Exhibit to Agenda Item #2

Discuss authorization of the Chief Executive Officer and General Manager to negotiate and execute a sole source contract with Electric Power Research Institute (EPRI) to provide market and technical research services to SMUD for the five-year period from January 1, 2025, through December 31, 2029, for a not-to-exceed amount of $6 million.

Board Finance & Audit Committee and Special SMUD Board of Directors Meeting

Tuesday, December 10, 2024, scheduled to begin at 6:00 p.m.

Auditorium, SMUD Headquarters Building

Background

- Electric Power Research Institute (EPRI) is a non-profit organization, funded by utility membership participation in its research activities.
- EPRI members represent more than 90% of the electricity generated and delivered in the U.S.
- SMUD has been a member with the EPRI since its founding in 1972.
- EPRI provides market and technical research services to SMUD across a wide range of topic areas, including Occupational Health and Safety, Sustainability, Hydropower Operations, Bulk Energy Storage Research, Advanced Generation and CCS, Electric Vehicles, Advanced Buildings, and Integration of Distributed Energy Resources.
- The current three-year agreement with EPRI will expire at the end of 2024.

Engagement Highlights (2023/2024)

Interaction	Engagement
Board Engagement	SMUD Board of Director Briefings (Hydrogen, Methane, Sustainability, and Rancho Seco Pollinator Habitat)
Key Supplemental Projects	EVs2Scale2030, Bulk Energy Storage Cost and Performance Study, Hydrogen Hub Evaluation, Flex Demand Response Projects
Workshops	Learning @ SMUD (Environmental Aspects of Energy Storage, Hydrogen), Utility Utilization of AI
Technology Reviews	Carbon Capture Technologies
Training	2 courses
Advisors	47 active advisors (SMUD) on 34 topic area committees
Technology and Project Reports	103 individual products provided

Previous highlights

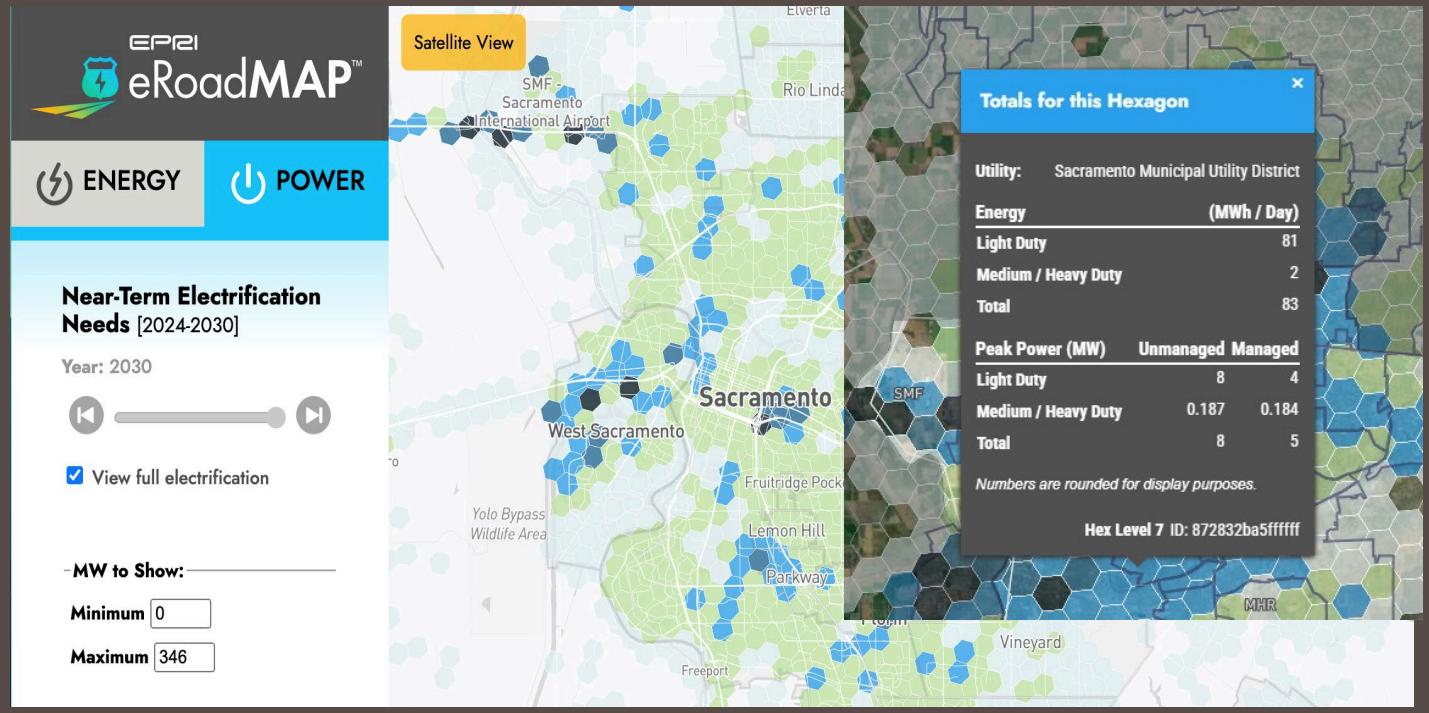
Rancho Seco Restorative Energy project

- Leveraging industry wide knowledge to apply and refine best practices at SMUD’s Rancho Seco PV array

Hydropower Design Basics training

- Onsite, 2-day training for SMUD staff, so popular we had to move to a larger facility and considering scheduling a refresher next year for staff that were unable to attend last time.

Previous highlights

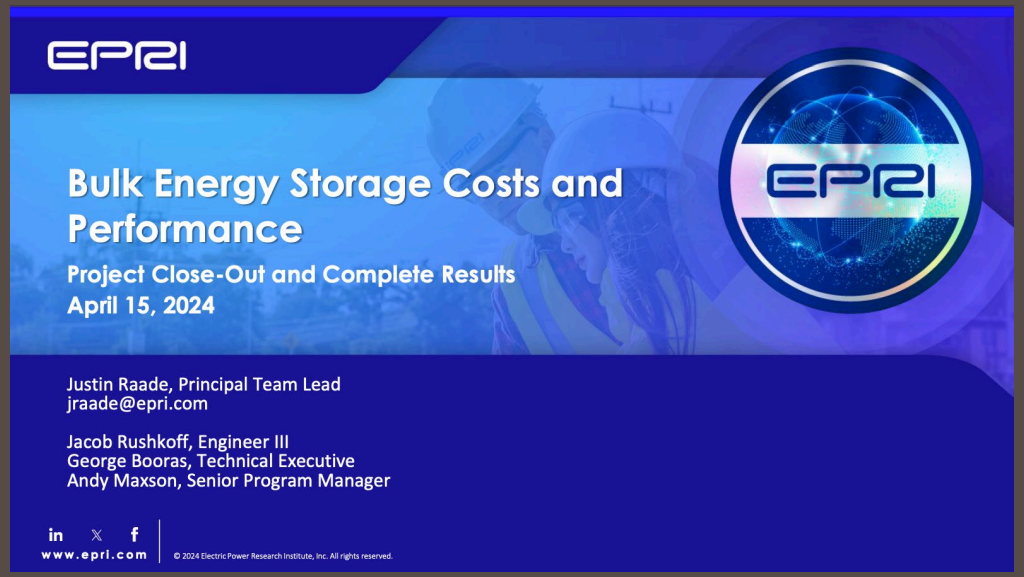


EVs2Scale2030

- Modeling location-based EV charging needs and infrastructure impact over time to support low cost and reliable access to EV charging.

Bulk Energy Storage Costs and Performance supplemental project

- EPRI provided granular detail for 6 active projects across the U.S., and technical assessment of multiple non-lithium storage technologies



Plan for next contract period

- Bulk Energy Storage
- Advanced Generation and Carbon Capture and Storage
- Hydropower Generation
- Transmission Asset Management Analytics
- Bulk System Integration of Renewables and DERS
- Energy Storage & Distributed Generation
- DER Integration
- Enterprise-Wide Occupational Health and Safety
- Strategic Sustainability Science
- Electric Transportation
- Grid-Edge Customer Technologies
- Advanced Buildings and Communities
- Heat Rate and Flexibility: Generation Fleet Optimization*
- Materials (includes Metallurgy)*

*New scope for 2025 contract period.

Budget

	Year 1	5-year Total
EPRI programs	$726,000	~$4,000,000
Supplemental + Special projects	$200,000 *estimate	~$1,500,000
TOTAL Planned	$926,000	**$5,500,000**
Contract Not to Exceed	N/A	$6,000,000

- Recent historical EPRI contract engagements have averaged ~$1 Million/yr
- Multi-Year contract savings of ~$1.3M compared to annual agreements (25% discount on program costs)
- Scope of work and program portfolio are reviewed on an annual basis

Action Request

Authorize the Chief Executive Officer and General Manager to negotiate and execute a sole source contract with Electric Power Research Institute (EPRI) to provide market and technical research services to SMUD for the five-year period from January 1, 2025, through December 31, 2029, for a not-to-exceed amount of $6 million.