



Department Source: City Utilities - Water and Light
To: City Council
From: City Manager & Staff
Council Meeting Date: January 2, 2018
Re: Integrated Electric Resources & Master Planning

Executive Summary

Columbia's Electric Utility is scheduled to conduct another Integrated Resource Plan in 2018. Based on revised electric load forecasts, staff is recommending that a new electric transmission and distribution system planning process be incorporated with the Integrated Electric Resource Plan. This proposed new planning process will replace all previous planning efforts regarding serving anticipated loads and meeting federal transmission planning requirements.

Discussion

Columbia's Electric Utility is scheduled to conduct another Integrated Resource Plan in 2018. An Integrated Electric Resource Plan is a plan to meet forecasted annual electric system peak and energy demand plus some established reserve margin through a combination of supply-side and demand-side resources over a specified time period.

Electric System Master Planning is also regularly conducted by electric utilities and other load serving entities. Electric System Master Plans provide general guidance for the electric system improvements needed to maintain reliability and serve anticipated loads.

Included with this memo are a couple of graphs and a chart showing the results of past electric system peak and energy demand forecasts. There are many variables that impact future forecasts. Since the load forecasts were developed for the 2008 Integrated Resource Plan, more recent peak and energy demand forecasts have been developed. The more recent forecasts show a reduction in the forecasted rate of peak and energy demand increases.

Based on these revised forecasts, staff is recommending that a new electric transmission and distribution system planning process be incorporated with the Integrated Electric Resource Plan. This proposed new planning process will replace all previous planning efforts regarding serving anticipated loads and meeting federal transmission planning requirements.

At this time staff is proposing an Integrated Electric Resources & Master Plan to represent this combined planning effort.

The purpose of this Integrated Electric Resources & Master Plan for Columbia's electric utility is to provide general guidance in planning to meet forecasted annual peak and energy demand, maintain reliability, and serve anticipated loads through a combination of supply-side, demand-side, distribution and transmission resources over a specified time period.



The Integrated Electric Resources & Master Plan will review major activities, system events, system improvements that occurred during past planning cycles, the existing electric system and proposed electric system projects related to generation, transmission, substation and distribution improvements.

The primary goals of the Integrated Electric Resources & Master Plan are as follows:

- Ensure public participation throughout the process
- Forecast capital needs based on:
 - Capacity requirements
 - System reliability
 - Economic viability
 - Customer satisfaction
 - Stakeholder needs.
- Plan for continued compliance with established Electric System Planning criteria.
- Develop projects and capital programs which implement strategic goals and initiatives.
- Identify specific generation, transmission, substation, and distribution system improvement projects, budgets and schedules.
- Identify long range property and right-of-way acquisition requirements.

To support the goal of public participation throughout the process, staff is proposing that a first step would be for an Integrated Electric Resources & Master Plan work group be created. The intent is for this workgroup to be involved in the planning throughout the entire process starting with developing a scope of services for selection of a consultant to support this planning process. The following structure for representation on this workgroup is proposed:

1. Water & Light Advisory Board Member
2. Water & Light Advisory Board Member
3. Water & Light Advisory Board Member
4. Water & Light Advisory Board Member
5. Water & Light Advisory Board Member
6. Residential Customer
7. Commercial Customer
8. Industrial Customer
9. Columbia Public Schools
10. University of Missouri
11. Columbia Board of Health
12. Financial Institutions
13. Central Electric Cooperative
14. Sustainability (AdHoc)
15. Community Development (AdHoc)



The planning period typically used in the past has been a 20 year planning horizon. An objective of this Integrated Electric Resources & Master Plan report is to document studies performed and decisions made as part of past planning processes. The Integrated Electric Resources & Master Planning process is intended to provide an opportunity for electric system planners to address complex issues in a structured, inclusive and transparent manner and at the same time provide an opportunity for interested parties both inside and outside the planning area to review, understand and provide input to planning decisions. Coordination with development of the Climate Action Plan is an important internal issue that will need to be supported. Having these two processes running together should provide an opportunity for the beneficial exchange of useful information.

The Integrated Electric Resources & Master Plan report is intended to develop options for environmentally sound power supply strategies which provide reliable electric service at the lowest practical cost and recommend the steps for implementation of the electric system projects and goals. Included with this is memo is a draft scope of services for the proposed Integrated Electric Resources & Master Plan.

Fiscal Impact

Short-Term Impact: N/A
 Long-Term Impact: N/A

Strategic & Comprehensive Plan Impacts

[Strategic Plan Impacts:](#)

Primary Impact: Primary, Secondary Impact: Secondary, Tertiary Impact: Tertiary

[Comprehensive Plan Impacts:](#)

Primary Impact: Primary, Secondary Impact: Secondary, Tertiary Impact: Tertiary

Legislative History

Date	Action

Suggested Council Action

Provided Direction to Staff on proposed approach for the next electric system planning process