BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of the California Energy Commission for Approval of Electric Program Investment Charge Proposed 2012 through 2014 Triennial Investment Plan	)	Application 12-11-001 (Filed November 1, 2012)
And Related Matters.	)	Application 12-11-002
	)	Application 12-11-003
	)	Application 12-11-004

COMPLIANCE FILING OF SAN DIEGO GAS & ELECTRIC COMPANY'S (U 902 E) 2014 EPIC ANNUAL REPORT

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February 27, 2015

#294581

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COMPLIANCE FILING OF SAN DIEGO GAS & ELECTRIC COMPANY'S (U 902 E) 2013 EPIC ANNUAL REPORT

Pursuant to Ordering Paragraph 16 of Decision ("D.") 12-05-037 and in accordance with the Annual Report Outline provided in Attachment 5 of D.13-11-025, San Diego Gas & Electric Company ("SDG&E") hereby submits its 2014 EPIC Annual Report ("Report"), provided hereto as Attachment A. In addition, SDG&E provides the excel file titled "SDG&E 2014 EPIC Project Status Report" in accordance with D.13-11-025 as Attachment B.[1] Together the two documents provide an overview of SDG&E's EPIC activities during the 2014 calendar year and program financial information through December 31, 2014.

[1] The EPIC Administrators are required to provide with the annual report "electronically in spreadsheet format the information identified in Attachment 6 to report on projects described in Section 4.b of the EPIC annual report outline adopted by this decision." D.13-11-025 at 63; Attachments 5 & 6.

SDG&E and its fellow EPIC Administrators are required to each submit an annual report "detailing program activities."[2] The annual reports are designed "to facilitate consistent reporting by the [EPIC] Administrators on their investment plans and project results."[3] The reports, and their timing, are intended to inform stakeholders of the EPIC Plan's accomplishments when they meet with the EPIC administrators in March of the years in which investment plans will be considered.[4] In accordance with D.12-05-037, SDG&E serves this Report on "all parties in the most recent EPIC proceeding, and all parties to the most recent general rate cases" for SDG&E, Pacific Gas & Electric, and Southern California Edison.[5]

DATED at San Diego, California, this 27th day of February, 2015.

Respectfully submitted,

SAN DIEGO GAS & ELECTRIC COMPANY

By: /s/ *Emma D. Salustro*

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[2] D.12-05-037 at 8.
[3] D.13-11-025 at 3-4, 62.
[4] 12-05-037 at 30-31.
[5] D.12-05-037 at OP 16. SDG&E's competitive solicitations have not yet reached the stage where bids have been received, so no project bidders will be provided with this Report. See D.12-05-037 at OP 16.

ATTACHMENT A

SDG&E'S 2014 EPIC ANNUAL REPORT

San Diego Gas & Electric Company

2014 EPIC Annual Report

February 27, 2015

#294581

1. EXECUTIVE SUMMARY

Pursuant to Ordering Paragraph 16 of Decision ("D.") 12-05-037 and in accordance with the Annual Report Outline provided in Attachment 5 of D.13-11-025, San Diego Gas & Electric Company ("SDG&E") hereby submits its 2014 EPIC Annual Report ("Report"). This Report provides an overview of SDG&E's EPIC activities during the 2014 calendar year.

As required by D.13-11-025, SDG&E is providing additional information about SDG&E's EPIC activities in Excel at Attachment B, "SDG&E 2014 EPIC Project Status Report."[1]

SDG&E proposed, and received approval for, five programs that demonstrate smart grid system integration solutions in the first triennial application cycle.[2] The final EPIC decision was ambiguous about whether SDG&E was required to use EPIC funds to pay for a non-EPIC project, the Plug-in Electric Vehicle Submetering Protocol ("PEVSP Pilot"), approved in a separate proceeding.[3] SDG&E's Commission-approved maximum budget for the PEVSP Pilot is $3.304 million.[4]

On January 14, 2014, SDG&E filed a Petition for Modification ("PFM") of D.13-11-025 seeking Commission direction on the source of funding for PEVSP Pilot costs, whether from EPIC or elsewhere.[5] A proposed decision has not yet been issued. SDG&E has tracked its PEVSP Pilot costs in the Alternative Vehicle Fuels Memorandum Account

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1 D.13-11-025 at 63.

2 D.13-11-025.

3 D.13-11-025 "encourage[s]" SDG&E to use EPIC funds for the PEVSP Pilot activity but does not clarify whether SDG&E should consider the PEVSP Pilot as part of its EPIC portfolio for reporting purposes if it chooses to fund the PEVSP Pilot with EPIC. D.13-11-025 at 41 ("SDG&E is not required but is encouraged to support [the PEVSP Pilot] project with EPIC funds.").

In addition, in November 2013, Commission issued D.13-11-002 in the Alternative Fueled Vehicle OIR, which encouraged SDG&E to use EPIC funds for PEVSP Pilot activities. D.13-11-002 at 42 ("[A]ll or the majority of costs for the submetering pilot program can be fully recovered through EPIC program funding, if approved.").

Resolution E-4651, issued in June of 2014, approved and launched phase 1 of the PEVSP Pilot for all three IOUs.

4 *See* Resolution E-4651, approving SDG&E's maximum budget of $3,304,667.

5 At the direction of assigned Administrative Law Judge Long, who expressed concern about using EPIC funds to pay for the SDG&E PEVSP Pilot, SDG&E submitted a proposal whereby the cost of the PEVSP Pilot activities would be included in the Public Purpose Program rate component and a two-way balancing account would be established for the PEVSP Pilot activities. SDG&E's Reply to The Office of Ratepayer Advocates' Response, filed February 24, 2014 (A.12-11-001).

("AFVMA").[6] Until the Commission rules on the source of the PEVSP Pilot activity funding, SDG&E has put aside EPIC funds equal to the estimated PEVSP Pilot budget in the event that the Commission determines that EPIC is the appropriate source of funding for the Pilots. Consequently, SDG&E has delayed the full launch of its Commission-approved First Triennial Cycle EPIC projects, narrowed the scope of one of its five approved projects, and indefinitely suspended two others.[7]

a. Overview of Programs/Plan Highlights

In A.12-11-002, SDG&E requested Commission approval of five programs that demonstrate smart grid system integration solutions. In November 2013, SDG&E's Application and First Triennial EPIC Plan was approved in full, with minor modifications, by the Commission in D.13-11-025. The total SDG&E budget for the first triennial cycle is $8,600k. Ten percent of this amount ($860k) is allotted to administration. The remainder ($7,740k) is allotted to technical work in the Technology Demonstration and Deployment ("TD&D") programs, which are limited to pre-commercial demonstrations.

b. Status of Projects

As discussed in further detail below, in 2014, SDG&E moved into the planning and procurement phase for the three projects scheduled for execution and is currently conducting competitive procurements for prime contractors. No project results are yet available for any of the three projects.

SDG&E's revised First Triennial Cycle EPIC Portfolio is provided in Table 1. Table 1 takes into account the narrowed scope of one EPIC project and the indefinite suspension of two other EPIC projects in light of the ongoing uncertainty regarding PEVSP Pilot funding.

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6 SDG&E AL 2584-E, effective March 14, 2014. If the Commission determines that the PEVSP Pilot should be paid for with EPIC funds, then SDG&E will include the PEVSP Pilot in future EPIC annual reports.

7 SDG&E has narrowed the scope of the Distributed Control for Smart Grids project and indefinitely suspended the Smart Grid Architecture Demonstrations and Visualization and Situational Awareness Demonstrations projects.

Table 1. SDG&E's First Triennial Cycle Portfolio as of December 31, 2014

EPIC Project	Project Commitments ($ thousands)	Comments
1. Demonstration of Grid Support Functions of Distributed Energy Resources	1,673	No change from original plan.
2. Smart Distribution Circuit Demonstrations	1,599	No change from original plan.
3. Distributed Control for Smart Grids	1,170	Activity will be downscoped to this reduced commitment, until a decision is made on the PFM regarding the PEVSP Pilot
EPIC funds held back in the event that they must be used for the PEVSP Pilot	3,304[8]	Amount equal to maximum budget for PEVSP Pilot[9]
SDG&E Program Administration	860	
Total	**8,600**	

Project 1: Demonstration of Grid Support Functions of Distributed Energy Resources

SDG&E released a request for proposal ("RFP") to procure a prime contractor for this project in early 2015. The prime contractor selection is scheduled for the first quarter of 2015.

The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor.

Project 2: Smart Distribution Circuit Demonstrations

SDG&E released the RFP to procure a prime contractor on November 21, 2014. Seven responses to the RFP were received in early 2015. The proposal evaluations are in progress at the time of the report filing. The prime contractor selection is scheduled for the first quarter of 2015.

[8] The expenses related to PEVSP Pilot activity are currently being recorded in the AFVMA. As of December 31, 2014, the account balance of the AFVMA was $315,461.

[9] Resolution E-4651.

The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor.

Project 3: Distributed Control for Smart Grids

SDG&E intends to release an RFP to procure a prime contractor for this project during the first quarter of 2015. The prime contractor selection is scheduled for the second quarter of 2015.

The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor.

Project 4: Smart Grid Architecture Demonstrations

This project has been suspended until SDG&E receives clarity from the Commission regarding the PEVSP Pilot funding.

Project 5: Visualization and Situational Awareness Demonstrations

This project has been suspended until SDG&E receives clarity from the Commission regarding the PEVSP Pilot funding.

2. INTRODUCTION AND OVERVIEW

a. Background on EPIC

EPIC was previously established by the Commission in D.11-12-035 to provide public interest investments in applied research and development, technology demonstration and deployment, market support, and market facilitation of clean energy technologies and approaches for the benefit of ratepayers of California's Investor-Owned Utilities ("IOUs"). D.12-05-037 established the purposes and governance structure for EPIC and D.13-11-025 clarified many of the program's regulatory requirements.

EPIC is designed to provide funding for electric utility research, development, and demonstration ("RD&D"). Specific funding allotments are made to four EPIC program administrators, including SDG&E. The EPIC program is intended to run until 2020 and is comprised of three triennial program cycles.

b. EPIC Program Components

The IOUs, including SDG&E, may only administer EPIC projects in the area of pre-commercial TD&D. Post-commercial demonstrations and deployments are not allowed.

Utility participation in the early stages of the research and development process, i.e., basic research for new utility-related technology, is also not allowed.

c. EPIC Program Regulatory Process

Pursuant to D.12-05-037, SDG&E must submit an application seeking Commission approval of an EPIC plan every three years. SDG&E submitted its First Triennial Plan (A.12-11-002) on November 1, 2012 and received full Commission approval of the Plan in D.13-11-025. No hearings were held. SDG&E submitted its Second Triennial Plan on May 1, 2014 and at the time of this filing, is awaiting a proposed decision by the Commission.

SDG&E and the other EPIC administrators are required to submit an annual report every February 28. This is the third annual report submitted by SDG&E for its EPIC program.

d. Coordination among EPIC Administrators

The four EPIC administrators have regular teleconferences and ad-hoc face-to-face meetings as needed to coordinate EPIC activities.

e. Transparent and Public Process

SDG&E is committed to conducting competitive procurements for those parts of the project work that require contracted services or equipment or software purchases. Development of the RFP's for the first two competitive procurements for projects in the First Triennial Plan was initiated in late 2014.

An SDG&E public EPIC web site has been established at https://www.sdge.com/epic. SDG&E and the other EPIC administrators are required to host at least two stakeholder meetings annually to discuss their EPIC programs, proposals and progress.[10] In 2014, SDG&E co-hosted and participated in EPIC stakeholders meetings on February 21, 2014, March 17 and 21, 2014. The focus of these three meetings was the Second Triennial Plan, which was filed May 1, 2014.

3. SDG&E's EPIC Budget & Related Costs

a. SDG&E Authorized Budget & Incurred Costs for First Triennial Cycle (2012 – 2014)

[10] D.12-05-037 at 74.

Table 2. SDG&E Budget and Incurred Costs for 2012-2014

	Technology Demonstration & Deployment (in $ thousands)	Program Administrative (in $ thousands)
SDG&E Authorized Budget for First Triennial Cycle	7,740	860
SDG&E Incurred Costs	182	288
SDG&E Disbursements to CEC	0	2,772
SDG&E Disbursements to Commission for Regulatory Oversight	n/a	203
EPIC funds held back in the event that they must be used for the PEVSP Pilot[11]	3,304	0

b. Commitments/Encumbrances for TD&D Projects

SDG&E has committed or encumbered $4,436k of its TD&D budget ($7,740k) for the first EPIC triennial cycle to three of the projects in the approved First Triennial Plan. The remaining $3,304k is being held in reserve, pending clarification from the Commission regarding PEVSP Pilot funding.

As of December 31, 2014, SDG&E has encumbered $83k for contracted activities, of which $76k had been expended. SDG&E has spent $106k on internal project work. The total expenditures through December 31, 2014 on TD&D project work is therefore $182k ($76k + $106k). More detail is provided in Attachment B.

[11] SDG&E considers these funds to be committed to fully scoped Project 3 and both Projects 4 and 5, or, alternatively, to the PEVSP Pilot.

c. Commitments/Encumbrances for Program Administration

SDG&E has fully committed its program administration budget ($860k). SDG&E has incurred a cumulative $288k of this amount for overall program administration expenses through 2014. All program administration has been done in-house.

d. Fund Shifting Above 5% between Program Areas

SDG&E has done no fund shifting to date.

e. Uncommitted/Unencumbered Program Funds

SDG&E does not have any uncommitted program funds as of December 31, 2014.

4. SDG&E EPIC PROJECTS

Project 1: Demonstration of Grid Support Functions of Distributed Energy Resources (DER)

i. Investment Plan Period

2012-2014

ii. Assignment to Value Chain

Distribution

iii. Objective

The objective is to assess the viability of using DER to provide non-traditional functions, such as Volt/VAR regulation, fast-response peaking or emergency power, peak shaving and distribution system status information. These findings will be used to determine DER's appropriate roles in a mix of alternative solutions for distribution system voltage regulation, electrical loss reduction, and gains in safety and reliability. The results will aid utilities to decide which, if any, DER grid support functions in specific application situations warrant commercial pursuit.

iv. Scope

DER grid support functions will be tested in various application situations to assess their technical and economic viability and to determine interconnection and interoperability system requirements for control and dispatch of those DER functions that appear to be viable for commercial adoption (if any).

v. Deliverables

A prime contractor has not yet been selected, so there are no received deliverables yet. The final report describing the work and results will include (but not be limited to) the following items:

- Descriptions of DER functions demonstrated, application situations, testing performed, and test results.
- Recommendations regarding which DER functions should be pursued commercially in power distribution systems.
- Roadmap for transfer of knowledge gained (on function viability and interoperability system requirements to support functions) to commercial practice and/or to standards working groups, as may be appropriate.
- Specifications for integration systems to encourage "plug and play" capabilities in the "smart inverters" (power conditioning systems) and other integration components.
- Transfer of relevant information to standards development organizations and other stakeholders.

vi. Metrics

A prime contractor has not yet been selected, so there is not yet a comprehensive list of project metrics. Future annual reports will include a list of project metrics, in accordance with D.13-11-025.[12]

In general, the ultimate measure of success for this project will be if it provides a basis for deciding which DER functions warrant commercial pursuit in smart grid development. Project metrics will also include the identification of suitable interoperability and interconnection systems that support the functions. Finally, the metrics will include a determination of what standards, rules and regulations are needed to encourage the adoption of viable grid support functions and the dissemination of program results to standards writers and governmental entities engaged in drafting applicable industry standards and rules.

vii. Schedule

April 1, 2014 to July 31, 2017

viii. EPIC Funds Encumbered

$28k

[12] D.13-11-025 at 67; Attachment 4 (potential project metrics).

ix. EPIC Funds Spent

$86k

x. Partners (if applicable)

n/a

xi. Match Funding (if applicable)

n/a

xii. Match Funding Split (if applicable)

n/a

xiii. Funding Mechanism (if applicable)

Combination of in-house work and pay-for-performance contracts

xiv. Treatment of Intellectual Property (if applicable)

TBD. None to date.

xv. Status Update

SDG&E has released an RFP in early 2015 to procure a prime contractor for this project. The prime contractor selection is scheduled for the first quarter of 2015.

The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor.

The RFP contains a detailed description of the work to be performed by the prime contractor. The selected prime contractor will work with SDG&E to assure a contractor work schedule in alignment with the implementation plan.

SDG&E will work with the selected prime contractor to perform the project work and to further refine project metrics. During project execution, the internal stakeholder review panel will continue to critique project work and results and to aid in tech transfer of the results into practical application.

Project 2: Smart Distribution Circuit Demonstrations

i. Investment Plan Period

2012-2014

ii. Assignment to Value Chain

Distribution

iii. Objective

The objective of this project is to perform pilot demonstrations of smart distribution circuit features and associated simulation work to identify best practices for integrating new and existing distribution equipment in these circuits. Simulations will take advantage of hardware-in-loop testing with a real-time digital simulator currently available at SDG&E. Using simulations to optimize one particular circuit, desired features will be tested in that circuit to assess their suitability for widespread commercial adoption.

iv. Scope

This three-year project will encompass laboratory and field testing of alternative distribution circuit components and circuit designs, and assess the related distribution system operational implications. Tests will be staged and data will be taken. It will be necessary to stage "before and after" simulations and tests to understand the prospective benefits of specific options that are under study. Data analysis will be performed, and recommendations will be made on best practices for robust distribution circuit practices in the future.

v. Deliverables

A prime contractor has not yet been selected, so there are no received deliverables yet. This project will produce three reports containing project data, findings, and recommendations. The Hardware and Circuit evaluation Report (an interim report) will describe the available and existing hardware capabilities, the required hardware or simulations and any baseline data results and conclusions. The Circuit Simulation Report (an interim report) will provide the simulation model specifics, required control algorithms, optimal equipment placement, and any circuit improvements simulated (based on baseline data). The comprehensive Final Report will document all of the work and important project results.

vi. Metrics

A prime contractor has not yet been selected, so there is not yet a comprehensive list of project metrics. Future annual reports will include a list of project metrics, in accordance with D.13-11-025.[13]

In general, the ultimate measure of success will be having a benchmark smart distribution circuit design that helps advance smart grid development. The circuit design will be capable of assimilating a wide variety of smart devices and will have a protection system that allows this assimilation to be done without compromising reliability or safety. Project metrics will include meeting project milestones and completing deliverables. The findings will be published in relevant technical conferences and journals.

vii. Schedule

July 7, 2014 to July 31, 2017

viii. EPIC Funds Encumbered

$55k

ix. EPIC Funds Spent

$96k

x. Partners (if applicable)

n/a

xi. Match Funding (if applicable)

n/a

xii. Match Funding Split (if applicable)

n/a

xiii. Funding Mechanism (if applicable)

Combination of in-house work and pay-for-performance contracts

xiv. Treatment of Intellectual Property (if applicable)

TBD. None to date.

[13] D.13-11-025 at 67; Attachment 4 (potential project metrics).

xv. Status Update

SDG&E released the RFP to procure a prime contractor on November 21, 2014. Seven responses to the RFP were received in early 2015. The proposal evaluations are in progress at the time of the report filing. The prime contractor selection is scheduled for the first quarter of 2015.

The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor.

The RFP contains a detailed description of the work to be performed by the prime contractor. The selected prime contractor will work with SDG&E to assure a contractor work schedule in alignment with the implementation plan.

SDG&E will work with the selected prime contractor to perform the project work and to further refine project metrics. During project execution, SDG&E's internal stakeholder review panel will continue to critique project work and results as well as aid in technology transfer of the results into practical application.

Project 3: Distributed Control for Smart Grids

i. Investment Plan Period

2012-2014

ii. Assignment to Value Chain

Distribution

iii. Objective

The objective of this project is to test alternatives for communication and control across distribution system resources to ensure that devices operate in a complementary manner and ensure optimum distribution system performance, reliability, and stability. The project will test distributed control methods and approaches to control distribution circuit resources and integrate them as part of a unified control scheme with other higher-level control systems, such as DMS. The project work will assess the scalability and performance of alternative control schemes.

iv. Scope

The distributed control methods must be devised to be compatible with the overall distribution management system capabilities being developed for the SDG&E system, and they must contribute to improvements in circuit electrical efficiency (electrical loss reduction), reliability, frequency control, voltage regulation, stability, and asset health maintenance. The scope of this project will be narrowed from SDG&E's original EPIC Plan based on the reduced available project budget.

v. Deliverables

A prime contractor has not yet been selected, so there are no received deliverables yet. The expected deliverables will be determined in re-scoping the project. A comprehensive final report will be the key deliverable.

vi. Metrics

A prime contractor has not yet been selected, so there is not yet a comprehensive list of project metrics. Future annual reports will include a list of project metrics, in accordance with D.13-11-025.[14]

In general, metrics for this project will be based on comparing the performance of distribution system operations when various control schemes are in place with the performance of the same operations when the control schemes are not in place. These performance metrics will include measures of power quality, electrical loss reductions, asset health maintenance, and adaptability to new device types in the distribution system.

vii. Schedule

January 12, 2015 to July 31, 2017

viii. EPIC Funds Encumbered

$0k

ix. EPIC Funds Spent

$0

x. Partners (if applicable)

n/a

[14] D.13-11-025 at 67; Attachment 4 (potential project metrics).

xi. Match Funding (if applicable)

n/a

xii. Match Funding Split (if applicable)

n/a

xiii. Funding Mechanism (if applicable)

Combination of in-house work and pay-for-performance contracts

xiv. Treatment of Intellectual Property (if applicable)

TBD. None to date.

xv. Status Update

SDG&E intends to release an RFP to procure a prime contractor for this project during the first quarter of 2015. The prime contractor selection is scheduled for the second quarter of 2015.

The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor.

The RFP contains a detailed description of the work to be performed by the prime contractor. The selected prime contractor will work with SDG&E to assure a contractor work schedule in alignment with the implementation plan.

SDG&E will work the selected prime contractor to perform the project work and to further refine project metrics. During project execution, SDG&E's internal stakeholder review panel will continue to critique project work and results as well as aid in tech transfer of the results into practical application.

Projects 4 & 5: Smart Grid Architecture Demonstrations and Visualization and Situational Awareness Demonstrations

Both projects have been suspended pending a Commission decision concerning the PEVSP Pilot.

5. CONCLUSION

a. Key Results for 2014 for SDG&E EPIC Projects

SDG&E moved into the planning and procurement phase for the three projects in 2014 and is currently conducting competitive procurements for prime contractors. No project results are yet available.

b. Next Steps for SDG&E's First Triennial EPIC Investment Plan

Competitive procurements will be completed and prime contracts will be negotiated. Project work will then be performed in accordance with project implementation plans. Contractors will assist in the project work and/or supply equipment or software, per the implementation plans.

Until SDG&E receives direction from the Commission about the source of funding for SDG&E's PEVSP Pilot, SDG&E will continue reserving a portion of its EPIC budget and indefinitely suspending two of its Commission-approved EPIC projects.

ATTACHMENT B

SDG&E 2014 EPIC PROJECT STATUS EXCEL

SDGE 2014 EPIC Project Status Report

Investment Program Period	Program Administrator	Project Name	Project Type	Brief Description of the Project (objective; scope; deliverables; schedule)	Date of the award	Was this project awarded in the immediately prior calendar year?	Assignment to Value Chain	Encumbered Funding Amount ($)	Committed Funding Amount ($)
1st triennial (2012-2014)	SDG&E	Demonstration of Grid Support Functions of Distributed Energy Resources	Pre-commercial Demonstration	The objective is to assess the viability of using DER to provide non-traditional functions, such as Volt/VAR regulation, fast-response peaking or emergency power, peak shaving and distribution system status information. These findings will be used to determine DER's appropriate roles in a mix of alternative solutions for distribution system voltage regulation, electrical loss reduction, and gains in safety and reliability. The results will aid decision making regarding which, if any, DER grid support functions in specific application situations warrant commercial pursuit by SDG&E or other utilities.	Procurements to begin in Q1 2015.	No	Distribution	28 k	1,673 k

SDGE 2014 EPIC Project Status Report

Project Name	Funds Expended to date: Contract/Grant Amount ($)	Funds Expended to date: In house expenditures ($)	Funds Expended to date: Total Spent to date ($)	Administrative and overhead costs to be incurred for each project	Leveraged Funds	Partners	Match Funding	Match Funding Split	Funding Mechanism	Intellectual Property
Demonstration of Grid Support Functions of Distributed Energy Resources	17 k	69 k	86 k	N/A	0	None	0	N/A	Combination of in-house work and pay-for-performance contracts	None

SDGE 2014 EPIC Project Status Report

Project Name	Identification of the method used to grant awards.	If competitively selected, provide the number of bidders passing the initial pass/fail screening for project	If competitively selected, provide the name of selected bidder.	If competitively selected, provide the rank of the selected bidder in the selection process.	If competitively selected, explain why the bidder was not the highest scoring bidder, explain why a lower scoring bidder was selected.	If interagency or sole source agreement, specify date of notification to the Joint Legislative Budget Committee (JLBC) was notified and date of JLBC authorization.	Does the recipient for this award identify as a California-based entity, small business, or businesses owned by women, minorities, or disabled veterans?
Demonstration of Grid Support Functions of Distributed Energy Resources	RFP for prime contractor and sole source for consultant to help prepare the RFP.	N/A	RFP released. Selection process in progress.	N/A	N/A	N/A	N/A

SDGE 2014 EPIC Project Status Report

Project Name	How the project leads to technological advancement or breakthroughs to overcome barriers to achieving the state's statutory energy goals	Applicable metrics	Update
Demonstration of Grid Support Functions of Distributed Energy Resources		A prime contractor has not yet been selected, so there is not yet a comprehensive list of project metrics. Future annual reports will include a list of project metrics. In general, the ultimate measures of success for this project will be if it provides a basis for deciding which DER functions warrant commercial pursuit in smart grid development. Project metrics will also include the identification of suitable interoperability and interconnection systems that support the functions. Finally, the metrics will include a determination of what standards, rules and regulations are needed to encourage the adoption of viable grid support functions and the dissemination of this information to standards writers and government parties that have the authority to make applicable industry rules or laws.	SDG&E has released an RFP in early 2015 to procure a prime contractor for this project. The prime contractor selection is scheduled for the first quarter of 2015. The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor. The RFP contains a detailed description of the work to be performed by the prime contractor. The selected prime contractor will work with SDG&E to assure a contractor work schedule in alignment with the implementation plan. SDG&E will work with the selected prime contractor to perform the project work and to further refine project metrics. During project execution, the internal stakeholder review panel will continue to critique project work and results and to aid in tech transfer of the results into practical application.

SDGE 2014 EPIC Project Status Report

Investment Program Period	Program Administrator	Project Name	Project Type	Brief Description of the Project (objective; scope; deliverables; schedule)	Date of the award	Was this project awarded in the immediately prior calendar year?	Assignment to Value Chain	Encumbered Funding Amount ($)	Committed Funding Amount ($)
1st triennial (2012-2014)	SDG&E	Smart Distribution Circuit Demonstrations	Pre-commercial Demonstration	The objective of this project is to perform pilot demonstrations of smart distribution circuit features and associated simulation work to identify best practices for integrating new and existing distribution equipment in these circuits. Simulations will take advantage of hardware-in-loop testing with a real-time digital simulator currently available at SDG&E. Using simulations to optimize one particular circuit, desired features will be tested in that circuit to assess their suitability for widespread commercial adoption.	Procurement process initiated in 2014.	No	Distribution	55 k	1,599 k

SDGE 2014 EPIC Project Status Report

Project Name	Funds Expended to date: Contract/Grant Amount ($)	Funds Expended to date: In house expenditures ($)	Funds Expended to date: Total Spent to date ($)	Administrative and overhead costs to be incurred for each project	Leveraged Funds	Partners	Match Funding	Match Funding Split	Funding Mechanism	Intellectual Property
Smart Distribution Circuit Demonstrations	59 k	37 k	96 k	N/A	0	None	0	N/A	Combination of in-house work and pay-for-performance contracts	None.

SDGE 2014 EPIC Project Status Report

Project Name	Identification of the method used to grant awards.	If competitively selected, provide the number of bidders passing the initial pass/fail screening for project	If competitively selected, provide the name of selected bidder.	If competitively selected, provide the rank of the selected bidder in the selection process.	If competitively selected, explain why the bidder was not the highest scoring bidder, explain why a lower scoring bidder was selected.	If interagency or sole source agreement, specify date of notification to the Joint Legislative Budget Committee (JLBC) was notified and date of JLBC authorization.	Does the recipient for this award identify as a California-based entity, small business, or businesses owned by women, minorities, or disabled veterans?
Smart Distribution Circuit Demonstrations	RFP for prime contractor and sole source for consultant to help prepare the RFP.	TBD	RFP released. Selection process in progress.	N/A	N/A	N/A	N/A

SDGE 2014 EPIC Project Status Report

Project Name	How the project leads to technological advancement or breakthroughs to overcome barriers to achieving the state's statutory energy goals	Applicable metrics	Update
Smart Distribution Circuit Demonstrations		A prime contractor has not yet been selected, so there is not yet a comprehensive list of project metrics. Future annual reports will include a list of project metrics in accordance with D.13-11-025. In general, the ultimate measure of success will be having a benchmark smart distribution circuit design that helps advance smart grid development. The circuit design will be capable of assimilating a wide variety of smart devices and will have a protection system that allows this assimilation to be done without compromising reliability or safety. Project metrics will include meeting project milestones and completing deliverables. The findings will be published in relevant technical conferences and journals.	SDG&E released the RFP to procure a prime contractor on November 21, 2014. Seven responses to the RFP were received in early 2015. The proposal evaluations are in progress at the time of the report filing. The prime contractor selection is scheduled for the first quarter of 2015. The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor. The RFP contains a detailed description of the work to be performed by the prime contractor. The selected prime contractor will work with SDG&E to assure a contractor work schedule in alignment with the implementation plan. SDG&E will work the selected prime contractor to perform the project work and to further refine project metrics. During project execution, SDG&E's internal stakeholder review panel will continue to critique project work and results as well as aid in tech transfer of the results into practical application.

SDGE 2014 EPIC Project Status Report

Investment Program Period	Program Administrator	Project Name	Project Type	Brief Description of the Project (objective; scope; deliverables; schedule)	Date of the award	Was this project awarded in the immediately prior calendar year?	Assignment to Value Chain	Encumbered Funding Amount ($)	Committed Funding Amount ($)
1st triennial (2012-2014)	SDG&E	Distributed Control for Smart Grids	Pre-commercial Demonstration	The objective of this project is to test alternatives for communication and control across distribution system resources to ensure that devices operate in a complementary manner and ensure optimum distribution system performance, reliability, and stability. The project will test distributed control methods and approaches to control distribution circuit resources and integrate them as part of a unified control scheme with other higher-level control systems, such as DMS. The project work will assess the scalability and performance of alternative control schemes.	Procurements to begin in 2014.	No	Distribution	0	1,170 k

SDGE 2014 EPIC Project Status Report

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Distributed Control for Smart Grids	0	0	0	N/A	0	None	0	N/A	Combination of in-house work and pay-for-performance contracts	TBD. None to date.

SDGE 2014 EPIC Project Status Report

Project Name	Identification of the method used to grant awards.	If competitively selected, provide the number of bidders passing the initial pass/fail screening for project	If competitively selected, provide the name of selected bidder.	If competitively selected, provide the rank of the selected bidder in the selection process.	If competitively selected, explain why the bidder was not the highest scoring bidder, explain why a lower scoring bidder was selected.	If interagency or sole source agreement, specify date of notification to the Joint Legislative Budget Committee (JLBC) was notified and date of JLBC authorization.	Does the recipient for this award identify as a California-based entity, small business, or businesses owned by women, minorities, or disabled veterans?
Distributed Control for Smart Grids	RFP for prime contractor and sole source for consultant to help prepare the RFP.	N/A	N/A	N/A	N/A	N/A	N/A

SDGE 2014 EPIC Project Status Report

Project Name	How the project leads to technological advancement or breakthroughs to overcome barriers to achieving the state's statutory energy goals	Applicable metrics	Update
Distributed Control for Smart Grids		A prime contractor has not yet been selected, so there is not yet a comprehensive list of project metrics. Future annual reports will include a list of project metrics. In general, metrics for this project will be based on comparing the performance of distribution system operations when various control schemes are in place with the performance of the same operations when the control schemes are not in place. These performance metrics will include measures of power quality, electrical loss reductions, asset health maintenance, and adaptability to new device types in the distribution system.	SDG&E intends to release an RFP to procure a prime contractor for this project the first quarter of 2015. The prime contractor selection is scheduled for the second quarter of 2015. The development of a project implementation plan, including approach, testing locations, internal staffing, procurement plans, and schedule, is proceeding in parallel with the RFP and will be finalized with involvement from the selected prime contractor. The RFP contains a detailed description of the work to be performed by the prime contractor. The selected prime contractor will work with SDG&E to assure a contractor work schedule in alignment with the implementation plan. SDG&E will work the selected prime contractor to perform the project work and to further refine project metrics. During project execution, SDG&E's internal stakeholder review panel will continue to critique project work and results as well as aid in tech transfer of the results into practical application.

SDGE 2014 EPIC Project Status Report

Investment Program Period	Program Administrator	Project Name	Project Type	Brief Description of the Project (objective; scope; deliverables; schedule)	Date of the award	Was this project awarded in the immediately prior calendar year?	Assignment to Value Chain	Encumbered Funding Amount ($)	Committed Funding Amount ($)
1st triennial (2012-2014)	SDG&E	Smart Grid Architecture Demonstrations	Pre-commercial Demonstration	The objective is to perform pilot demonstrations of key candidate prototype building blocks for SDG&E's smart grid architecture, assess their viability, and recommend which building blocks should be adopted into the SDG&E power distribution system.	Project suspended, pending a Commission decision concerning the PEVSP Pilot	No	Distribution	0	0
1st triennial (2012-2014)	SDG&E	Visualization and Situational Awareness Demonstrations	Pre-commercial Demonstration	The objective is to explore how data collected from sensors and devices can be processed, combined, and presented to system operators in a way that enhances power system monitoring and situational awareness.	Project suspended, pending a Commission decision concerning the PEVSP Pilot	No	Distribution	0	0

SDGE 2014 EPIC Project Status Report

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Smart Grid Architecture Demonstrations	0	0	0	N/A	0	None	0	N/A	Combination of in-house work and pay-for-performance contracts	None
Visualization and Situational Awareness Demonstrations	0	0	0	N/A	0	None	0	N/A	Combination of in-house work and pay-for-performance contracts	None

SDGE 2014 EPIC Project Status Report

Project Name	Identification of the method used to grant awards.	If competitively selected, provide the number of bidders passing the initial pass/fail screening for project	If competitively selected, provide the name of selected bidder.	If competitively selected, provide the rank of the selected bidder in the selection process.	If competitively selected, explain why the bidder was not the highest scoring bidder, explain why a lower scoring bidder was selected.	If interagency or sole source agreement, specify date of notification to the Joint Legislative Budget Committee (JLBC) was notified and date of JLBC authorization.	Does the recipient for this award identify as a California-based entity, small business, or businesses owned by women, minorities, or disabled veterans?
Smart Grid Architecture Demonstrations	RFP	N/A	N/A	N/A	N/A	N/A	N/A
Visualization and Situational Awareness Demonstrations	RFP	N/A	N/A	N/A	N/A	N/A	N/A

SDGE 2014 EPIC Project Status Report

Project Name	How the project leads to technological advancement or breakthroughs to overcome barriers to achieving the state's statutory energy goals	Applicable metrics	Update
Smart Grid Architecture Demonstrations		The project has been suspended, so there is not yet a comprehensive list of project metrics.	Project suspended, pending a Commission decision concerning the PEVSP Pilot funding
Visualization and Situational Awareness Demonstrations		The project has been suspended, so there is not yet a comprehensive list of project metrics.	Project suspended, pending a Commission decision concerning the PEVSP Pilot funding