Exhibit to Agenda Item #1

Brief the Board on SMUD's recently completed **Integrated Distribution Resources Plan.**

Board Strategic Development Committee and Special SMUD Board of Directors Meeting

Tuesday, October 6, 2026, scheduled to begin at 6 p.m.

SMUD Headquarters Building, Auditorium

Agenda

- Background & Context
- Integrated Distribution Resource Planning Analysis
- Considerations & Efforts Underway

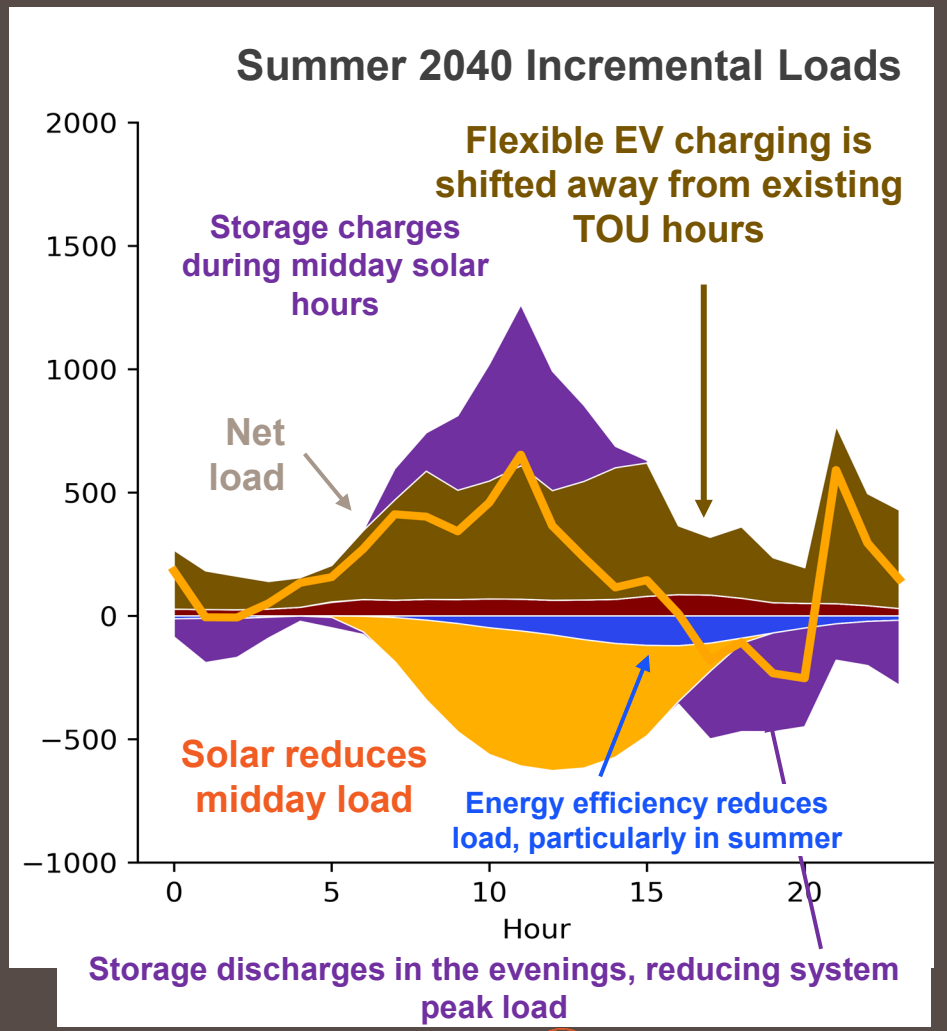
Background & Context: Integrated Distribution Resource Planning

Why do we do an IDRP? To evaluate potential future DER growth scenarios, enabling us to proactively prepare for various distribution grid evolution pathways. This insight will inform our DER programs and ensure our infrastructure is ready to support electrification and grid modernization efforts.

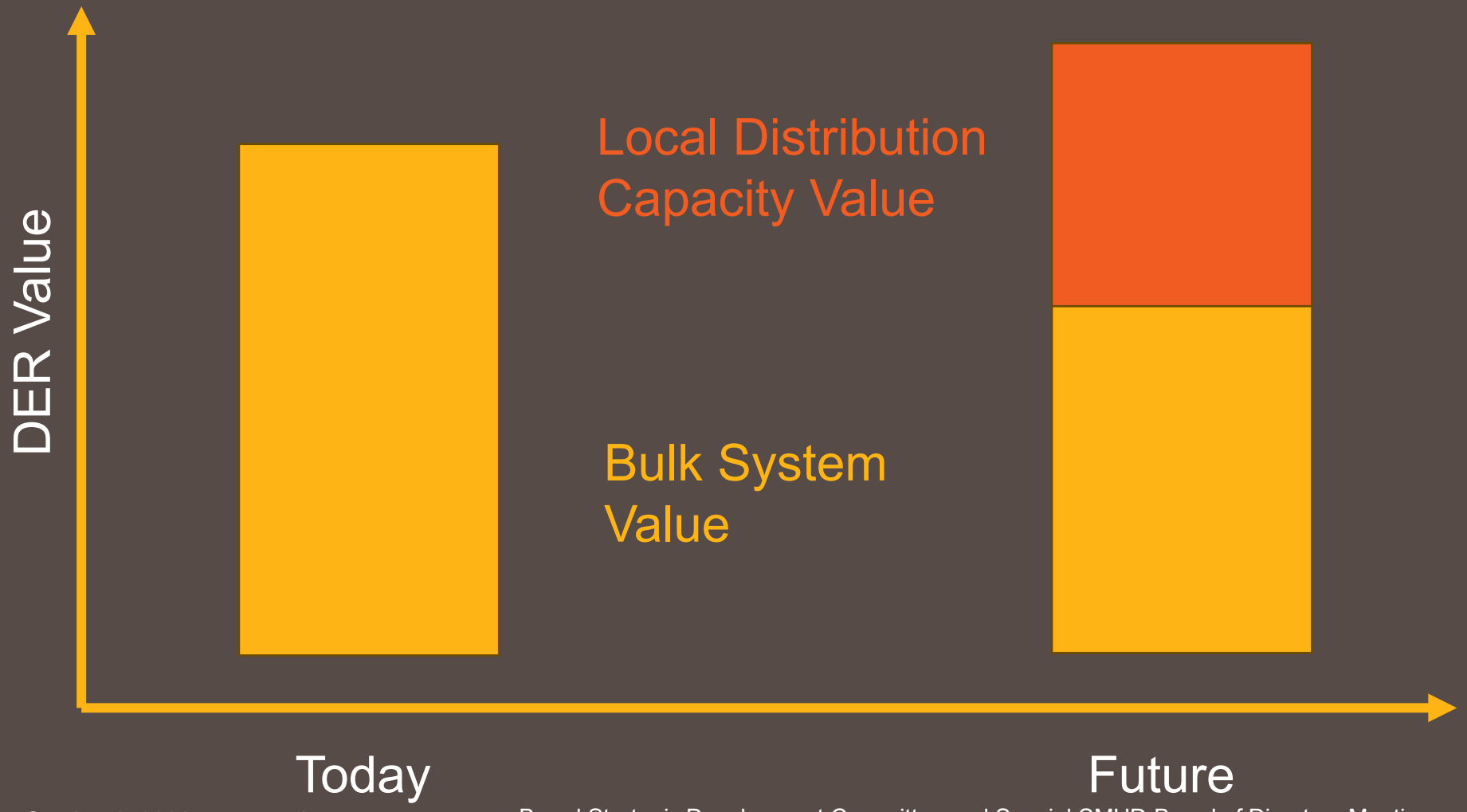
Addressing Uncertainty: Given the dynamic and evolving nature of this space, the scenarios presented are intended as directional guides rather than definitive forecasts.

Prior Investments: Our previous forecasting efforts have already guided investments in key areas such as: Distributed Energy Resource Management Systems (DERMS), Advanced Metering Infrastructure (AMI), Managed Charging Pilot Programs, which are critical pieces of being ready for this increasingly dynamic future distribution system.

Next Steps: The insights from the IDRP will help us chart the appropriate course for future actions, ensuring SMUD can effectively support and capitalize on the benefits of transportation electrification while maintaining grid reliability and resilience.



What does it mean for our Programs?



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Eric Cutter, Partner
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Energy+Environmental Economics

Distribution Planning

Traditional Process

Inputs
What informs our Forecast

- Historical Peak Load
- \+
- New Customer Demand

Develop 5-Year Load Forecast

Combine historical peak load with new customer demand to create a five-year distribution forecast

Identify Capacity Needs

Compare Forecasted Demand with available system capacity to identify where and when deficiencies are expected

Develop Mitigation Measures

For each projected deficiency, evaluate and recommend solutions including

- Seasonal Load transfers
- Switching
- Substation Upgrades
- Substation builds

Plan For Large Loads

Work Closely with Commercial Development and Strategic Account teams to support large load projects

Inform Long-Term Planning

Use the Five-year distribution forecast to generate the 10-year transmission forecast and 20-year resource planning forecast

Distribution Planning

EV Impacts

Collaboration

Bidirectional grid triggers need for new and greater cross-functional efforts to manage unique loads with evolving load profiles

How EVs Are Different

Forecasts for EV growth are uncertain, so assume growth will be incremental and evolving

Planning for Peak

EV Loads have unique profiles

Utilize Existing Resources

The aim is to increase existing system utilization through new technology and ongoing pilots

Looking Forward

Consider non-wires solutions that were not available before

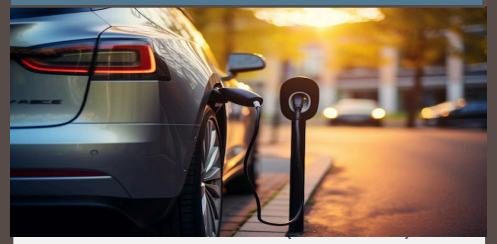
Key Takeaway

EV growth introduces new complexities, but also opportunities to innovate and plan smarter for a more flexible and reliable grid

Distribution Planning

Future Ready

Ongoing Efforts



- Advanced Distribution Management System (ADMS)
- Distributed Energy Resource Management System (DERMS)
- Advanced Metering

New Forecast Tool

Allows for hourly forecasts that predict load growth while accounting for the impacts of DERs and EVs at a more granular level.

Future Mitigation Measures

- Managed Charging
- Load Flexing
- Storage
- Renewables
- Demand Response
- Non-Wire Solutions

Next Steps

Incorporating the learnings from the IRP into SMUD's planning processes while preparing for new mitigation measures that will support greater transportation electrification in an affordable and reliable manner.

Opportunities Ahead

Prepare for new Integrated System Planning (ISP) approach by developing a process to align infrastructure investments, rates, managed charging and DERs to identify the lowest cost, most reliable path forward

Our Path Forward | Leverage data, innovation, and integrated planning to meet evolving customer needs and a cleaner more resilient grid.

Distribution Planning

Integrated System Planning

Strengthen Cross-Team Collaboration

Align infrastructure investments, rates, managed charging and DERs to identify the lowest- cost, most reliable path forward.

Key Outcomes

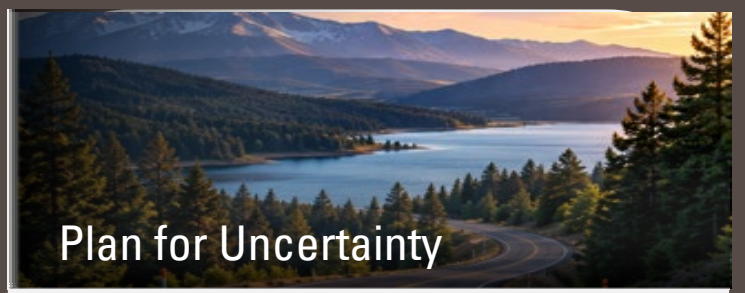
- Cross-Functional Alignment
- Shared understanding of system needs
- More informed investment decisions

Coordinate EV and DER Growth

Leverage the Integrated Resource Plan to align EV demand growth with siting renewable generation, storage, flexible loads, and managed charging to support decarbonization goals.

Key Outcomes

- Holistic Planning across the grid
- Supports decarbonization and reliability
- Optimizes use of existing and new resources



Plan for Uncertainty

Use scenario analysis to account for changes in vehicle costs, charging availability, incentives, fleet adoption, and customer behavior.

Key Outcomes

- Range of potential futures
- Informs flexible, adaptive strategies
- A reliable and cost-effective path forward

A STRONGER MORE RESILIENT GRID | By integrating EV and DER growth into our planning processes, SMUD is prepared to meet evolving customer needs while advancing a cleaner, more reliable and affordable energy future.