Board Policy Committee Meeting and Special SMUD Board of Directors Meeting

Date: Wednesday, October 12, 2022
Time: Scheduled to begin at 5:30 p.m.
Location: Virtual Meeting (online)

Powering forward. Together.
AGENDA
BOARD POLICY COMMITTEE MEETING
AND SPECIAL SMUD BOARD OF DIRECTORS MEETING

Wednesday, October 12, 2022
Scheduled to begin at 5:30 p.m.
Zoom Webinar Link: Join Board Policy Committee Meeting Here
Webinar/Meeting ID: 161 108 2604
Passcode: 409695
Phone Dial-in Number: 1-669-254-5252 or 1-833-568-8864 (Toll Free)

Pursuant to Government Code section 54953(e) and the Emergency Board Meeting Procedures adopted by the SMUD Board of Directors, the regular Board meeting and other public meetings are currently conducted solely via virtual (online/teleconference) meeting to align with state, local, and federal guidelines for the containment of the coronavirus.

Live video streams and indexed archives of meetings are available at: http://smud.granicus.com/ViewPublisher.php?view_id=16

Members of the public may register to provide verbal comments at an upcoming Board or Committee meeting by emailing a request to speak to PublicComment@smud.org. Please include the date of the meeting, name, and topic or agenda item the requestor wishes to speak on. The request may also be submitted while the meeting is in progress during the standard time for the agenda item or topic. Pre-registration is strongly encouraged by no later than 3:00 p.m. on the day of the meeting.

Members of the public may provide written public comments on a specific agenda item or on items not on the agenda (general public comment) by submitting comments via e-mail. Comments may be submitted to PublicComment@smud.org and will be placed into the record of the meeting.

Members of the public that are listening to or watching the live stream of a Committee meeting and wish to comment on a specific agenda item as it is being heard may submit their comments, limited to 250 words or less, to PublicComment@smud.org, noting the agenda item number in the subject line. The Committee Chair may read comments for items on the agenda into the record, in his discretion, based upon such factors as the length of the agenda or the number of e-mail comments received. General public comment for items not on the agenda will not be read into the record but will be provided to the Board and placed into the record of the Board meeting if it is received within two hours after the meeting ends.

This Committee meeting is noticed as a joint meeting with the Board of Directors for the purpose of compliance with the Brown Act. The Policy Committee will review, discuss and provide the Committee's recommendation (if applicable) on the following items, and the Board of Directors will take action on the Discussion Calendar:
DISCUSSION CALENDAR

1. Laura Lewis  Make findings pursuant to Government Code section 54953(e) to continue holding meetings virtually during proclaimed state of emergency (recurring item, every 30 days).  Presentation: 5 minutes  Discussion: 10 minutes

DISCUSSION ITEMS

2. Ellias van Ekelenburg  Accept the monitoring report for Strategic Direction SD-6, Safety Leadership.  Presentation: 15 minutes  Discussion: 10 minutes

3. Ed Hamzawi  Accept the monitoring report for Strategic Direction SD-10, Innovation.  Presentation: 15 minutes  Discussion: 15 minutes

4. Rachel Huang  Accept the monitoring report for Strategic Direction SD-19, Diversified Business.  Presentation: 10 minutes  Discussion: 10 minutes

5. Dave Tamayo  Board Monitoring: Board-Staff Linkage BL-6, Evaluating the Chief Executive Officer and General Manager's Performance and Board-Staff Linkage BL-7, Delegation to the Chief Executive Officer and General Manager.  Presentation: 5 minutes  Discussion: 5 minutes

INFORMATIONAL ITEMS

6. Brandon Rose  Board Work Plan.  Discussion: 5 minutes

7. Public Comment

8. Dave Tamayo  Summary of Committee Direction.  Discussion: 1 minute

Pursuant to Resolution No. 20-06-08 adopted on June 18, 2020, Emergency Board Meeting Procedures are in effect:

Members of the public may make either a general public comment or comment on a specific agenda item by submitting comments via email. Comments may be submitted to PublicComment@smud.org.
Comments will be provided to the Board and placed into the record of the Committee meeting if it is received within two hours after the meeting ends.

Members of the public that are listening or watching the live stream of a Board meeting and wish to comment on a specific agenda item as it is being heard, may submit their comments, limited to 250 words or less, to PublicComment@smud.org. The Board Chair may read the comments into the record, in his discretion, based upon such factors as the length of the agenda or the number of email comments received. Comments will be provided to the Board and placed into the record of the Committee meeting if it is received within two hours after the meeting ends.

Members of the public may register to provide verbal comments at an upcoming Board or Committee meeting by emailing a request to speak to PublicComment@smud.org. Please include the date of the meeting, name, and topic or agenda item the requestor wishes to speak on. The request may also be submitted while the meeting is in progress during the standard time for the agenda item or topic. Pre-registration is strongly encouraged by no later than 3:00 p.m. on the day of the meeting.

ADA Accessibility Procedures: Upon request, SMUD will generally provide appropriate aids and services leading to effective communication for qualified persons with disabilities so that they can participate equally in this virtual meeting. If you need a reasonable auxiliary aid or service for effective communication to participate, please email Toni.Stelling@smud.org, or contact by phone at (916) 732-7143, no later than 48 hours before this virtual meeting.
NARRATIVE:

Requested Action: Make findings pursuant to Government Code section 54953(e) to continue meetings via virtual (online/teleconference) meeting for the next 30 days.

Summary: Pursuant to Executive Order N-29-20 issued on March 17, 2020, and Executive Order N-35-20 issued on March 21, 2020, as well as the Emergency Board Meeting Procedures adopted by this Board via Resolution No. 20-06-08 on June 18, 2020, this Board has conducted regular Board meetings and other public meetings via remote (online/teleconference) meetings.

On September 16, 2021, Governor Newsom signed Assembly Bill 361 (AB 361), which became effective immediately upon signature, containing language that eased Brown Act requirements to allow local agencies to meet remotely. AB 361 allows meetings to continue to be conducted by teleconference, similar to the process used during the current COVID-19 pandemic, but only when there is a declared state of emergency when the local governing body makes findings that there are imminent health risks to meeting in person.

On February 25, 2022, Executive Order N-04-22 was issued leaving the California State of Emergency due to the threat of COVID-19 in effect for the foreseeable future. Though the State of Emergency remains in effect, mask mandates have been dropped locally and at the state level.

On April 21, 2022, CAL/OSHA re-adopted its workplace COVID-19 Emergency Temporary Standards (ETS), as modified, effective May 6, 2022, through December 31, 2022, including outbreak reporting. Due to the lack of a requirement to sign in at SMUD Board meetings with contact information, it could be nearly impossible to undertake effective contact tracing. Although the most recently reported COVID-19 data published by the Sacramento County Department of Public Health on its Epidemiology COVID-19 Dashboard, and covering the period up to September 24, 2022, indicated a local COVID-19 case rate of 8.3% and 13 deaths since the last update, meaning Sacramento County is currently in the low severity tier for COVID-19 with surrounding counties also being in the low tiers, staff and community partners continue to report COVID-19 infections, sometimes with fairly severe symptoms. This is consistent with wastewater data showing COVID-19 samples to have remained at a fairly consistent level in Sacramento County for the last few weeks. The bivalent booster shots are widely available but reportedly only a third of people say they plan to get it soon. Moreover, when SMUD Board and Committee meetings were held in person, they could last as long as four hours with all participants in a single room. And although we could space out participants, they would still be breathing one another’s respirated air for what could be a lengthy period of time. The last two years saw rapid increases in infection rates during the fall, and if that pattern remains true for this year, a new surge could come soon.

By Resolution 21-10-01 adopted on October 12, 2021, Resolution No. 21-10-03 adopted on October 21, 2021, Resolution No. 21-11-05 adopted on November 18, 2021, Resolution No. 21-12-04 adopted on December 9, 2021, Resolution No. 22-03-01 adopted on March 8, 2022, Resolution No. 22-03-03 adopted
on March 17, 2022, Resolution No. 22-04-01 adopted on April 13, 2022, Resolution No. 22-04-03 adopted on April 21, 2022, Resolution No. 22-05-06 adopted on May 19, 2022, Resolution No. 22-06-02 adopted on June 16, 2022, Resolution No. 22-07-02 adopted on July 21, 2022, Resolution No. 22-08-05 adopted on August 18, 2022, and Resolution No. 22-09-06 adopted on September 15, 2022, this Board has previously made findings to continue to hold regular Board meetings and other public meetings via solely virtual (online/teleconference) format.

Staff’s recommendation is to continue to hold regular Board meetings and other public meetings via solely virtual (online/teleconference) meeting and continue to monitor developments related to the COVID-19 pandemic. Pursuant to Government Code section 54953(e), this Board must make findings every 30 days that conditions warrant continuing to meet virtually instead of in-person.

**Board Policy:** Governance Process GP-3, Board Job Description – j) Take such other actions as may be required by law.

**Benefits:** Making the determination to continue remote meetings will allow for efficient conduct of SMUD business.

**Cost/Budgeted:** Contained in Business Unit budget for internal labor.

**Alternatives:** Take no action and comply with all original Brown Act requirements.

**Affected Parties:** SMUD, Board of Directors, Public

**Coordination:** Executive Office, Board Office, Legal Department, Information Technology, Communications

**Presenter:** Laura Lewis, Chief Legal & Government Affairs Officer

**Additional Links:**

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<th>Make Findings to Continue Online/Teleconference Meetings</th>
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ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
RESOLUTION NO. ____________

WHEREAS, SMUD is committed to preserving public access and participation in meetings of the Board of Directors and to the safety of meeting attendees; and

WHEREAS, all meetings of the Board of Directors are open and public, as required by the Ralph M. Brown Act (Gov’t Code, §§ 5495054963) (“Brown Act”), so that any member of the public may attend, participate in, and watch SMUD’s governing body conduct its business; and

WHEREAS, the newly enacted Government Code section 54953(e) authorizes a local agency’s governing body, during a proclaimed state of emergency, to participate in its public meetings using remote teleconferencing without compliance with the requirements of Government Code section 54953(b)(3), under specified conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, another condition is that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body determines that meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, on February 28, 2022, the California Department of Public Health rescinded the mask requirement effective March 1, 2022, for all individuals
regardless of vaccination status and instead issued a strong recommendation that all persons, regardless of vaccine status, continue indoor masking; and

WHEREAS, the Sacramento County Department of Public Health on its Epidemiology COVID-19 Dashboard continues to show elevated case and death data that appears to have been stable for weeks, and this is supported by ongoing wastewater sampling; and

WHEREAS, Sacramento County and surrounding counties currently have low community transmission rates for COVID-19 as defined by the Centers for Disease Control and Prevention; and

WHEREAS, on April 21, 2022, the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) re-adopted its workplace COVID-19 Emergency Temporary Standards (ETS), as modified, effective May 6, 2022, through December 31, 2022, including outbreak reporting; and

WHEREAS, SMUD staff and other community members are still reporting infections with lasting symptoms; and

WHEREAS, adoption of the new bivalent booster is still relatively low; and

WHEREAS, SMUD Board and Committee meetings can last as long as four hours, with participants sitting in the same room sharing air the entire time; and

WHEREAS, it would be impractical for SMUD to take steps necessary to prevent imminent risks to the health and safety of attendees, such as by holding public meetings outdoors, ensuring public meeting attendees are vaccinated, have appropriate face coverings, and wear them consistent with public health guidance; and
WHEREAS, all meetings, agendas, meeting dates, times, and manner in which the public may participate in the public meetings of the SMUD Board and offer public comment by telephone or internet-based service options including video conference are posted on the SMUD website and physically outside of SMUD’s Headquarters Building; and

WHEREAS, by Resolution No. 21-10-01 adopted on October 12, 2021, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 21-10-03 adopted on October 21, 2021, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 21-11-05 adopted on November 18, 2021, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 21-12-04 adopted on December 9, 2021, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 22-03-01 adopted on March 8, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct
remote teleconference meetings without compliance with paragraph (3) of subdivision 
(b) of section 54953; and

WHEREAS, by Resolution No. 22-03-03 adopted on March 17, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 22-04-01 adopted on April 13, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 22-04-03 adopted on April 21, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 22-05-06 adopted on May 19, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 22-06-02 adopted on June 16, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and
WHEREAS, by Resolution No. 22-07-02 adopted on July 21, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 22-08-05 adopted on August 18, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; and

WHEREAS, by Resolution No. 22-09-06 adopted on September 15, 2022, this Board made findings that requisite conditions exist for the SMUD Board to conduct remote teleconference meetings without compliance with paragraph (3) of subdivision (b) of section 54953; NOW, THEREFORE,

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SACRAMENTO MUNICIPAL UTILITY DISTRICT:

Section 1. Risks to Health and Safety of Attendees. The Board has reconsidered the circumstances of the state of emergency and hereby finds that the state of emergency continues to directly impact the ability of the members to meet safely in person and holding SMUD Board meetings in person would present imminent risks to the health and safety of attendees.

Section 2. Remote Teleconference Meetings. SMUD staff are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution, including conducting open and public meetings in accordance with section 54953(e) and other applicable provisions of the Brown Act.
Section 3.  **Effective Date of Resolution.** This Resolution shall take effect immediately upon its adoption and shall be effective until the earlier of (i) November 11, 2022, or (ii) such time the Board of Directors adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the SMUD Board may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.
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**NARRATIVE:**

**Requested Action:** Accept the monitoring report for Strategic Direction SD-6, Safety Leadership.

**Summary:** Report on the status of Strategic Direction SD-6, Safety Leadership (SD-6), for safety performance from January through June of 2022. Report addresses safety leadership accomplishments during the first six months of the year, current Days Away Restricted Time numbers, and safety opportunities and challenges.

**Board Policy:** This report supports the SD-6 Core Value of Safety by providing a safety performance status.

**Benefits:** Provide the scheduled bi-annual monitoring report as requested by the Board of Directors and Executive Staff. The report provides an opportunity to make recommendations or policy revisions, as necessary.

**Cost/Budgeted:** None

**Alternatives:** Provide the Board monitoring report without a presentation.

**Affected Parties:** Board of Directors, Executive Staff

**Coordination:** Organization-wide

**Presenter:** Ellias van Ekelenburg, Director of Environmental, Safety, and Real Estate Services
TO: Board of Directors

FROM: Claire Rogers

SUBJECT: Audit Report No. 28007434
        Board Monitoring Report; SD-06, Safety Leadership

Audit and Quality Services (AQS) received the SD-06 Safety Leadership first-half 2022 Biannual Board Monitoring Report and performed the following:

- A review of the information presented in the report to determine the possible existence of material misstatements;
- Interviews with report contributors and verification of the methodology used to prepare the monitoring report; and
- Validation of the reasonableness of a selection of the report’s statements and assertions.

During the review, nothing came to AQS’ attention that would suggest the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:
Paul Lau
1. **Background**

Strategic Direction SD-6, Safety Leadership states that:

Creating a safe environment for employees and the public is a core value of SMUD.

Through best practice methods and continuous improvement, SMUD will be recognized as a leader in employee safety while also assuring the safety of the public related to SMUD operations and facilities. SMUD commits to a proactive approach, including the active involvement of SMUD leadership, employees, contractors, and the community, as well as comprehensive monitoring of organizational and public safety performance.

Therefore, SMUD will continue to improve safety results to:

**Workplace Safety**

a) Reduce SMUD’s injury severity incidents to 13 or less than by 2025, as measured by OSHA’s Days Away Restricted Time (DART), a rate that demonstrates top quartile safety performance for similar size utilities using the Bureau of Labor Statistics (BLS) work-related safety data.

b) Provide timely, quality health care for injured employees that aids their recovery while maintaining positive financial performance of the workers’ compensation program.

**Contractor Safety**

a) Support contractors to reduce and eliminate potential hazards for Serious Injuries and/or Fatality (SIF) when conducting high risk work.

**Public Safety**

a) Track and report injuries to the public related to SMUD operations or facilities.

b) Implement measures to protect the public from injuries related to SMUD operations or facilities.

2. **Executive Summary**

SMUD is in compliance with the SD-6 direction and is in alignment with SMUD’s new 5-year strategy of working toward a zero-incident culture. SMUD is currently on track to meet safety performance targets related to SD-6 for 2022.
Workplace Safety

From January 2022 through June, SMUD recorded 15 OSHA Recordables injuries. This is a 40% decrease from this time last year (25 OSHA Recordables). Of the 15 injuries, 4 (2 Lost Time & 2 Modified Duty injuries) resulted in a .0.39 DART rate. This represents a continued decrease in injuries which is trending downward to meet our 2025 Target (See Appendix A).

Quality care of injured employees is measured through the Workers’ Compensation program’s performance, which is assessed annually by an independent actuary. SMUD continues to have a reduction in claims over the past three years, a reduction in injury frequency rates, and a reduction in indemnity benefits as presented below.

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
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<tr>
<td>No. of Claims (Medical &amp; Indemnity)</td>
<td>120</td>
<td>85</td>
<td>89</td>
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<tr>
<td>Incident rate per 100 employees</td>
<td>5.06</td>
<td>3.6</td>
<td>2.3</td>
<td>2.4</td>
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<tr>
<td>Rates per $100 payroll</td>
<td>.98</td>
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This year has continued to present challenges with COVID-19. COVID-19 has not only impacted the way SMUD is getting work done but has also resulted in new and emerging legislation surrounding paid leave and workers’ compensation liabilities for COVID related injuries. Despite these challenges SMUD’s program remains strong and continues to lead when compared with similarly situated organizations. No COVID-19 claims were made in 2022.

Contractor Safety

Safety has completed 96 contractor site safety field visits thru the 2nd Quarter of 2022. These visits focus on high hazard work performed on SMUD projects focusing on construction safety hazards, such as excavation, working at elevations, and in confined spaces to verify safe working practices by our contractor to reduce the potential for serious injuries or property damage. Contractor reported incidents require an investigation to be completed and typically will warrant additional site safety visits to verify corrective measures have been put into place to reduce further occurrences.

Public and Community Safety

SMUD tracks public and community incidents in the Safety Incident Tracking System (SITS) involving car-pole, electrical contact, dig-in incidents, and injuries to the public that are related to SMUD’s operations or facilities. For the first half of 2022, there have been 150 incidents where the public struck a SMUD asset with a vehicle, with one fatality from such events. Seven electrical contacts were reported with one minor injury, and 45 dig-ins with no reported injuries.

3. Additional Supporting Information

The new SD-6 Safety Direction became effective February 2021. Our goal is to achieve the desired performance objectives by year-end 2025. This report summarizes the first half of the 2022 safety performance.
Safety Leadership. The Safety Team continues with its integration efforts to support Executive Leadership’s 5-year plan that emphasizes zero incidents and injuries and a focus on a zero-accident safety culture. SMUD’s Chief Executive Officer (CEO) Paul Lau, re-emphasized the need to improve safety at SMUD with a greater focus of developing a” Safety for Life” culture, reducing the risk of serious injuries and fatalities, implementing a safety management system, and improving the analysis of injury and incident trends. These goals are outlined in SMUD’s Safety Road Map, which was updated in early 2022.

Safety Management System (SMS). Five applications within the Safety Management System are planned to be activated in 2022. They include the Contractor Manager, Safety Data Sheets (SDS), Industrial Hygiene, Initial Injury Reports and Incident & Measurements which will replace core functions of the legacy Safety Incident Tracking System (SITS). During 2022, Safety anticipates that there will be sufficient data to activate and utilize, new safety dashboards and reports for leadership.

Safety Standards Development. The Safety Team has continued their efforts to improve the process of routing new or updated Health & Safety Standards to appropriate Directors for review, utilizing the SMS “Doc Manager” application. The first standard to be routed, utilizing this process is the PCB Health & Safety Standard. In addition, the Team has been preparing for updates from Cal/OSHA on the COVID-19 requirements, to ensure our Injury Illness Prevention Program (IIPP) and COVID-19 Appendix contains the most up-to-date regulatory requirements and is provided to all SMUD personnel in a timely manner.

Supervisor-Employee Interactions. Safety continues to strengthen its supervisor-employee interaction quality program. Improvements included moving data to the new Safety Management System (SMS). Emphasis is placed on field visits for work with the highest hazard potential. For office personnel, an emphasis is placed on observing personnel pertaining to ergonomic risk, and slip/trip/fall hazards in walking areas. During the first half of 2022, a total of 7,067 Supervisor-Employee interactions were complete that resulted in a 152% percentage observed.

Near Miss Reporting. Leadership continues to support and encourage near miss reporting. During the first half of 2022, the Safety Incident Tracking System (SITS) and applications within the new Safety Management System, provided a method to track near miss reporting. The goal of this process is to identify opportunities for learning, prior to an incident occurring. Thirty-four near miss incident were reported through June 2022, 22 through the SITS applications and 12 in the new Safety Management System.

Contractor Safety. SMUD continues to use the ISNetworld system to evaluate our contractor’s safety record and safety program. The Contractor Safety program focuses on SMUD contractors in Power Generation, Environmental Services, Line, Substation, and Vegetation management contractors that perform high risk work, such as high voltage work, working at heights, vegetation management, confined spaces, excavations, etc. Additionally, we have begun to integrate the use of the SMS system for use with SMUD contractors, primarily for incident tracking, reporting and investigations as we move away from SITS.

SMUD currently has 80 contractors in the ISN system. During the past year we have expended our site safety evaluations performed on our high-risk contractors validate safety performance on the job sites. Through the second quarter of 2022, 96 site safety evaluations have been completed and SMUD is on track to meet or exceed the 2022 target of 150 evaluations. We are also continuing to validate our pre-qualification criteria for contractor selection. SMUD’s pre-qualification criteria focuses on Contractor Fatality History, OSHA Citation History, DART and
Total Recordable Incident Rates (TRIR), Insurance Experience Ratio, Safety Culture Questions, and Safety Program Review.

In addition, SMUD Procurement and Safety have partnered together working on enhancing contract language as it relates to contractor safety requirements, Request for Proposal (RFP) templates for high-risk work and incorporating contractor safety as part of the onboarding process.

**Safely Conducted Observations Reduce Common Hazards (SCORCH).** A SCORCH Spring Cleaning event and Summer Safety photo contest were conducted to continuously promote SMUD’s Safety for Life culture and intentionally expand employee use of the (SMS) Safety Management System. Employees positively responded to engagement opportunities that allow them to share photos of themselves and/or family members demonstrating safe behaviors in action *at home* and *at play*. Feedback obtained from these observations will be used to create an additional CBI behavior checklist that extends beyond the employee’s core work. SCORCH relaunched its external process engagement efforts and best practices information gathering by attending Dekra’s, Safety in Action conference after a two-year absence. An internal mini conference will serve as the forum for sharing the information and made available for all employees to attend. The goal is to elevate behavior awareness and wellness ownership to a level that is in alignment with a sustained work/life balance here at SMUD.

Through June of 2022, SCORCH team members conducted 1,995 Office and Professional observations and 1,399 Field employee observations. These safety interactions resulted in the removal of 2 barriers to employee safety. **Head & Neck Posture** is the current/trending top at-risk behavior for office employees. Early awareness and behavior ownership coaching for avoiding repeated or sustained awkward postures (chin to chest, chin to sky or craning) of the head and neck was out into action.

For Field employees **Situational Awareness** is the top trending at-risk behavior. This led to an action plan focused on elevating behavior awareness for more frequently updated information for potential moving and/or changing conditions related to the surrounding work area. Early recognition for a potential hazard (vehicle, pedestrians, or stray dogs) can provide employees the space, visibility, and time to safely react to a situation.

**4. Challenges**

**COVID-19 and Vaccination Guidance.** The safety of our employees is of utmost importance, so we continue to monitor SMUD COVID-19 cases and manage prevention efforts. In 2022 SMUD Safety, People, Services, & Strategies, along with Communications revised the COVID-19 guidance to meet regulation changes within the Cal-OSHA Emergency Temporary Standard around facial covering, testing programs, quarantine, and isolation guidelines to protect employees, contractors, and the public. SMUD continues to provide employees with COVID-19 vaccinations and antigen testing at our EC-OC clinic, as well as PCR testing at our contractor facility. Our third-party vendor Axiom Medical continues to handle employee contract tracing and the process has been working well.

**Data Management.** SMUD Safety and IT selected the GenSuite Safety Management System (SMS) to improve the quality, automation, and use of safety data. Injury dashboards and
automated reports will be available to leadership in the second half of 2022, with the rollout of the Incidents & Measurements application.

**Chronic Muscular Injuries.** The SMUD Safety Team continues to work with business units to reduce all incidents. This year, the following actions were taken to focus on a reduction to chronic muscular injuries: SMUD leadership and employees worked together to continue to build trust. Safety continued to partner with SCORCH (behavior-based) Committees to utilize data from home observations and what at-risks were trending. Safety then used this data for areas to focus on during ergo evaluations and quarterly safety meeting topics.

Safety for Life efforts continued with Sparky’s Crew sending quarterly safety newsletters, postcards, birthday cards and reaching out for children’s artwork for the Safety Calendar.

Safety continued crew and contractor safety field visits, getting eyes on work and ensuring our employees, contractors, customers and community are safe. The Safety team has made additional updates to safety standards and trainings both in person and virtual. In addition, SMUD continued the field ergonomic program with Power Generation and started a pilot Injury Prevention Outpost with Line Division, at the end of the Q4 2021.

**Wildfire Smoke.** This year, in May and June, Safety held several Tabletop Exercises with our various leadership teams who have outdoor workers, to prepare for the use of the Purple Air monitoring system and reporting, in cab vehicle air filters, PPE, scheduling, and training as a different method to inform and assist with response of poor air quality days, should the need arise. We sent a voting email to all leadership to determine the need and interest of receiving Wildfire Smoke Alerts throughout the organization for these events. This year, to date, we have had 5 days of notifications, of which, were only provided to the UARP personnel due to the Oak and Electra Fires.

5. **Recommendation**

SMUD is committed to becoming a recognized leader in safety. Both SMUD’s leadership team and employees recognize that to achieve success we must integrate safety into all that we do. It is recommended that the Board accept the Monitoring Report for SD-6.
6. **Appendices - Business Segment Safety Program Improvement Initiatives**

**Energy Delivery and Operations (EDO).** Grid Assets leadership is continuing its efforts to achieve World Class Safety with ongoing efforts, of encouraging field staff input and participation in Business Unit and Work Group specific Joint Labor Management Safety Committees (JLMSCs), which include representatives from Field, Supervision, Union, Warehouse, Fleet and Safety in attendance. The Quarterly Business Segment JLMSC continues with an “All field teams’ approach” at SMUD, allowing for the sharing of ideas and mitigation controls, of similar risks. Due to COVID-19 impacts, these meetings continue to be held via Teams. A few of the subjects addressed this year which directly affect field staff have been SMS roll out of the Concern Report App, SCORCH Observation App, and Monthly Vehicle Inspections and Housekeeping Inspections in the Inspection Tool App; FR Clothing product substitution with like products (in response to global supply chain issues); procurement of a healthier electrolyte alternative and cooling hard hats for high heat in the summer months. Field crew response continues to be positive, for the safety improvements being made, recognized, and appreciated. During the first half of the year, Safety has partnered with ED&O field operations to roll out a highly effective, innovative field focused ergonomics program. Instead of having staff come in from the field to interact with the ergonomics specialist, the expert is going out to the job site. During this crew specific, 1-1 discussions various stretching techniques, ergo support tools are provided, and awkward postures are identified. This program started with the Line department and is quickly moving throughout the organization.

Safety has continued to work with the SMUD Power Academy, through the COVID pandemic, reviewing internal and external safety training programs, to ensure continued consistency and quality. This year, the SMUD Power Academy has been invited to participate and collaborate in the Health & Safety Standards update reviews, for input and identification of training opportunities.

The Safety Team continues to provide required health and safety training to field employees, utilizing smaller class sizes, updated signage, use of temperature stations, improved sanitization, PPE, and pre shift wellness checks. This adjustment to the safety training delivery has prevented any COVID related illnesses spread or outbreaks by the field crews during their participation in SMUD Safety training at the Power Academy, ECOC, Fresh Pond, or other SMUD reporting facility.

To ensure the Safety for Life culture continues to evolve during this time of social distancing and remote work, more emphasis will be placed on Safety for Life communications and testimonials. There were two employee shares this year in our Employee Safety for Life Newsletter. One newsletter was a personal share about how the wildfire smoke affected her and how she safely evacuated her home, and the other was a share about an employee’s son being bitten by a rattlesnake which offered information about myths and how to keep others safe. The Safety team hosted three driving rodeos this year for the Telecom, Meter Reading and Energy Specialist teams and has one more scheduled in fourth quarter for the Facilities teams. Safety for Life Sparky’s Crew for SMUD children consisting of birthday cards, safety newsletters, postcards, and the safety calendar with children’s artwork, has continued throughout the pandemic.

It is important to maintain health and wellness with the ever-changing landscape we are currently working through. Health & Safety realizes the environments in which we live, work and
play, impacts our well-being. The wellness program embraces a holistic approach that includes physical, financial, social, spiritual, and emotional wellness to support positive behavioral changes. Wellness activities were designed to support all employees, whether working on-site or remotely, through virtual wellness programs and activities. These activities focused on improving overall health, through on-line stretch breaks, workouts, nutritional seminars, and cooking demos, all to support physical health. In 2022, Health and Safety partnered with Wellness to establish guidelines to safely re-open locker rooms and showers to accommodate bike commuters and runners that have returned to campus. Earlier this year a new mental health workshops brought awareness to emotional health and provided tools and resources to support employees and their families. The new Mental Health Hotline was introduced for people dealing with a mental health crisis can now call the national hotline by dialing 988 for help. Health and Wellness efforts continue to focus on employees and their families, empowering them to promote and model positive attitudes and behaviors through a lifelong commitment to wellness.

**Zero Carbon Energy Solutions (ZCES).** Since the beginning of the COVID-19 pandemic, Power Generation has prioritized employee safety while ensuring that critical work is completed. The Upper American River Project (UARP) increased work planning efforts to isolate crews and document work routes in case contact tracing was needed. Gas Pipeline began reporting directly to the field, to limit employee to employee contact. Meetings that include JLMSC updates, tailboards, safety meetings and safety training, including annual crew training, have continued with appropriate modifications to occur virtually, or when an in-person meeting is required, social distancing is utilized. Power Generation employees continued with their Savvy FIT Daily Dozen for soft tissue injury reduction. As a result, soft tissue injuries continue to trend down.

In addition to the COVID-19 Pandemic, Power Generation has also responded to extreme high heat and wildfire smoke events. Multiple employees have been fit tested for N95 respirators, so they are able to respond to emergency call-outs.

In February 2022, Hydro Operations received the highest Cal/OSHA recognition, VPP Star status. VPP is designed to recognize employers and their employees who have implemented safety and health programs that effectively prevent and control occupational hazards. These programs go beyond minimal Cal/OSHA standards and provide the best feasible protection at the site. Achieving this status ensures that Hydro will continue with safety process improvements with annual comprehensive safety audits performed by a third party. Their 2022 audit will take place in September.

Management commitment and employee participation are key elements in achieving VPP recognition. VPP establishments are considered leaders in the field of workplace safety and health. GPO continues to meet and prepare for their Cal/OSHA audit.

Some of the major projects completed by Hydro employees include the Camino unit 1 generator maintenance consisting of rotor and stator cleaning and repair. Camino unit 1 and 2 breakers and switch gear were also replaced. In 2022, the Rubicon Reservoir flow meters and pipe were replaced all projects were high hazard work and were completed without injury or incident.
**Customer & Community Services (CCS).** Safety worked closely with CCS and Security to safely re-open the CSC lobby to full capacity. CCS initiated the dunning process that drove more customer into the lobby and all five customer windows were opened to support the increase of customer traffic. COVID-19 safety protocols remain in place to protect employees, contractors, and members of the public. The front lobby parking lot project is well underway for upgrades to meet ADA compliance and is scheduled for completion by Q4, 2022.

**Corporate Financial and Administrative Services (CFAS).** Facilities and Safety continue to partner on re-entry efforts and Home-Based Agent workspace installations to ensure ergonomic comfort for employees in office and at home. COVID-19 mitigation measures continue in the office workspace to protect all employees, contractors, and the public. Facilities has integrated Monthly Vehicle Inspections into SMS through the Inspection Tool application for easy access and data trending. Facilities continues to support the SMUD 2030 Zero Carbon goal by supporting the installation of EV Charging infrastructure throughout SMUD campuses as a united effort with SMUD contractors.

This summer, the Sacramento area has experienced record-breaking high temperatures throughout the region. Warehouse has partnered with Safety in heat-illness prevention mitigations to ensure all field employees have access to cool water, portable shade, and UV skin protection. During days with high heat hazards, Warehouse provides electrolyte-replenishing beverages to field employees. Safety and Warehouse have collaborated with various business units to pilot new hard-hats with advanced ventilation designs to improve the comfort of our field employees wearing mandatory personal protective equipment while performing essential work in high heat environments.

Fleet and Safety collaborated in integrating Motor Vehicle Accidents reporting into SMS and in improving the Monthly Vehicle Inspections in SMS by including vehicle cleanliness as an inspection item to improve cleaning and disinfecting measures before servicing. Fleet employees are participating in EV training courses customized to suit SMUD’s needs in preparation for the transition to an all-electrified fleet by 2030.

All business units continue to partner in a consultative collaborative development of a World Class Safety program as One SMUD. One project that continues to support onsite personnel and operations by the Facilities department is installation of a passive HVAC ionization system called, needlepoint bipolar ionization (NPBI). Thus far DSO and SPA operations have units installed. With additional areas of the campus being assessed. These units have demonstrated performance in reducing indoor air particles during smoke wildfire events.

**Driver Safety.** In 2022 the Driver Safety program was reimplemented with COVID-19 safety protocols in place. Supervisors began conduction side by side ride alongs, in-person Smith System driving classes resumed and more Driving Rodeos were scheduled to meet demands. Due to the closure of 59th Street, the Driving Rodeo relocated to the HQ west parking lot however, with more employees returning to campus, another location was secured to accommodate the driving course. Safety and Facilities staff partnered with Safetyville to reserve space at the Army Depot for storage of equipment and supplies and set up multiple stations for the driving rodeo.
Appendix A

DART Count and OSHA Recordable 2012-2022

![Bar chart showing DART Count and OSHA Recordable from 2012 to 2022.

- Recordable
- DART

Year | Recordable | DART |
--- | --- | --- |
2012 | 125 | 55 |
2013 | 103 | 40 |
2014 | 90 | 46 |
2015 | 87 | 33 |
2016 | 75 | 24 |
2017 | 81 | 33 |
2018 | 85 | 22 |
2019 | 48 | 24 |
2020 | 58 | 26 |
2021 | 45 | 16 |
2022 | 15 | 4 |
### NARRATIVE:

**Requested Action:** Accept the monitoring report for Strategic Direction SD-10, Innovation.

**Summary:** SD-10 supports innovation by investigating emerging technologies, business models, and solutions that can provide value for SMUD, our customers, and our community. SMUD has developed a diverse portfolio of projects designed to balance risk with potential environmental and economic benefits that are intended to provide operational improvements, provide a more sustainable energy supply, and support, accelerate, or expand our ability to deliver on our carbon reduction goals.

**Board Policy:** SD-10, Innovation

**(Number & Title)**

**Benefits:** Benefits sought include accelerated technology deployments, innovative products & services, and an improved ability to meet SMUD's strategic directives such as environmental protection and climate change, reliability, local control, and energy efficiency and renewable energy goals.

**Cost/Budgeted:** Activities represented in the monitoring report were budgeted in the respective year in which they occurred.

**Alternatives:** Do not accept the monitoring report.

**Affected Parties:** Zero Carbon Energy Solutions, Enterprise Strategy, Customer & Community Services, Energy Delivery, Information Technology

**Coordination:** Zero Carbon Energy Solutions, Advanced Energy Solutions, Research & Development

**Presenter:** Ed Hamzawi, Director, Advanced Energy Solutions

### Additional Links:

- **SUBJECT**
  - SD-10, Innovation Board Monitoring Report

- **ITEM NO.**
  - FOR LEGAL USE ONLY

**ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.**
Audit and Quality Services (AQS) received the SD-10 Innovation 2022 Annual Board Monitoring Report and performed the following:

- A review of the information presented in the report to determine the possible existence of material misstatements;
- Interviews with report contributors and verification of the methodology used to prepare the monitoring report; and
- Validation of the reasonableness of a selection of the report’s statements and assertions.

During the review, nothing came to AQS’ attention that would suggest the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:

Paul Lau
1) Background
SD-10 States: Delivering innovative solutions, products and services to our customers is a core value. To assure our long-term competitiveness, SMUD shall invest in research and development projects that support its core and key values, and integrate emerging technologies and new business models into SMUD’s customer offerings in a way that balances risk and opportunity and benefits our customers and community.

2) Executive Summary
SMUD’s Research & Development portfolio (R&D) addresses innovation and challenges in electric transportation, energy efficiency, building electrification, load flexibility, thermal transition, and climate change. The research provides insight into future planning and supports the development of near-term technology solutions for SMUD customers and the grid, in support of SMUD’s target of zero carbon by 2030 and associated thermal transition. A number of foundational initiatives were launched or expanded this year to support SMUD’s Zero Carbon Plan (ZCP) goals and significant effort was expended supporting the development of grant concepts to prepare SMUD to take advantage of pending state and federal funding opportunities.

Our conclusion is that SMUD is in compliance with SD-10 Innovation.

<table>
<thead>
<tr>
<th>SD Requirement</th>
<th>Purpose</th>
<th>Outcome</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Implementation</td>
<td>Project distribution indicates breadth of portfolio diversity and prioritization of program areas.</td>
<td>42 active projects in 2022. 7 projects are complete as of September 1, 2022¹.</td>
<td>This reflects a 35% decrease in active projects and 56% reduction in completions compared to previous reporting period.</td>
</tr>
<tr>
<td>Risk</td>
<td>Technology risk assesses ability to meet expected performance goals. Implementation risk assesses probability of deployment.</td>
<td>74% of projects are deemed low to medium-low technology risk. 72% are deemed low to medium-low implementation risk.</td>
<td>The risk portfolio is consistent with the previous reporting period. Potential risks are managed by creating a diversified portfolio and partnering with other entities to distribute risk and mitigation.</td>
</tr>
<tr>
<td>Benefits</td>
<td>Research stage and benefits timeframe indicate the relevance of portfolio to address customer needs and strategic planning.</td>
<td>79% of projects are in stages 4-5². 91% are expected to provide benefits to SMUD or customers within 5 years.</td>
<td>Percent of stages 4-5 is consistent with 2021’s 80%, reflecting the shift in focus to near-term applications. Benefits time frame is consistent with 2021.</td>
</tr>
</tbody>
</table>

¹ Reporting metrics and achievements reflect the reporting period of October 1, 2021 – September 1, 2022.
² Stage 1 - Preliminary Investigation, Stage 2 - Concept Definition/Lab scale, Stage 3 - Concept Development (Prototype/bench scale), Stage 4 - Technology Development and Verification (pilot scale; field testing), Stage 5 - Commercialization
3) Additional Supporting Information

Project Implementation
SMUD’s Research and Development team has the primary responsibility of meeting SD-10; however, notable relevant innovation occurs throughout SMUD.

**Electric Transportation (ET)**
Transportation electrification will improve air quality and reduce net greenhouse gas emissions and petroleum consumption to support energy sustainability, while creating new revenue streams for SMUD. This strategy is supported through investigation of mitigation of grid impacts due to charging, improvement of electric vehicles (EV) value via pricing signals and remote controls, increased EV adoption and access to charging.

Key Achievements:
- SMUD was awarded $2.23M by the California Energy Commission REACH grant for the ChargeReady Community project, which will deploy EV chargers in underserved multi-family homes. SMUD expects to sign the grant agreement with the CEC in Q4 2022, which will fund 60% of the total project cost.
- The Residential Managed EV Charging project launched and enrolled the first customers Q3 2022. SMUD is partnering with GM, Ford and BMW to incentivize Sacramento-area customers to charge their EVs when it’s most beneficial to the electric grid, using plentiful renewable energy. Customers plug in their vehicle and let the automaker know when their vehicle needs to be charged via a secure remote home charging management tool and smartphone apps.
- Building off the experience implementing the BESTFIT grant supporting the Twin Rivers Unified School District with equipment specifications and interconnection to pilot managed charging (V1G) and Vehicle-to-Grid (V2G) capabilities of electric school buses, SMUD is working to expand the pilot for V1G and V2G capabilities to other school districts and vendors with electric school bus fleets.
- SMUD’s Fleet department is purchasing 5 medium-duty all-electric utility trucks from Zeus. Delivery of the trucks has been delayed by regulatory and technical issues, but they are in production and have received approval for state incentives for electric vehicles. R&D evaluation will commence upon delivery of the trucks.

**Energy Efficiency (EE) & Electric Buildings (EB)**
This program area optimizes energy delivery costs and improves grid asset utilization through targeted, time-specific energy efficiency and building electrification as well as by capturing permanent outcomes in building codes. R&D explores emerging and underutilized technologies; working to enhance advanced applications in building decarbonization and energy efficiency and increase technology adoption.

Key Achievements:
- SMUD returned as a founding sponsor and contributing member of the Advanced Water Heating Initiative, an initiative formed to increase adoption of heat pump water heaters nationally. SMUD R&D team members lead the AWHI Residential Group, and a task group delivering a proposal for national Data Standardization and Sharing.
• The 120V Heat Pump Water Heater Field Trial has begun installations in customers’ homes. 12 installations are expected to be completed in 2022, with monitoring and analysis complete by early 2024. The trial will investigate potential installation, performance, or customer satisfaction issues with these new units that avoid the need for a new 240V circuit to electrify the water heater.

• Completed evaluation of a novel, central heat pump water heater design without electric resistance backup elements at St. Francis Manor, a high-rise 128-unit senior community. Analysis showed 20% bill savings and 54% reduction in CO2 emissions annually compared to the gas boiler that was replaced.

• Staff completed phase 1 of the Home Infrastructure Planning project, creating a data collection and cleaning process for data sourced from inside and outside SMUD. Analysis to identify the magnitude and shape of load impacts to residential customers due to home electrification retrofits will be used in Phase 2 starting in 2023 to develop tools and forecasts to help distribution planners and customers make optimal decisions regarding utility service upgrades.

Load Flexibility
This program supports cost-effective, reliable, scalable flexible resource growth to serve future grid needs. R&D determines functional, operational and market viability of flexible loads to align supply and demand, give customers bill management options, improve air quality, and reduce carbon emissions.

Key Achievements:
• SMUD launched the My Energy Optimizer, Partner level, in June 2022 to evaluate aggregator management of multiple customer DERs to support grid services. The pilot leverages an aggregator to enroll customers and automate the response of their smart thermostats and batteries to utility dispatch signals, including a subset of customers enrolled on SMUD’s Critical Peak Pricing rate. SMUD is launching Partner+ this fall, a program that leverages customer-owned and sited battery storage to operate a Virtual Power Plant, maximizing value to customers and benefitting the grid at times of high carbon intensity.

• SMUD is partnering with UC Davis and Panasonic to pilot the EnergyKit home energy management system in 8 SMUD customer homes. Customers will be able to automate their electric appliances, optimizing for comfort, convenience, and cost, in response to SMUD dispatch signals.

Thermal Transition
R&D pursues innovative grid, storage and generation solutions to facilitate SMUD’s goal of zero carbon by 2030 and accelerate interconnection of grid-connected systems and devices to ensure safe and efficient operation. This program supports system reliability and reducing emissions through alignment of DERs and zero-carbon generation with grid needs. It seeks to improve grid reliability through reduced outage frequency and duration; control of the distribution system, voltage and frequency variations, and
overload conditions; and optimize grid benefits of DERs through advancing integration standards and coordinated automation.

Key Achievements:

- SMUD completed construction and all commissioning tests for grid support functionality for our first utility-scale battery project adjacent to Hedge substation. SMUD also received an EPRI Technology Transfer award for applying phase 1 of the EPRI Fire Prevention & Mitigation Project to the Hedge Battery. SMUD enrolled in phase 2 which includes developing training for first responders.
- Q3 2022, staff issued a Request for Information regarding Long Duration Energy Storage solutions to support SMUD’s Zero Carbon Plan. The intent is to identify promising technological solutions to provide 300 MW of long duration energy storage with duration capability at least 8-10 hours at full output to maintain resiliency in an increasingly renewable generation portfolio.
- The EPRI supplemental project assessing NET Power’s Allam Fetvedt Cycle (a Super Critical CO2 Cycle) found that this carbon capture technology is not yet ready for utility implementation.
- The analysis of alternative fuels shortlisted two zero carbon fuel types (Renewable Natural Gas and Hydrogen) and five pathways as deserving of closer scrutiny. The five pathways include Renewable Natural Gas from dairy, landfill, wastewater and Forest Waste Biogas and Electrolytic Green Hydrogen.
- SMUD is one of 20+ industry and academia participants and eight National Labs collaborating on $12.45M DOE grant for hydrogen blending research. Testing is underway to understand what upgrades to our pipeline would be needed to support up to 100% replacement of natural gas with hydrogen, supporting SMUD’s zero carbon goal.
- The PREconfiguring and Controlling Inverter SEt-points (PRECISE™) software tool was developed at the National Renewable Energy Laboratory, with SMUD collaboration, and won the R&D 100 Award in 2019 from R&D World Magazine. In 2022, SMUD successfully finished implementing the tool with SMUD systems to enable interconnection of more behind the meter (BTM) PV while mitigating grid power quality issues by leveraging advanced inverter settings.
- Installed and began testing direct communication to smart-inverters to evaluate their potential to support distribution operations via the DERMS and the ability to replace PV production meters for residential customers.

**Climate Change**

This program provides technical, economic, and policy expertise on climate change and impacts to SMUD territory. It compliments SMUD’s Zero Carbon Plan and aligns with our board direction to address climate vulnerabilities, and we partner with our customers and community on mitigation opportunities and regenerative, net positive projects.

Key Achievements:

- Carbon Farming and Ecosystem Service Research kicked off at Rancho Seco II. The project will evaluate the use of native pollinator plant species to reduce operational costs associated with vegetation management, erosion control and fire protection at utility
solar sites, quantify the impact on the power production of the PV system, and measure the carbon captured and sequestered in the soil by these plants.

**Enterprise-Wide Innovations**
While SD-10 innovation goals are met by R&D research programs, additional notable achievements occurred across SMUD supporting progressive customer offerings.

- The Innovation Program has continued to encourage employee participation in innovation at SMUD to accelerate digitization, drive acquisition of new data, embrace new technologies, expand new business models, and build new ecosystems to solve for SMUD's 2030 zero carbon objective and operational efficiencies. In 2022, 38 new ideas were submitted through IdeaHub, bringing the total to 79. Concepts successfully operationalized include:
  - Name Pronunciation Recording enables employees to record how to properly pronounce their name, which promotes equity and inclusion.
  - RealWear Headsets enable multiple subject matter experts to virtually attend a site visit with only one staff member physically deployed in the field, reducing travel and associated risks and costs.
- ADMS development complete, implemented Q3 2022. DERMs Phase 1 developed, implemented Q3 2022. Phases 2-3 are planned to go live Q1 2024.

**Summary**
As SMUD shifts to implementation of the 2030 Zero Carbon Plan, R&D has focused on ramping up efforts supporting thermal transition and load flexibility technologies and business models leveraging storage, electric transportation, and buildings, while we continue to advance research in climate change. These innovations expand customer choice and offer new solutions toward a low carbon future. Our diverse portfolio helps maintain long-term competitiveness and balance risk with potential environmental and economic benefits, ensuring community benefits.

4) **Challenges**
2022 continued in a primarily remote work environment due to the ongoing health pandemic, with increasing concern about supply chain and inflationary impacts. The new Enterprise Prioritization process involved a learning curve for staff submitting proposals for research and innovation. Staff resources were balanced between project planning and implementation and grant planning and acquisition to reduce SMUD’s cost for research and demonstration projects. R&D revised the team reporting structure to better reflect two pillars of the zero carbon plan, thermal transition technologies and customer programs, and staff time was focused on providing subject matter expertise for efforts supporting zero carbon by 2030.

5) **Recommendation:** Recommend the Board accept the SD-10 Monitoring Report.
## Table 2: R&D Projects

<table>
<thead>
<tr>
<th>Research Program</th>
<th>ID</th>
<th>Project Name</th>
<th>Project Description</th>
<th>SD-10 Benefits</th>
<th>Start Date</th>
<th>End Date</th>
<th>Ward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>11</td>
<td>Direct Bury Customer and Building</td>
<td>Identify the locations, characteristics, and electrification market barriers for customers who are currently served by direct burial cables (DBC).</td>
<td>This will provide insights into the characteristics of DBC customers, and the related challenges to SMUD’s decarbonization efforts.</td>
<td>9/28/2020</td>
<td>12/31/2021</td>
<td>All</td>
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<tr>
<td>Electrification</td>
<td></td>
<td>Analysis</td>
<td></td>
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<tr>
<td>Building</td>
<td>12</td>
<td>Electrification Readiness Study</td>
<td>Conduct an expedited utility industry analysis to identify key insights from utilities, community choice aggregators (CCAs), and other key market actors to accelerate electrification programs. The analysis informs a research-based approach for accelerating SMUD’s own electrification programs.</td>
<td>Establishes a new paradigm for how research informs the development of incentive programs. Identifies opportunities for incentive programs to maximize outcomes like GHG savings, equity, and affordability. Creates rapid feedback on the performance of new technologies within programs.</td>
<td>8/20/2020</td>
<td>1/28/2022</td>
<td>All</td>
</tr>
<tr>
<td>Electrification</td>
<td></td>
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<tr>
<td>Building</td>
<td>67</td>
<td>St. Francis Manor Central HPWH</td>
<td>SMUD staff will monitor the performance and benefits of converting a gas powered (boiler) domestic hot water system to a heat pump water heater (HPWH) driven system. The system will allow the customer to electrify the bulk of the hot water demand while not straining the electrical panel.</td>
<td>Confirm the realized savings and benefit of replacing existing boiler and gas-powered hot water systems in a central plant, which will inform replacements for the 50-100 similar commercial sites within SMUD territory that could electrify the hot water system.</td>
<td>4/1/2021</td>
<td>5/31/2022</td>
<td>5</td>
</tr>
<tr>
<td>Electrification</td>
<td></td>
<td>Study</td>
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<tr>
<td>Building</td>
<td>72</td>
<td>120V Heat Pump Water Heater</td>
<td>Objective is to overcome electrification barriers by increasing options that reduce impacts on panel upgrades and provides solutions for space constraints such as multifamily. Conduct a statewide field trial of 120V heat pump water heaters, to ensure their performance meets the needs of customers, and to investigate typical installation costs and technical hurdles. The field trial is being conducted in coordination with other CA utilities as part of the Advanced Water Heater Initiative. 12 homes in SMUD territory will take part, out of a project total of around 60 homes.</td>
<td>SMUD will be one of the first utilities nationally to deploy 120V HPWH as part of a program. In parallel with introducing this new technology without delay, SMUD is testing its effectiveness in the field, in order to make course corrections to the technology and program delivery as needed.</td>
<td>4/27/2021</td>
<td>12/31/2023</td>
<td>All</td>
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<tr>
<td>Electrification</td>
<td></td>
<td>Field Trial</td>
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<tr>
<td>Building</td>
<td>112</td>
<td>Home Infrastructure Planning</td>
<td>Phase I leverages historical SMUD single-family electrification programs data to understand drivers for service panel upgrades. Collaboration with SMUD IT will generate Machine Learning predictions based on building attributes, customer demographics, and existing infrastructure. In later phases, these predictions will be the basis for customer engagements on building electrification, incentives programs, and predictive distribution planning.</td>
<td>Generating insights about infrastructure upgrades for SMUD distribution planners, electrification program designers, and SMUD Customers. The innovative tools produced in this project will help scale programs and optimally allocate resources towards 2030 ZCP goals.</td>
<td>10/22/2021</td>
<td>11/25/2022</td>
<td>All</td>
</tr>
<tr>
<td>Building Electrification</td>
<td>Advanced Water Heating Initiative 2022 Sponsorship</td>
<td>SMUD is continuing as a 2022 sponsor of the Advanced Water Heater Initiative, which seeks to dramatically expand the heat pump water heater market using advocacy, program alignment, and research. SMUD was a founding sponsor of AWHI in 2021. The U.S DOE supports the initiative.</td>
<td>The project will set out a consensus agenda and process for water heating research, specifically joint research between utilities. It will also bring together best practices to ensure that SMUD and other utilities are implementing the most innovative programs.</td>
<td>1/1/2022</td>
<td>12/31/2022</td>
<td>All</td>
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<tr>
<td>Climate Change</td>
<td>Carbon Farming and Ecosystem Service Research at RSSII</td>
<td>Conduct field experiments at Rancho Seco to research ecosystems and evaluate the use of native species/pollinators to reduce the operational costs associated with vegetation management, erosion control, and fire protection. The project will explore the effects of vegetation and panel layout on PV generation and soil carbon.</td>
<td>The project will help identify and demonstrate strategies to integrate ecosystem services and agricultural value into large scale solar projects, helping to mitigate their environmental impact and build public support for their continued construction, assisting SMUD in achieving the 2030 ZCP.</td>
<td>1/30/2021</td>
<td>1/30/2026</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Climate Change</td>
<td>EPRI Evaluating Landholdings for Monarch Habitat</td>
<td>The SMUD Pollinator working group will determine recommended actions, including proposed acres, timing and cost for enrollment in the CCAA, if appropriate.</td>
<td>Assists SMUD in understanding opportunities and costs associated with enrollment in the Monarch butterfly CCAA and compliance with a potential future Endangered Species Act listing.</td>
<td>3/1/2021</td>
<td>7/31/2022</td>
<td>All</td>
<td></td>
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<tr>
<td>Climate Change</td>
<td>Natural Refrigerant Incentive Pilot Program</td>
<td>Provides incentive for customer natural refrigerant systems, replacing super-polluting conventional refrigerants with high global warming potential. SMUD's first incentive program based on GHG reduction, not kWh savings. Monitored field pilots are underway at Grocery Outlet and Raley's stores in Sacramento.</td>
<td>DEED grant funding ($125K) was secured to support the Grocery Outlet project and technology transfer. First of its kind for the utility industry, this program demonstrates SMUD's leadership in leveraging relationships with our customers to help them save money and reduce GHG emissions in the region.</td>
<td>1/1/2018</td>
<td>12/31/2022</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td>Electric Transportation</td>
<td>Zeus Electric Truck Deployment</td>
<td>Collaboration with the California Mobility Center and Zeus Electric Chassis to deploy and test five Medium-Duty Electric Vehicles. Five unique configurations of the Zeus truck will operate in SMUD’s fleet to study the performance, duty-cycle, and costs associated with utilizing electric trucks.</td>
<td>Inform both SMUD operations and customers of the challenges and benefits of fleet electrification. This project synergizes with the launch of the California Mobility Center which will support local economies and improve health and safety in DACs.</td>
<td>1/3/2023</td>
<td>6/30/2023</td>
<td>All</td>
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<tr>
<td>Electric Transportation</td>
<td>Del Paso Mobility Hub</td>
<td>Help create an e-Mobility hub for different modes of transportation, such as taxis, Uber, Jump, buses, etc. It will also include EV charging capability as well as gig cars. The first project in execution is the Del Paso Mobility Hub.</td>
<td>This is a novel project and transportation facility concept. It includes electric and fuel cell vehicles, including an electric shuttle, EV charging, shared vehicles, electric micro-mobility (ebikes and electric scooters) and transportation services.</td>
<td>9/1/2022</td>
<td>8/31/2023</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Electric Transportation</td>
<td>Mobi EV and Gen Charger Loan Pilot Program</td>
<td>Test and understand the technical and economic viability as well as the logistic application of mobile electric vehicle (EV) chargers and battery powered generators to support the development of transportation electrification and elimination fossil fuel generators. SMUD loans the units to customers who can demonstrate they have a need for the chargers at no cost.</td>
<td>Acquire knowledge about mobile battery powered EV chargers and generators, which may play key roles in transportation electrification. This pilot also yields learnings regarding loan programs and potential revenues from rental units.</td>
<td>8/3/2020</td>
<td>3/31/2022</td>
<td>All</td>
<td></td>
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</tbody>
</table>
## Appendix

<table>
<thead>
<tr>
<th>Electric Transportation</th>
<th>Twin Rivers Commercial Managed Charging (V1G, V2G)</th>
<th>Incorporate electric school buses and light duty vehicles to evaluate the effectiveness of managed charging and vehicle-to-grid capabilities to balance impacts on customer and utility electrical distribution and create value through grid services.</th>
<th>V1G findings will support smart charging applications which can mitigate customer charging costs and support grid management and deferred infrastructure upgrades. Reduce grid impacts, reduced customer infrastructure build-out cost, wholesale energy or capacity cost avoidance, and mirror characteristics of stationary storage using V2G.</th>
<th>1/30/2021</th>
<th>9/30/2024</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Transportation</td>
<td>EPRI Qualification of EVSE</td>
<td>Produce a compliance matrix for EVSE that SMUD will be able to use to qualify EVSE vendors for our EV-related programs.</td>
<td>Increase EV adoption by having publicly available working charging stations in high trafficked areas.</td>
<td>1/6/2020</td>
<td>3/31/2022</td>
<td>All</td>
</tr>
<tr>
<td>Electric Transportation</td>
<td>Residential Managed EV Charging (V1G)</td>
<td>Actively manage residential EV charging times and peak power consumption. Managed EV charging can enable deferment of distribution system upgrades, smooth the duck curve, reduce renewable generation curtailment, and provide import and export arbitrage opportunities.</td>
<td>Benefits include reduction of the financial risks associated with transportation electrification, specifically by mitigating the risk of overloading electrical distribution infrastructure. Another secondary benefit is to better align energy delivery for charging with low-cost energy supply.</td>
<td>10/1/2021</td>
<td>12/30/2024</td>
<td>All</td>
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<tr>
<td>Electric Transportation</td>
<td>SMUD-Owned EVSE</td>
<td>Operation and maintenance of SMUD’s public level 2 and DCFC charging stations.</td>
<td>Increase EV adoption by having publicly available working charging stations in high trafficked areas.</td>
<td>1/1/2014</td>
<td>12/31/2027</td>
<td>All</td>
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<tr>
<td>Electric Transportation</td>
<td>ChargeReady Community</td>
<td>ChargeReady Community is the Sacramento region’s replicable, equity-first EV charging solution for multi-family housing (MFH). Powered by SMUD and in partnership with community-based organization and site host Mutual Housing California and Sacramento Metropolitan Air Quality Management District, ChargeReady Community will deploy a pilot model that transitions EV charging in under-resourced communities from inaccessible amenity to expected, critical infrastructure.</td>
<td>Help SMUD better understand the challenges and opportunities of deploying EVSEs in multi-unit dwelling in underserved communities, helping SMUD advance the adoption of electric transportation, which contributes to GHG emissions reductions, and promoting equity in transportation.</td>
<td>5/11/2022</td>
<td>6/30/2025</td>
<td>All</td>
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<tr>
<td>Electric Transportation</td>
<td>Light Duty Fleet V2G</td>
<td>This project will test and demonstrate V2X functionality on campus with capable fleet vehicles such as the Nissan Leaf and Ford F150 Lightning. We hope to understand interconnection process, installation requirements, and V2X functionality through this project before proposing a larger scale pilot.</td>
<td>Informed deployment of light-duty V2X will reduce grid impacts and customer infrastructure build-out costs. LDV fleet management can also offer wholesale energy or capacity cost avoidance, and mirror characteristics of stationary storage.</td>
<td>1/1/2022</td>
<td>12/31/2023</td>
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<tr>
<td>Electric Transportation</td>
<td>V2G Commercial Expansion</td>
<td>This project will build off the electric school bus project with Twin Rivers Unified School District. We will demonstrate and test Automated Load Management, Managed Charging, and Vehicle to Grid functionality with electric school buses and other capable EVs.</td>
<td>Reduce grid impacts, reduced customer infrastructure build-out cost, wholesale energy or capacity cost avoidance, and mirror characteristics of stationary storage using V2G.</td>
<td>1/1/2022</td>
<td>5/30/2024</td>
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<tr>
<td>Energy Storage</td>
<td>Project Number</td>
<td>Description</td>
<td>Details</td>
<td>Start Date</td>
<td>End Date</td>
<td>Notes</td>
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<td>Residential BTM energy storage systems including Commitment to Operate, Smart Energy Optimizer, and PowerMinder. Study of these systems will answer research questions regarding how customers respond to dispatch models, what communication standards could promote battery manufacturer relationships and data communication quality.</td>
<td>5</td>
<td>Residential Energy Storage Programs</td>
<td>Continuation of Residential BTM energy storage systems that will provide resilience and system benefits to customers and SMUD alike. This work will inform future pilots including Multi-DER and Capacity Contracts VPPs.</td>
<td>1/1/2021</td>
<td>12/31/2023</td>
<td>All</td>
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<td>Deployment and operation of a 4 MW / 8 MWh utility-scale storage battery to test different operational modes and grid interactions.</td>
<td>6</td>
<td>Hedge Utility-Scale Battery</td>
<td>The Hedge Battery supports the StorageShares program and SMUD’s goal of adding 1,100 MWs of battery capacity in the coming decade. Proximity to the Sacramento Power Academy training facility will foster opportunities for workforce development in battery storage operations.</td>
<td>3/1/2019</td>
<td>12/31/2023</td>
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<tr>
<td>Install and test a new 175 kW DC Fast Charger and 2nd-life battery storage. Integrate solar, storage, and EV charging into an advance site controller.</td>
<td>26</td>
<td>Integrated EV Charging with Storage and Solar PV</td>
<td>Help promote EV adoption by using load management to prevent unnecessary infrastructure installations, ultimately saving the customer and SMUD time and money.</td>
<td>11/5/2018</td>
<td>12/31/2021</td>
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<td>Partner with schools to install eight battery energy storage units at high schools or colleges to provide early hands-on education of battery energy storage systems.</td>
<td>29</td>
<td>Sunverge in Schools</td>
<td>Support local workforce development by developing a battery energy storage curriculum and installing battery energy storage system at educational institutes.</td>
<td>1/1/2021</td>
<td>12/31/2022</td>
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<td>This project performed detailed technology and cost characterization of Long Duration Energy Storage (LDES) technologies. Perform an assessment of the viability and adoption of LDES that provide compelling features to help mitigate the issues associated with variable and intermittent renewables by improving its dispatchability and help meet or exceed SMUD’s Zero Carbon Plan (ZCP). Investigate current, planned and potential LDES technologies that will provide highest values to SMUD. Perform comparative analysis of viable LDES technologies, discuss pros &amp; cons, along with attributes for next steps that will meet or exceed ZCP.</td>
<td>87</td>
<td>LDES Market &amp; Technology Report</td>
<td>Empower SMUD planners to make confident technology decisions along the flexible path to zero carbon. These technologies will provide grid stability and predictable electricity prices for SMUD customers.</td>
<td>4/29/2021</td>
<td>4/29/2022</td>
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<td>Develop and submit the biogas-to-electricity pathway applications for Van Steyn, Van Warmerdam and New Hope dairy digesters under the Renewable Fuel Standard (RFS) for electricity Renewable Identification Number (eRIN) credits, generated when electricity produced from dairy digester biogas is used to charge electric vehicles in SMUD service territory.</td>
<td>34</td>
<td>Dairy Digesters eRIN Applications</td>
<td>The use of eRIN credits could unlock $0.12/kWh to $0.33/kWh of electricity generated for electric vehicle charging. This legal and financial innovation offer sound investment into biofuels production and carbon-negative transportation for electric vehicles.</td>
<td>1/1/2021</td>
<td>12/31/2022</td>
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<td>Generation and Sequestration</td>
<td>Project ID</td>
<td>Description</td>
<td>Objective</td>
<td>Start Date</td>
<td>End Date</td>
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<td>38</td>
<td>PRECISE Project Phase 2</td>
<td>Evaluate PV interconnection applications and identify the advanced inverter settings that each PV system to be set to. This process will significantly save SMUD engineer’s time and yet maximize the benefit of each asset.</td>
<td>Increased safety and avoiding reprogramming of advanced inverters post-install, and minimizing curtailment. Deploying the tool in a real utility environment would advance chances of commercialization of PRECISE and revenues to SMUD.</td>
<td>1/1/2019</td>
<td>6/30/2022</td>
<td>All</td>
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<td>39</td>
<td>LCFS Electricity Pathways for Dairy Digesters, Solar and Wind</td>
<td>LCFS Electricity pathway applications for Van Warmerdam, Van Steyn and New Hope dairy digesters, wastewater biogas and wind/solar that perform carbon intensity life cycle modeling, certification, verification, monetization, and reporting for LCFS credits to charge electric vehicles in SMUD territory. This initiative stimulates revenue generation, supports the growth of electric transportation and advanced renewable generation and helps achieve carbon zero target goal.</td>
<td>At full utilization of the 30 dairies and 14,000 cows in SMUD territory, the dairy digesters could offset a minimum of 70,000 Metric Tons of CO2 per year, while garnering $12.6 Million per year in LCFS credits. In 2021, Van Warmerdam and Van Steyn reduced 7,856 MT of GHG worth $1.2M LCFS. This project also proved the financial viability of Zero Carbon Intensity (CI) wind generation, which garnered approximately $1 Million from LCFS.</td>
<td>6/1/2019</td>
<td>12/31/2030</td>
<td>All</td>
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<td>55</td>
<td>DER Carbon Tool</td>
<td>Expand DER planning and modeling tool that assesses carbon reduction/savings, budgeting, portfolio optimization, cost effectiveness and load forecasting to include EE, Load flexibility, ET solar PV and battery storage measures.</td>
<td>Provide hourly forecasting of load shapes, evaluate carbon impacts and cost effectiveness for programs. Provides insights about DER valuation and the attribution of GHG reductions.</td>
<td>11/1/2020</td>
<td>12/31/2021</td>
<td>All</td>
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<td>75</td>
<td>Wind Resources in Northern CA, 2 Terrawathours</td>
<td>This study will help SMUD identify sites in Northern California suitable for adding wind generation. The work will be performed by a consultant.</td>
<td>Identifying areas outside of SMUD's service territory suitable for wind resource, will enable SMUD to remain on track to meet the 2030 carbon reduction goals.</td>
<td>4/28/2021</td>
<td>4/28/2022</td>
<td>All</td>
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<td>77</td>
<td>NET Power - Allam Fetvedt Cycle (Super Critical CO2 Cycle) Study</td>
<td>Participation in the EPRI supplemental project which will perform research on the Allam Fetvedt Cycle for supercritical carbon capture. The project will yield a technology assessment, value proposition, and analysis of SMUD-focused applications.</td>
<td>Key information will be provided on the design of Allam-Fetvedt Cycles during this project, along with detailed testing data and performance assessments. The project will look to provide insights and lessons learned on the technology and its operations, giving more evidence of its potential viability for low-carbon power generation.</td>
<td>4/28/2021</td>
<td>12/31/2022</td>
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<td>81</td>
<td>Assessments of Alternative Fuels (Generation)</td>
<td>SMUD will hire a consultant to explore the feasibility of using renewable ethanol, biodiesel, renewable diesel, RNG &amp; others as potential fuel-sources for our thermal generation assets.</td>
<td>This assessment will facilitate enterprise decision-making, providing a deep understanding of the resource sustainability, supply chain landscape, price forecasts, market trends, and techno-economic feasibility of each biofuel.</td>
<td>4/28/2021</td>
<td>4/28/2022</td>
<td>All</td>
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<td>91</td>
<td>Hydrogen Blend Collaborative Research</td>
<td>Address the barriers on pipeline materials compatibility and degradation related to the blending of hydrogen into natural gas pipelines, a concept referred to as HyBlend. SMUD will provide data and serve as one of the injection points of H2. The data that will be The HyBlend project will specify the role Hydrogen can play in the transformation of SMUD’s thermal generation. HyBlend is a leading fuel choice that offers benefits for seasonal energy storage, resilience, and GHG emissions reductions.</td>
<td>7/1/2021</td>
<td>7/30/2023</td>
<td>All</td>
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<tr>
<td>Grid Evolution</td>
<td>Project Number</td>
<td>Description</td>
<td>Benefits</td>
<td>Start Date</td>
<td>End Date</td>
<td>Priority</td>
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<td>36</td>
<td>EPRI SHINES</td>
<td>Beneficial integration of solar PV, energy storage, load management, and solar forecasting. EPRI will test the architecture at three sites to compare configurations and size, as well as grid connections, and solar generation variability.</td>
<td>Enhanced grid operations, increased PV deployments, time shifting of solar generation, improved generation/load profiles, reduced grid impacts and interconnection processing time and cost.</td>
<td>11/1/2019</td>
<td>4/29/2022</td>
<td>All</td>
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<td>45</td>
<td>Transmission Line Monitoring</td>
<td>Test the achievability and usability of Dynamic Line Ratings (DLR) to inform short-term operational and long-term planning decisions, using the LineVision V3 monitoring system.</td>
<td>Increases efficiency of transmission asset utilization while maintaining reliability. Advanced line rating methodologies can result in cost savings and operational benefits.</td>
<td>4/22/2021</td>
<td>12/31/2023</td>
<td>All</td>
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<td>52</td>
<td>HQ Solar Port Microgrid</td>
<td>Install and commission a small microgrid at the HQ Solar port using second-life batteries, solar and an advance site controller. These activities provide insights regarding DSO operating processes, microgrid maintenance downtimes, data communication, and operations during normal and emergency conditions.</td>
<td>Microgrids can increase reliability by providing backup power to customers during power outages using renewable generation, reduce transmission infrastructure needs, and hedge against volatile energy markets.</td>
<td>1/1/2021</td>
<td>12/1/2022</td>
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<td>61</td>
<td>3M Spartan II</td>
<td>The Spartan units will be used to gain visibility on the downtown network where we currently have none.</td>
<td>Savings on SCADA for the downtown network and reduction in time for restoring service.</td>
<td>11/5/2018</td>
<td>11/5/2021</td>
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<td>80</td>
<td>EPRI 2021 Utility Blockchain Interest Group</td>
<td>Work alongside other utilities to expand knowledge of blockchain technology and its potential applications. Enable collaboration among utilities and act as a bridge to the startup/vendor community, compile and track a comprehensive list of global utility blockchain pilots and extract and document industry trends, lessons learned and key insights.</td>
<td>Through a collaborative approach, expand utility knowledge of blockchain technology and its potential applications in the industry. Enable collaboration opportunities among utilities and act as a bridge to the startup/vendor community.</td>
<td>1/1/2021</td>
<td>12/31/2021</td>
<td>All</td>
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<td>89</td>
<td>Smart Inverters</td>
<td>This project will test smart inverter connection via two pathways: direct connection and through vendors/aggregators. Direct connection will assist in development of the DERMS, while the vendor/aggregator pathway leverage OEM and aggregator relationships to establish pilot access agreements to a broader range of smart inverters.</td>
<td>Smart inverters are new technology that allows SMUD to monitor residential PV and storage and provides control functionality to assist in grid support.</td>
<td>7/1/2021</td>
<td>3/31/2023</td>
<td>All</td>
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<td>100</td>
<td>EPRI Transmission &amp; Substations Collaborator Project</td>
<td>Participation in this EPRI collaborative enables SMUD to stay current on industry-wide EPRI R&amp;D, including results of advanced technology testing, software tool development, reference guides and the application of research results.</td>
<td>Apply EPRI tools and research results in Overhead Lines, Underground Lines, Substations, and Asset Analytics. Increased knowledge of failure rates and emerging issues by contributing to and accessing EPRI’s T&amp;S Asset Industry-Wide Databases.</td>
<td>1/1/2021</td>
<td>12/31/2021</td>
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</table>
This project will research the ability of the proposed solution to orchestrate a diversity of qualifying residential customer-sited devices to deliver load flexibility needs throughout the year and to assess whether it makes sense to continue to scale-up.

Upon successful completion of the Multi-DER VPP, SMUD will have a reliable flexible residential load program. This load will be integrated with the DERMS and allow SMUD to operate as required for business needs (EIM/RA/Emergency).

Ynventive is designing, building, and testing the EnergyKit, as well as demonstrating its effectiveness at a chosen site in Davis, CA. SMUD is providing inputs on typical home energy use patterns and technological considerations pertaining to SMUD’s operations. Successful development may persuade Panasonic and NEDO to match up to $20M in DOE or CEC grant funding to deploy a field demo to dispatch customer loads using price signals with the confidence and reliability of a VPP product.

Ynventive is designing, building, and testing the EnergyKit, as well as demonstrating its effectiveness at a chosen site in Davis, CA. SMUD is providing inputs on typical home energy use patterns and technological considerations pertaining to SMUD’s operations. Successful development may persuade Panasonic and NEDO to match up to $20M in DOE or CEC grant funding to deploy a field demo to dispatch customer loads using price signals with the confidence and reliability of a VPP product.

SMUD is providing inputs on typical home energy use patterns and match up to $20M in DOE or CEC grant funding to deploy a field demo to dispatch customer loads using price signals with the confidence and reliability of a VPP product.

R&D provided a 3rd party evaluation of Oracle Behavioral Demand Response (BDR) to confirm results. This project aims to fulfill the boards desire to have a demand response program for all customers. Having a demand response program available to all customers, regardless of technology, is an important step towards meeting the 2030 goals.

Table 3: Enterprise-Wide Initiatives

<table>
<thead>
<tr>
<th>Initiative Name</th>
<th>Initiative Description</th>
<th>Initiative Benefits</th>
<th>Start Date</th>
<th>End Date</th>
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<tr>
<td>Innovation Program (IdeaHub)</td>
<td>Innovation at SMUD comprises of exploratory activities related to new strategies. The IDEAHub portal captures technology, business model, and operational efficiency opportunities submitted by employees to support SMUD Innovation.</td>
<td>The Innovation team will propel us towards our 2030 absolute zero carbon goal by balancing diverse emerging technologies and ideas across the organization that drive operational efficiencies and competitive advantage with a centralized team that can champion breakthrough innovations.</td>
<td>2021</td>
<td>Ongoing</td>
<td>All</td>
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<td>Name Pronunciation Recording</td>
<td>SMUD’S IT team worked to identify software that can support an employee recording the pronunciation of their name so that colleagues can learn the correct way to pronounce names that may appear unfamiliar.</td>
<td>This software solutions helps employees learn other employee’s names, increasing inclusion and employee morale.</td>
<td>11/10/2021</td>
<td>6/14/2022</td>
<td>All</td>
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<td>RealWear Headsets</td>
<td>RealWear Headsets allow staff to call in to site visits and see a live video feed from their computer and communicate in real-time with the person in the field.</td>
<td>Using RealWear camera allows one subject matter expert to attend site visits while other SMEs participate from their home/office. This reduces the number of staff required to travel and attend field meetings in person.</td>
<td>8/27/2021</td>
<td>6/15/2022</td>
<td>All</td>
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<td>DERMS</td>
<td>Strategic business partnership with OSI to develop a Distributed Energy Resource Management System whereas SCADA and behind the meter resources can be used to solve distribution constraints, participate in the market, and manage flexibles loads.</td>
<td>Leverage DER capabilities to meet economic objectives, peak load reduction, local constraint issues, deferred infrastructure investment, and grid optimization. As OSI’s partner, SMUD shares revenue from future sales.</td>
<td>2018</td>
<td>2028</td>
<td>All</td>
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<td>ADMS</td>
<td>Implement a real-time Advanced Distribution Management System (ADMS) Platform (DMS and D-SCADA) to improve management and control of distribution system, enhance distribution operations functions, optimize distribution system and improve forecasting accuracy.</td>
<td>ADMS is the foundation to support providing SMUD’s Distribution System Operations a 360 view of distribution and is required to support future DERMS Phases.</td>
<td>02/2018</td>
<td>2022</td>
<td>All</td>
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### BOARD AGENDA

#### STAFFING SUMMARY SHEET

**Committee Meeting & Date**  
Policy – 10/12/22  
**Board Meeting Date**  
October 20, 2022

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<tr>
<td>1. Bryan Swann</td>
<td>6. Suresh Kotha</td>
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<td>2. Claire Rogers</td>
<td>7. Brandy Bolden</td>
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<td>4. Lora Anguay</td>
<td>9. Legal</td>
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<td>5. Jennifer Davidson</td>
<td>10. CEO &amp; General Manager</td>
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**Consent Calendar**

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<th>x</th>
<th>Yes</th>
<th>No (if, schedule a dry run presentation.)</th>
<th>Budgeted</th>
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<th>Yes</th>
<th>No (if no, explain in Cost/Budgeted section.)</th>
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<td>FROM (IPR) Rachel Huang</td>
<td>Customer &amp; Grid Strategy</td>
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<td>MAIL STOP</td>
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**NARRATIVE:**

**Requested Action:** Accept the monitoring report for Strategic Direction SD-19, Diversified Business.

**Summary:** The purpose is to provide the Board with an update on SD-19, Diversified Business, for 2021. SMUD has three revenue portfolios that are delivering revenues from sources other than traditional electricity sales to customers. They are comprised of a diverse mix of projects that leverage SMUD’s brand, intellectual property and assets to create new revenues for SMUD.

For 2021, the three portfolios generated $14.7M in revenues.

**Board Policy:** Strategic Direction SD-19, Diversified Business

**(Number & Title)**

**Benefits:** These portfolios support the goals and objectives of SMUD’s Enterprise Strategy of Affordability through:

1) Operational Excellence with respect to better utilization of existing assets, and 2) Partnerships with respect to creating new revenue streams.

**Cost/Budgeted:** Budgeted

**Alternatives:** Provide the Board written reports and communications through the CEO/General Manager.

**Affected Parties:** N/A

**Coordination:** Budget Office, Audit & Quality Services

**Presenter:** Rachel Huang, Director, Customer & Grid Strategy

**Additional Links:**

**SUBJECT**  
SD-19 Diversified Business 2021 Monitoring Report  
**ITEM NO. (FOR LEGAL USE ONLY)**

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
SACRAMENTO MUNICIPAL UTILITY DISTRICT

OFFICE MEMORANDUM

TO: Board of Directors

FROM: Claire Rogers CR 9/28/22

DATE: September 28, 2022

SUBJECT: Audit Report No. 28007423
Board Monitoring Report; SD-19: Diversified Business

Audit and Quality Services (AQS) received the SD-19 Diversified Business 2021 Annual Board Monitoring Report and performed the following:

• A review of the information presented in the report to determine the possible existence of material misstatements;
• Interviews with report contributors and verification of the methodology used to prepare the monitoring report; and
• Validation of the reasonableness of a selection of the report’s statements and assertions.

During the review, nothing came to AQS’ attention that would suggest the SD Board Monitoring report did not fairly represent the source data available at the time of the review.

CC:

Paul Lau
1) **Background**

Strategic Direction SD-19 states that:

Broadening and diversifying the products and services that SMUD offers is a key value. The desired results are to: a) generate new revenues that contribute to SMUD’s long-term financial health; b) spur the creation of innovative products and services; c) capture the value of SMUD’s brand and intellectual property; d) better leverage and optimize SMUD’s assets; and e) enable SMUD to continue to attract and retain a talented workforce.

Therefore:

a) SMUD shall broaden and diversify its lines of business, which may include:
   i) Being an external service provider;
   ii) Expanding wholesale energy market opportunities;
   iii) Capitalizing on intellectual property and assets to develop products and services either solely or through strategic partnerships;
   iv) Selling products and services aligned with SMUD’s purpose and Strategic Directions.

b) SMUD shall ensure any new lines of business:
   i) Benefit SMUD’s customers and our community;
   ii) Achieve a balanced, diversified portfolio of rewards and risks;
   iii) Create economic value without compromising SMUD’s financial health;
   iv) Do not pose unreasonable risk to SMUD’s reputation;
   v) Align with, leverage, and optimize SMUD’s strengths, assets and expertise;
   vi) Position SMUD for the future.

2) **Executive Summary**

a) Staff is tracking and reporting on three separate revenue portfolios. These revenue programs are deriving revenues that are not traditional electricity sales to customers. The three portfolios are a diverse mix of projects that leverage SMUD’s brand, intellectual property (IP) and assets to create new revenues for SMUD.

b) **SMUD is in compliance with SD-19, Diversified Business.**

c) There are three portfolios that generate revenue for SMUD. Prior to development of SD-19, tracking costs and revenues separately for each revenue program was aligned with operational efforts, and not specifically configured in a manner to
measure net revenue per project. Therefore, only revenues are reported for Legacy Revenue and Innovation Generator Programs. However, for the New Revenue Program portfolio, both costs and revenues are reported.

The founding objective of the Legacy Revenue Programs was to improve customer satisfaction by offering products and services requested by customers. Revenue generation was secondary. A requirement was that such programs must be self-sustaining after 5 years. Because many of the operational costs are shared across many programs, it is difficult to calculate net revenues even though revenues are tracked separately.

For fiscal year 2021, the actual costs and revenues for each portfolio are as follows:

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Total Expenses</th>
<th>Total Revenues</th>
<th>Total Net Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Revenue Program</td>
<td>$(7,441,337)</td>
<td>$10,902,597</td>
<td>$3,461,261</td>
</tr>
<tr>
<td>Legacy Revenue Programs</td>
<td></td>
<td>$3,748,833</td>
<td></td>
</tr>
<tr>
<td>Innovation Generator Program</td>
<td></td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$14,651,430</td>
<td></td>
</tr>
</tbody>
</table>

3) Additional Supporting Information

a) Financial Summary

A total of 13 programs/projects are included in the three portfolios. Descriptions of each deal within each portfolio are listed in Appendix A.

For the Legacy Revenue Programs, actual revenues of $3,748,833 were $874,874 above planned revenues of $2,873,959. Within the Legacy Revenue Programs, Cell Site Revenue and Home Power contributed most of the revenue out of the portfolio. The Innovation Generator Program actual revenues were negligible; again, there is no plan tracked for this program.

There have been no new deals added to the New Revenue Program in 2021. The New Revenue Program generated $10,902,597 in revenue which was $837,972 above the planned revenue of $10,064,625. The actual expenses of $7,441,337 were $1,090,722 lower than the planned expenses of $8,532,059. This resulted in positive net revenue of $3,461,261 compared to a planned positive net revenue of $1,532,566 – a variance of $1,928,694. The biggest driver of this improvement over plan is due to the Community Energy Services
Program performing 80% better on a net basis than planned. The program performed better on both on reducing costs more than planned while increasing revenue more than planned.

The New Business Development Program is centrally responsible for developing, assessing, negotiating, overseeing implementation and tracking performance of existing and new business opportunities for all of SMUD. However, for all of 2021, this team was dedicated full time to launching the California Mobility Center. This team did not actively track the current portfolios or pursue any new opportunities for SMUD.

b) Risk Summary
Risk is reported here only for the New Revenue Program and the methodology is derived from SMUD’s Enterprise Risk business practices. Risk is generally defined as the ability to successfully recoup SMUD’s investment over a reasonable timeframe, without damaging SMUD’s reputation, causing financial hardship, or resulting in regulatory or policy violations.

Risk is evaluated on five impact areas - Financial; Legal, Regulatory and Legislative; Operational; Strategic; and Reputational. See Appendix B for definitions.

The overall risk ratings of the New Revenue Program portfolio were not modified from the 2020 assessment as no new opportunities were added. The previous overall portfolio risk was rated low. For 2021, the portfolio risk was not reevaluated or changed as it is still deemed low.

c) Compliance with Desired SD-19 Outcomes
Two of the three portfolios are meeting the desired results stated in the policy as follows:

New Revenue – The New Revenue Program is generating positive net revenue for the second year in a row.

Spurs Innovative Product and Services – The New Revenue Program is delivering innovative products and services to existing SMUD customers and new customers.
Capture Value From Brand and IP – Intrinsically, brand and IP value are considered and included in the associated revenue models for many of the projects included in the portfolios.

Asset Leverage and Optimization – Transmission Sales is a prime example of how SMUD is extracting additional value from an existing asset by selling surplus transmission capacity more competitively. For 2021, SMUD generated over 60% more revenue in excess transmission sales than was planned.

4) Challenges
Regimented cost and revenue tracking will be paramount to assessment of performance under SD-19. Staff is working diligently to maximize the revenue generation that is possible from all three portfolios.

As SMUD embarks on attaining new goals relative to zero carbon emissions, a robust innovation pipeline, greater reliance on strategic partnerships and business diversification will all play vital roles. New revenue generation opportunities aligned to SMUD’s 2030 zero carbon goals will be a priority. As an example, the California Mobility Center will continue to play a critical role in helping to identify new zero emission mobility solutions aligned to SMUD’s goals. Additionally, SMUD’s participation in the Global Mobility Strategic Fund – a venture fund established to support early-stage mobility companies – will create new opportunities for revenue generation from this sector.

As part of this evolution as it relates to new revenue opportunities, SMUD needs to learn how to be comfortable with trying new business models for revenue generation, fail quickly and move on to other ideas. The innovation process must be quicker.

5) Recommendation
It is recommended that the Board accept the Fiscal Year 2021 Monitoring Report for SD-19, Diversified Business.
Appendix A
PORTFOLIO PROJECT LIST AND DESCRIPTIONS

New Revenue Program:

1. **Community Choice Aggregator Services**: SMUD provides back office support services such as data management, call center, whole energy, marketing, communications and customer care for Community Choice Aggregators.

2. **NEC/STI**: Partnership with NEC Corporation (NEC) to collaborate on energy solutions for Japanese electric power providers and others in the Asia Pacific region.

3. **Sacramento Power Academy (SPA)**: Program to train future utility workers in hundreds of utilities throughout the Western United States.

4. **Smart Grid Billing**: Smart Grid Billing enables real-time device monitoring and control to lower energy consumption and provide predictive maintenance for equipment. Our current pilot is with Embassy Suite and Hyatt Regency in Sacramento. This pilot offers an installation of a storage battery in the Hyatt in midtown that will be connected with the energy management system (EMS).

5. **OSI/DERMS Co-Development**: Open System International, Inc. (OSI) and SMUD strategic technology partnership to implement and deploy an industry-leading Distributed Energy Resource Management System (DERMS). SMUD will receive royalties from future sales of the enhanced product suite for DERM.

6. **GridX**: Program will generate pro forma bills for all SMUD residential customers under various tariffs as part of RTOU planning efforts.

Legacy Revenue Programs:

1. **Cell Site Construction**: Revenues derived from SMUD review of cell site modifications or new construction.

2. **Energy Profiler**: Energy Profiler Online (EPO) lets customers to see their load profiles, energy consumption by time period, and other information on their facilities from any computer with Internet access.

3. **Home Power**: Program that covers customer’s homes against unforeseen electrical repairs to outlets, switches, circuit breakers, fuses and accessible internal wiring. All repairs are performed by a SMUD approved electrical contractor.

4. **Moving Connections**: Program designed to enhance a customer’s overall move experience. Residential customers can sign up for phone, internet, and other services, after transferring or starting electric service with a SMUD Customer Service Representative (CSR).

5. **Power Protection**: Residential program that prevents harmful voltage surges from entering a home via a whole house surge suppressor attached to the meter.
Appendix A
The program includes a manufacturer’s warranty covering surge damage to appliances and electronic equipment.

Innovation Generator Projects

1. **DER Planning Software:** DER Planning Tool software will forecast adoption scenarios (rate of adoption and geographic location) of DERs like electric vehicles, solar PV, storage, etc.

2. **Intelligent Energy Solutions:** Software that minimizes certain electrical end uses in the customer's home (e.g. pool pumps).
Appendix B

RISK

Risk is tracked only for the New Revenue Program using best practices derived from SMUD’s Enterprise Risk business practices. Risk is generally defined as the ability to successfully recoup SMUD’s investment over a reasonable timeframe, without damaging SMUD’s reputation, causing financial hardship, or resulting in regulatory or policy violations.

A risk is the possibility that an event will occur and adversely affect the achievement of objectives. To help understand the nature of risk and to determine the level of risk, the risk assessment process is used. Risk Assessment requires calculations of three components of risk: impact, likelihood and velocity.

**Impact** is the magnitude of the potential risk based on six impact areas defined below. **Likelihood** is the chance that the event (risk) will occur and velocity is the speed at which the risk will occur, if it occurs. For the purposes of this rubric, the **risk score** is calculated as follow: \( \text{Risk score} = \text{Impact} \times \frac{\text{Likelihood} + \text{Velocity}}{2} \)

The following five impact areas are considered for the New Revenue Program Portfolio.

**Financial** – This category focuses on how much SMUD’s financial commitment is including both cash and non-cash resources. Labor is considered here as well.

**Legal, Regulatory and Legislative** – This category considers whether the project has the potential to violate the law, cause significant fines, or a loss of confidential data. It considers whether the project exposes SMUD to higher levels of risks or new risks from a legal, regulatory or legislative perspective.

**Operational** – This category considers whether the project aligns with, leverages and/or optimizes SMUD’s strengths, assets and expertise. It also considers whether the project poses unreasonable risks to existing projects or operations.

**Strategic** – This category considers whether the project or the failure of the project will impact SMUD’s ability to achieve its strategy. It also considers whether the project poses unreasonable risk to SMUD’s goals and objectives.

**Reputational** – This category considers how the project could impact the perception of SMUD by its customers and the community. It considers whether the project poses unreasonable risk to SMUD’s reputation.

The following tables define the rubric for ratings of risk impacts.
<table>
<thead>
<tr>
<th>Score</th>
<th>Name</th>
<th>Financial</th>
<th>Legal, Regulatory &amp; Compliance</th>
<th>Operational</th>
<th>Strategic</th>
<th>Reputational</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Insignificant</td>
<td>&lt;$2M, no FTE</td>
<td>No legal/compliance violations. No confidential data involved.</td>
<td>Direct alignment with SMUD’s strengths, assets, and expertise. No impact to existing projects or operations.</td>
<td>No impact to achievement of goals and objectives.</td>
<td>No impact to metrics and surveys. No public criticism on media platform. No impact to SMUD's reputation.</td>
</tr>
<tr>
<td>2</td>
<td>Minor</td>
<td>$2M&lt;$5M, 1 FTE</td>
<td>Minor legal/compliance violations. (regulatory fines &gt;$5K and torts)</td>
<td>Project may be a minor deviation from SMUD’s strengths, assets, and expertise. Minor delays or modifications to a few existing projects or operations.</td>
<td>Minor delays or modifications to goals and objectives.</td>
<td>Slight change in customer metrics and surveys. Limited public criticism from a few media platforms.</td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
<td>$5M&lt;$10M, 2 FTEs</td>
<td>Moderate violations lead to increased scrutiny and some fines. (regulatory fines &gt;$100K) Introduces new risks to SMUD that can be mitigated with effort, confidential data involved.</td>
<td>The project may align with, leverage and optimize only a portion of SMUD’s strengths, assets and expertise. Moderate delays or modifications to project portfolio or operations.</td>
<td>Moderate delays or modifications to goals and objectives.</td>
<td>Modest decline in customer metrics and surveys. SMUD is subject to criticism from several opinion leaders/customers, media sources and the Board.</td>
</tr>
<tr>
<td>4</td>
<td>Major</td>
<td>$10&lt;$20M, 3-4 FTEs or team to support</td>
<td>Significant violations of law or potential loss of confidential data. Significant fines (regulatory fines &gt;$250K) Introduces new risks to SMUD that are difficult or costly to mitigate.</td>
<td>The project may be a major deviation from SMUD’s strengths, assets, and expertise. Significant delays or modifications to existing project portfolio or operations.</td>
<td>Significant delays or reductions in scope of goals and objectives.</td>
<td>Significant deterioration in customer metrics and surveys. Negative media reaches headlines of several publications. Significant erosion of trust from the Board.</td>
</tr>
<tr>
<td>5</td>
<td>Critical</td>
<td>&gt;$20M, &gt;4 FTEs or an entire team or department to support</td>
<td>Violations result in widespread data loss, loss of qualifications for licenses. (regulatory fines &gt;$1M) Introduces new risks to SMUD that are too difficult or costly to mitigate.</td>
<td>New line of business with significant disruptions to SMUD’s strengths, assets and expertise. Cancellation of multiple projects and significant impacts of operations.</td>
<td>Failure to meet SMUD’s goals and objectives.</td>
<td>Major deterioration in customer metrics and surveys. Irreparable negative media coverage and damage to SMUD’s reputation and credibility with the media and the Board.</td>
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</table>
**BOARD AGENDA ITEM**  
**STAFFING SUMMARY SHEET**  

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>3. Farres Everly</td>
<td>8.</td>
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<tr>
<td>4. Suresh Kotha</td>
<td>9. Legal</td>
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<td>5.</td>
<td>10. CEO &amp; General Manager</td>
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<th>Yes</th>
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<tbody>
<tr>
<td>FROM (IPR)</td>
<td>Dave Tamayo / Donna Lofton</td>
<td>DEPARTMENT</td>
<td>Board Office</td>
<td>MAIL STOP</td>
<td>B307</td>
<td>EXT.</td>
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**NARRATIVE:**

**Requested Action:** Allow the Board members and Executive staff an opportunity to discuss and evaluate Board-Staff Linkage BL-6, Evaluating the Chief Executive Officer and General Manager’s Performance and Board-Staff Linkage BL-7, Delegation to the Chief Executive Officer and General Manager as part of the Board policy monitoring process.

**Summary:** The Board agreed to monitor established policies on a yearly basis to create a framework to better understand the policies and give the Board an opportunity to make improvements, additions or changes as desired.

**Board Policy:** This monitoring supports Governance Process GP-2, Governance Focus, which states that the Board will direct, evaluate, and inspire the organization through the establishment of written policies which reflect the Board’s values.

**Benefits:** Monitoring these policies allows the Board members an opportunity to update the policies as needed.

**Cost/Budgeted:** N/A

**Alternatives:** Monitor these policies at a later date.

**Affected Parties:** Board of Directors

**Coordination:** Donna Lofton, Special Assistant to the Board

**Presenter:** Dave Tamayo, Policy Chair

**Additional Links:**

**SUBJECT**  
Board Monitoring of BL-6 and BL-7

**ITEM NO. (FOR LEGAL USE ONLY):**

ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.
The Chief Executive Officer and General Manager’s job performance shall be evaluated by comparing the organization's results, operations and their personal performance to the policies established by the Board.

Specifically:

a) The Board shall evaluate the Chief Executive Officer and General Manager’s performance on an annual basis in December. In the same month, the Chief Executive Officer and General Manager shall propose performance criteria for the following year that represent their reasonable interpretation of achieving the results defined by the Board.

b) The evaluation will be based on a review of the organization’s performance and the Chief Executive Officer and General Manager’s personal performance against the performance criteria proposed under subsection a), as accepted by the Board.

c) Additional performance discussions and check-ins with the Chief Executive Officer and General Manager should occur at mid-year.
d) The Board will use data to determine the degree to which Board policies are being met.

e) All policies that instruct the Chief Executive Officer and General Manager shall be monitored at a frequency and by a method chosen by the Board.

Monitoring Method: Board Report
Frequency: Annual
The Board will instruct the Chief Executive Officer and General Manager through written policies that define the results that the organization is to achieve, and which describe the delegation of authority to the Chief Executive Officer and General Manager.

Specifically:

a) The Board shall identify and define those results or conditions of SMUD that are acceptable and not acceptable to the Board and communicate them in the form of policy.

b) The Board shall develop policies that define the delegation to the Chief Executive Officer and General Manager with regard to the Chief Executive Officer and General Manager’s authority.

c) The Chief Executive Officer and General Manager is authorized to establish all further policies, make all decisions, take all actions, establish all practices, and develop all activities related to the operations or business affairs of SMUD.
d) The Chief Executive Officer and General Manager shall use prudent judgment in the exercise of the delegations and in a manner that is operationally and economically sound, serves the best interests of SMUD’s customers and the community, comports with prudent business practices, balances the risks and benefits of the actions, and does not expose SMUD to unreasonable risk. If the Chief Executive Officer and General Manager reasonably determines that an activity related to the delegations presents, regardless of the size of the financial commitment: (i) a unique and significant operational risk to SMUD; (ii) a significant impact to customers; (iii) a significant impact to community relations; (iv) a significant impact to SMUD’s reputation; or (v) materially compromises the policies and goals established by the Board, the Chief Executive Officer and General Manager shall timely inform the Board and may request the Board to take appropriate actions.

e) The Board may change its delegation to the Chief Executive Officer and General Manager at any time, subject to the conditions of the Board’s contract with the Chief Executive Officer and General Manager, thereby expanding or limiting the authority of the Chief Executive Officer and General Manager. But as long as any particular delegation is in place, the Board will abide by the Chief Executive Officer and General Manager’s decisions in those areas that are delegated to him or her.

Monitoring Method: Board Report
Frequency: Annual
TO | TO
---|---
2. Suresh Kotha | 7.
4. Farres Everly | 9. Legal
5. | 10. CEO & General Manager

<table>
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<td>B307</td>
<td>EXT.</td>
<td>5079</td>
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NARRATIVE:

**Requested Action:** Enable the Board of Directors and Executive Staff an opportunity to review the Board Work Plan.

**Summary:** The Board President reviews the Board Work Plan at the Policy Committee meeting to ensure agenda items support the work of the Board.

**Board Policy:** This review of the work plan supports GP-6 Role of the Board President which states that the Board President shall give progress reports on the Board’s work plan.

**Benefits:** Reviewing the Work Plan allows the Board members and Executive staff to make changes to the Work Plan and Parking Lot items as necessary.

**Cost/Budgeted:** N/A

**Alternatives:** Not review the Work Plan at this time

**Affected Parties:** Board and Executive staff

**Coordination:** Donna Lofton

**Presenter:** Brandon Rose, Board President

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**SUBJECT:** Board Work Plan
### BOARD AGENDA ITEM

**STAFFING SUMMARY SHEET**

**BOD 2021-022**

<table>
<thead>
<tr>
<th>Committee Meeting &amp; Date</th>
<th>Policy October 12, 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Meeting Date</td>
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</table>

**FROM (IPR)**

Dave Tamayo / Donna Lofton  
Board Office  
B307  
5079  
12/21/2021

**MAIL STOP**

**EXT.**

**DATE SENT**

**NARRATIVE:**

**Requested Action:** A summary of directives provided to staff during the committee meeting.

**Summary:** The Board requested an on-going opportunity to do a wrap up period at the end of each committee meeting to summarize various Board member suggestions and requests that were made at the meeting in an effort to make clear the will of the Board. The Policy Committee Chair will summarize Board member requests that come out of the committee presentations for this meeting.

**Board Policy:** GP-4 Agenda Planning states the Board will focus on the results the Board wants the organization to achieve.

**Benefits:** Having an agendized opportunity to summarize the Board’s requests and suggestions that arise during the committee meeting will help clarify what the will of the Board.

**Cost/Budgeted:** N/A

**Alternatives:** Not summarize the Board’s requests at this meeting.

**Affected Parties:** Board of Directors and Executive Staff

**Coordination:** Donna Lofton, Special Assistant to the Board

**Presenter:** Dave Tamayo, Policy Committee Chair

**Additional Links:**

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**SUBJECT**

Summary Of Committee Direction

**ITEM NO. (FOR LEGAL USE ONLY)**

**ITEMS SUBMITTED AFTER DEADLINE WILL BE POSTPONED UNTIL NEXT MEETING.**