



MEMORANDUM

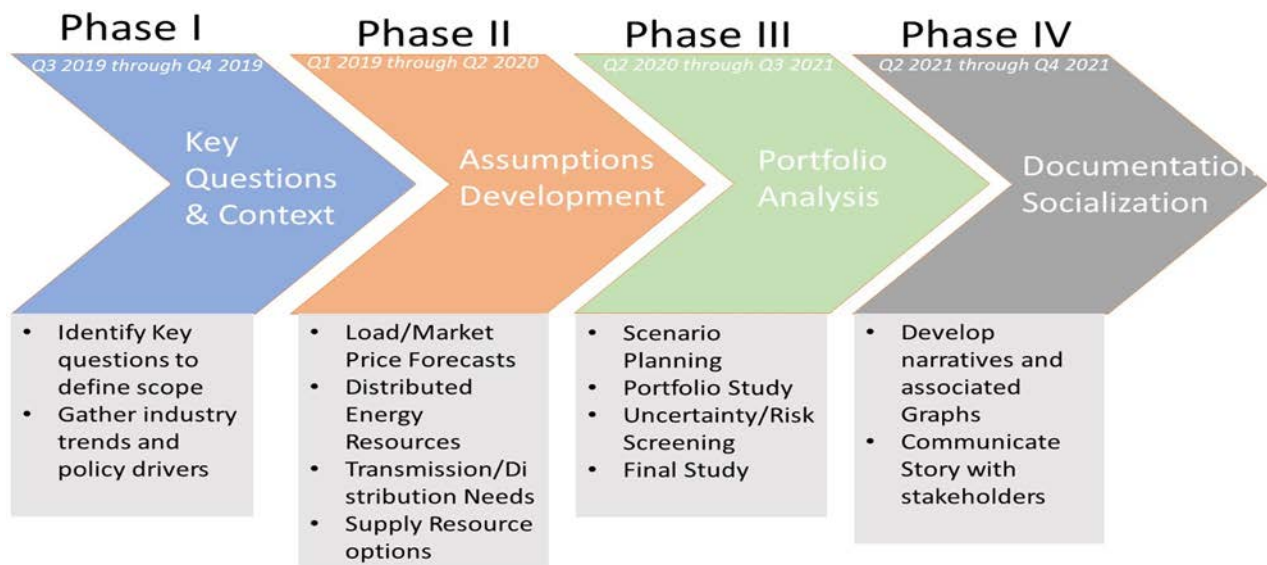
EUGENE WATER & ELECTRIC BOARD



TO: Commissioners Carlson, Mital, Helgeson, Schlossberg, and Brown
FROM: Susan Ackerman, Chief Energy Officer
DATE: July 24, 2019
SUBJECT: 2021 Integrated Energy Resource Plan
OBJECTIVE: Information Only

EWEB's Planning group is gearing up to develop a new integrated energy resource plan (IERP), for completion year end 2021. EWEB's resource choices over the next decade are one of our two strategic priorities, so this first full IERP since 2011 is important.

Below is the draft schedule for analysis and decision making regarding the 2021 Plan:



The first task associated with this analysis is develop and refine its scope and intent. As part of scoping, EWEB Planning Staff is interested in learning what questions Board members have for our electric resource portfolio that may be answered by the 2021 IERP analysis. We will be scheduling one-on-one meetings with Board members about the IERP in September and October, and hope to learn from you at that time what questions you would like answered. After we have gathered these questions, we will propose an IERP scope. We may recommend that questions be answered in stages over successive IERPs.



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Carlson, Mital, Helgeson, Schlossberg and Brown
FROM: Sue Fahey, Assistant General Manager/CFO;
Rene Gonzalez, Customer Solutions Manager;
Greg Kelleher, Customer Solutions Supervisor
DATE: July 28, 2019
SUBJECT: Customer Solutions Products and Services Priorities
OBJECTIVE: Information Only

Issue

This is an informational item describing the products and services that, based on EWEB's adopted Strategic Plan and Organizational Goals, will be the focus of the Customer Solutions team's work in the next eighteen months.

Background

EWEB's product and services portfolio includes items that provide value-added efficiency and electric and water conservation, as well as those that provide technical and financial support. Some are long-standing with a broad reach across our customer base, such as weatherization programs, while others support new initiatives with a more targeted audience, like transportation electrification related rebates.

The Board has approved a set of organizational goals with specific metrics to track progress towards meeting EWEB's strategic plan priorities. While EWEB will continue to offer a broad portfolio of products and services, Customer Solutions seeks to focus and synergize efforts across different work groups to optimize results in areas that directly contribute to achieving strategic and operational goals.

Discussion

Attachment 1 shows the product and services offered through Customer Solutions that most directly impact strategic and organizational goals, many of which move the needle on multiple goals. To further focus efforts, those marked with a star have the highest strategic alignment and potential to impact the goals, but unlike steady-state offerings, require cross-functional product development and/or marketing for best results.

1. Achieve conservation/energy efficiency reductions of 9,500 MWh and peak savings of 1.2 MW in 2019

Several programs are offered that assist customers with reducing overall energy use, lowering bills and increasing comfort through conservation and efficient technologies. Energy conservation, especially during high demand periods, helps the utility avoid or delay infrastructure investments and

reduces market purchases at peak energy use times. While EWEB's power portfolio is 90% carbon free, reducing peak power consumption also lowers carbon emissions associated with the purchase of more carbon intensive market power.

Weatherization of existing buildings remains a cornerstone for this work, assisting customers across all income brackets, while Home Energy Scores and the revamped Home Energy Audits are services targeted towards our limited income customers and renters.

Long-term energy demand of new technologies and electrification, as well as regional supply constraints, will likely contribute to peak challenges in the future. A peak energy education program (Peak Hero) is being explored to educate customers across sectors to be champions in lowering peak usage to maximize clean energy use in their homes and businesses. Staff is exploring technologies to facilitate the delivery of peak education events to customers and has begun to explore partnerships with local groups, including Eugene350, to assist with education and delivery of program and goals.

2. Equitably and cost-effectively reduce community/regional carbon emissions by 7,500 MTCO_{2e} in 2019

Climate change presents ongoing environmental, economic and social risk to EWEB, our customers, our community and the world. Per Board policy SD15, EWEB will assist customers in reducing their carbon emissions.

In addition to the services noted above that reduce peak usage, programs with direct and significant carbon reduction potential include smart electrification incentives for commercial new construction and retrofit projects. Energy Management staff are working with some of our larger customers, such as the University of Oregon and the City of Eugene on potential carbon reduction opportunities. These opportunities typically arise on a case-by-case basis and require extra time to develop and implement. A good example is the multi-year renovation of Ya-Po-Ah Terrace, which will result in annual savings of 420 metric tons of CO₂, and equipment life-expectancy is estimated at 20-25 years. The project includes electrification and energy efficiency upgrades, including the replacement of their gas boiler heating system with an efficient electric system.

Electric Vehicle (EV) related products and services encourage adoption, and provide education and incentives for charging infrastructure to control timing of EV-related load. These programs not only have a direct, measurable impact on carbon emissions, they have the added benefit of leveraging agency partnerships for education campaigns, such as rEV Up Eugene, and access to Clean Fuel Credits for financial support.

3. Reduce non-pay disconnects by 10% in 2019 and by 50% by 2023.

Affordable prices, bill payment assistance, and energy efficiency investments are priority strategies to support limited-income customers. In addition to enhanced conservation incentives targeting this customer segment, products and services are being developed to facilitate on-time bill payment and to help customers escape the cycle that leads to service shut-offs. An easier and more accessible level bill pay service will be implemented in 2019.

4. Create products, services and infrastructure that facilitate consumption flexibility

Boosting customer confidence through cost-controls, continuous improvement, consistent performance, and transparent communication is the foundation of Phase 1 of the strategic plan. Phase 1 success is necessary to creating Phase 2's consumption flexibility, because customer participation will be required to more efficiently balance resource supply and demand. Examples of existing program offerings that are well-suited for time-of-use pricing and load shifting flexibility include incentives for heat pump water heaters and automated controls for commercial/industrial operations. As noted earlier, staff is launching a peak energy marketing campaign which will involve a concerted educational effort to build community awareness of peak energy issues, including the importance of managing peak consumption and ways customers can be involved.

Requested Board Action

Information only. If the Board has feedback on Customer Solutions' priorities, please contact Rene Gonzalez at rene.gonzalez@eweb.org.

| Strategic Alignment: Priority Areas and Goals | <u>Goal #5:</u> Reduce non-pay disconnects by 10% in 2019 and by 50% by 2023. | <u>Goal #6:</u> Achieve conservation/ energy efficiency reductions of 9,500 MWh in 2019 | <u>Goal #6:</u> Equitably and cost-effectively reduce community/regional carbon emissions by 7,500 MTCO _{2e} in 2019. <u>SD15:</u> Assist customers with carbon reductions through efficiency, alternative fuels and smart electrification. Participate in local, state and regional efforts to encourage, develop and enact measures to mitigate carbon emissions | Achieve peak savings of 1.2 MW in 2019 | <u>Strategic Plan, Phase II:</u> Create products, services and infrastructure that facilitate consumption flexibility . |
|----------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Customer Solutions Priority Programs | | | | | |
| Bill Assistance | ✓ | | | | |
| Commercial Building Controls Rebates & Loans | | ✓ | ✓ | ✓ | ✓ |
| Ductless Heat Pump Rebates & Loans | | ✓ | ✓ | ✓ | |
| EV Adoption & Charging | | ✓ | ✓ | ✓ | ✓ |
| Heat Pump Water Heater Rebate | | ✓ | ✓ | ✓ | ✓ |
| Home Efficiency Audits | ✓ | ✓ | ✓ | ✓ | |
| Home Energy Score - Rentals | ✓ | ✓ | ✓ | ✓ | |
| Level Pay Bills | ✓ | | | | |
| Peak Hero - Education Campaign | | ✓ | ✓ | ✓ | ✓ |
| Smart Electrification New Construction & Retrofits | | ✓ | ✓ | ✓ | |
| Updated Greenpower Program* | | | ✓ | | |
| Weatherization rebate & loan | ✓ | ✓ | ✓ | ✓ | |
| *Program required by State | | | | | |



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Carlson, Mital, Helgeson, Schlossberg and Brown
FROM: Rod Price, Chief Operating Officer; Gary Lentsch, Fleet Operations Supervisor
DATE: August 6, 2019
SUBJECT: Maintaining a Cost Effective Fleet Replacement Program
OBJECTIVE: Information Only

Issue

Having a sound vehicle and equipment replacement program is important to utilities and municipal agencies of all size. EWEB owns and maintains a large, specialized and varied fleet which includes over 370 assets. Fleet Services acquires, maintains, and dispose of vehicles and equipment in a manner that is financially and environmentally sustainable. At the July 2019 Board meeting, Commissioners requested staff to provide more back ground on how replacement decisions are made for our vehicles.

Background

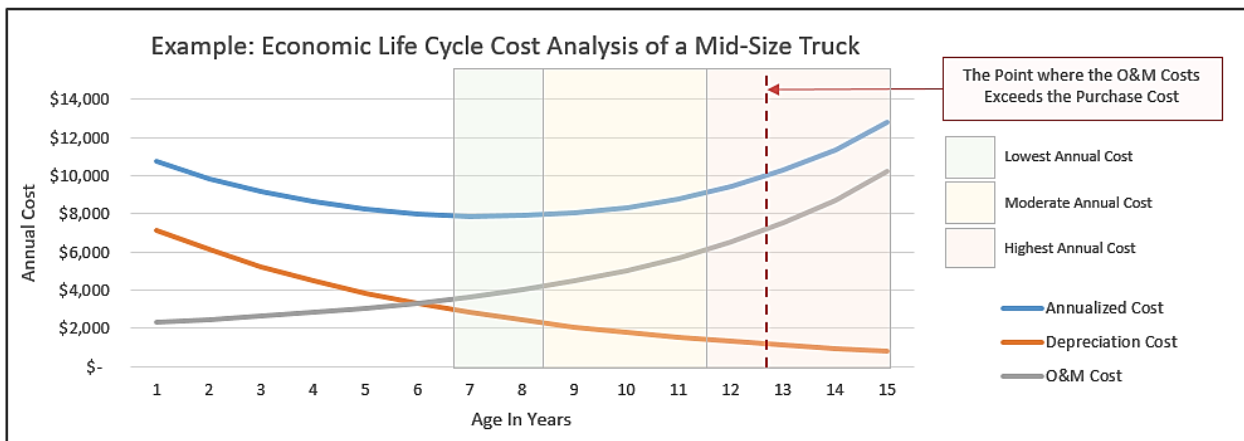
Currently the capitalized value of the fleet is over \$21.4 million, with an estimated replacement value of \$29.2 million. Maintaining the current fleet requires about \$2.4 million per year in O&M cost, and around \$1.5 million a year in Capital replacement costs. The average age of the fleet is currently 9.2 years old.

Discussion

Eventually, all vehicles and equipment wear out due to age or excessive use. For the most part, utilities and municipal agencies across the country have relied on using fixed replacement intervals to manage their fleets. However, using the conventional fixed replacement interval doesn't always work. That's mainly because we find that mileage, utilization and our type of work varies greatly across the organization. Therefore various lifecycle costs are looked at to determine when to replace a vehicle. Those lifecycle cost elements include:

- Acquisition costs
- Age, miles and/or hours to date.
- Fuel costs
- Preventable Maintenance (PM) and repair costs
- Estimated salvage value
- Downtime cost and obsolescence cost

Following is an example chart of how these elements are modeled.



This orange curve on the chart indicates how capital and resale values decline, while the gray curve shows how vehicle operation and maintenance cost increases over time. The combination of these two trends produces a U-shaped total annualized cost. Once we have reached the flat portion of the u-shaped blue annualized cost curve (green zone), we tend to experience the lowest annual cost of ownership. Replacing vehicles and equipment before they reach this point in the curve be likely to be unnecessary, so any replacement at this point, needs to be heavily scrutinized to why and how the asset is being replaced.

Once we move into the moderate area of the curve (yellow zone), we can evaluate the vehicle’s condition and determine how long we can defer replacement by extending its useful life cycle. Depending on how a vehicle is being used (e.g. first responder, server duty use, etc.), the Utility may start looking at replacing certain vehicles during this part of the curve.

At some point in the cost curve (red zone), we move to having the highest annual cost of ownership as the vehicle starts to wear out. This is often when we experience a higher frequency of break-downs, which is having a dramatic effect on crew-down time. This is also the point of the curve is where we often see where the total O&M cost has exceeded the original purchase cost of the vehicle.

These curves are built using EWEB specific details and nationally collected data, and along with operating needs and professional judgement, are used to drive decisions about individual vehicle replacements. The same tools are used to determine overall fleet capital and maintenance needs for long term financial planning.

After we determine a vehicle is to be surplus, processes are in place to maximize the resale value. Since we normally dispose our vehicles and equipment through a local municipal-agency surplus auction, maintaining our reputation of selling our assets before there literally run-to-failure is crucial for maintaining future resale values of our surplus equipment. Our current auction process allows local municipal fleets to be able to bid on our surplus vehicles and equipment before they are offered to the public. We find that the majority of our buyers are the smaller municipal fleets that are experiencing budget shortfalls while maintaining a level of service to our community. Because of this process, we have been able to maintain a 15 to 20% salvage value at the time of disposal.

TBL Assessment

When we are replacing our vehicles and equipment, we also look at the environmental and regulatory considerations that have led EWEB to implement “Green Fleet” initiatives. Having a

sustainable fleet replacement program can provide opportunities for the Utility to comply with regulatory emissions and improve the environmental impact of EWEB's fleet, while reducing greenhouse emissions for the community.

Requested Board Action

None at this time.

If you have any questions please contact Rod Price Rod.price@eweb.org or 541-685-7122.