



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD



TO: Commissioners Mital, Schlossberg, Helgeson, Brown and Carlson
FROM: Frank Lawson, General Manager
DATE: March 3, 2020
SUBJECT: Amendment to Goal #6, Electricity Supply Planning
OBJECTIVE: Board Action

Issue

Management is recommending a change to the 2020 annual organizational goals that prioritizes further understanding of the impacts of electrification as part of electric utility planning.

Background

Detailed background information and the resulting draft 2020 organizational goals were discussed at the January 7, 2020 Board Meeting, and approved on February 4, 2020, including a goal to develop a dynamic electricity supply planning methodology that included a new Integrated Resource Plan (IRP). IRPs are tools to assist utilities in making good decisions about long-term generation resource choices under various scenarios. EWEB provides annual updates to the Board on the status of its existing IRP, with the last update on September 2019 showing that EWEB's portfolio remains adequate for meeting our resource needs for at least the next five (5) years. The next update and review is scheduled for September 2020.

Discussion

Many of the decisions informed by a comprehensive new integrated resource plan will be made by future Commissioners. However, the present Board and management are compelled to understand, communicate, counsel, and opine on policy, legislation, regulation, and ordinances that impact the electrification of other sectors (transportation, heating, etc.). To meet this need, Management proposes that EWEB focus on developing an Electrification Impact Analysis and Report that assesses the effects of electrification, and related ordinances/legislation, on EWEB's loads, generation mix, reliability, costs, compliance, energy/efficiency efforts, and community GHGs.

The scope of the Electrification Impact Analysis and Report is attached for the Board's reference and comment.

Recommendation

Management is requesting the Board consider altering the 2020 Organizational Goal #6 as proposed below.

GOAL AS APPROVED (Feb. 4, 2020)

Goal #6 –Develop a dynamic electricity supply planning (ESP) methodology, including processes, analytical tools, and reporting and outreach methods, needed to effectively synchronize generation resources with future customer-preferred consumption products.

NEW GOAL:

As part of electricity supply planning, develop and publish an Electrification Impact Analysis Report that assesses the effects of electrification, and related ordinances/legislation, on EWEB’s loads, generation mix, reliability, costs, compliance, energy/efficiency efforts, and community GHGs.

Requested Board Action

Management requests the Board vote on the following motion: “...move to modify the 2020 organizational goal #6 to focus on an Electrification Impact Analysis and Report as proposed.”

Electrification Impact Analysis Scope

A. Categories & Covered Period

EWEB’s Electrification Impact Analysis will assess the 30-year impact of the following categories, with data summarized and presented for present state, 2025, 2030, 2040, & 2050. The rate of electrification will be varied in order to understand the *sensitivity* of the impacts.

1. De-Carbonization of Transportation; primarily light-duty electric and/or plug-in hybrid electric vehicles. Other fuel sources may be considered, including hydrogen fuel cells.
2. Residential Water Heating (secondarily commercial)
3. Residential Space Heating (secondarily commercial)

B. Sensitivity to Legislated/Regulated Actions & EWEB Programs

Within each category listed above, EWEB will hypothesize and test the effects of legislation and local ordinances on the rate(s) of electrification (i.e. sensitivities), including accelerators (e.g. carbon pricing, natural gas restrictions) and deterrents (e.g. high electricity supply prices, loss of state or federal credits).

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C. Impacts

EWEB will use formal and informal models and analytical tools to determine the following impacts of electrification within the categories identified above, including the following.

Phase 1 (2020)

- Energy Impact, Peak Impact, Shape Impact (Seasonal, Daily)
- Generation/Portfolio Impact (Type/Mix, Capacity, Costs, Carbon, Compliance)
- Environmental Impact (Generation Only, Net – Total Energy Cycle)

Phase 2 (2020/2021)

- Infrastructure Impact (Bulk System Capacity, Constraints, Costs)
- Customer Impact (Electric Service, Appliance, Costs)
- Predictive Influence of EWEB programs on rate of electrification and impacts identified above

D. Mitigation Strategies

As part of the electrification impact analysis, EWEB will develop a general understanding of how energy efficiency, load shifting, and peak reduction programs can mitigate challenging outcomes within the “impact categories” highlighted above.

E. Schedule

A first draft for Phase 1 review will be made available by mid-summer of this year, with the invitation for Board and public review and guidance. Depending on the degree of adjustments and additions, the intent is to finalize and publish the Phase 1 content by October. It is expected that conditions will continue to evolve and provide for additional opportunities to analyze impacts over time. Following the release of the Phase 1 draft, work on the additional scope (Phase 2) will commence with the goal of completion in late 2020 or early 2021.