resources described

in Task 3, and the results of our observation of the City’s transmission and distribution system as described in Task 4.

Sawvel will prepare a second draft report in electronic format by expanding the first draft report with the evaluation of resource plan power supply costs described in Task 3 and cost estimates for identified improvements and/or extensions to the transmission and distribution system described in Task 4. Customer service improvements and technology solutions and implementation will also be addressed in this draft report.

Sawvel will prepare a final draft report in electronic format by expanding the second draft report to include all tasks. Sawvel will incorporate comments and discussions with IPL about the final draft report to include in the Final Report provided in electronic format. Sawvel will present the Final Report to IPL and City management and the public engagement firm in a meeting as scheduled by the City.

MEETINGS:

Tour and Observation of the IPL Electric System

Sawvel will tour and observe the IPL electric system when IPL electric system personnel are available for interviews. Any requested data from Task 1 relating to IPL-owned generators, transmission, and distribution system, including electric system maps, would be important to have for the tour and observation.

Meeting #1 – Kickoff Meeting/Data Request/Power Supply

This meeting would be scheduled after a data and information request is sent to IPL. The intent of this meeting is to meet the key IPL staff who will be responsible for providing data and information to Sawvel and discuss what information is available from IPL and what information Sawvel has requested. Sawvel would also use this meeting to meet with IPL power supply personnel to begin the process of obtaining and understanding IPL power supply contracts and resources. This is expected to be a two day on-site meeting at IPL attended by three (3) Sawvel consultants.

Meeting #2 – Transmission and Distribution, Customer Service and Technology

This meeting would be scheduled after data and information about the transmission and distribution, customer service and technology areas is sent to Sawvel. The intent of this meeting is to observe the transmission and distribution system, capital improvements, operation and maintenance plans and staffing to assist Sawvel in estimating capital and operating costs of these

systems. Sawvel would also use this meeting to follow up with power supply personnel if there are questions regarding IPL existing and future power supply contracts and resources. This is expected to be a four-day on-site meeting at IPL attended by two (2) Sawvel consultants.

Meeting #3 - Review Draft Plan

The purpose of this meeting would be to review and discuss the draft Strategic Plan. Sawvel will provide the draft Strategic Plan in advance of the meeting and then conduct a one-day on-site meeting with IPL and City staff as appropriate attended by three (3) Sawvel consultants.

Meeting #4 – Meet with Management and City Council

The purpose of this meeting would be to review and discuss the draft Strategic Plan. Sawvel will provide the draft Strategic Plan in advance of the meeting and then meet with management and City Council. This is expected to be a one-day on-site meeting at the City attended by three (3) Sawvel consultants.

Coordination with Public Engagement Firm

Sawvel has included 120 manhours of time and \$21,000 of compensation for coordination activities. Sawvel will participate more than this budgeted amount if authorized and compensated by IPL.

COMPENSATION:

The estimated compensation for the Study is \$300,000. Sawvel will not exceed the estimated compensation amount without prior authorization from Client. Sawvel will invoice monthly for time and expenses incurred during the previous month in accordance with the then current Standard Billing Schedule.