



**SAN DIEGO GAS & ELECTRIC COMPANY
LTPP/TRACK 4 PROCUREMENT PLAN
(PREFERRED RESOURCES)**

May 1, 2014

**SAN DIEGO GAS & ELECTRIC COMPANY
TRACK 4 PROCUREMENT PLAN (PREFERRED RESOURCES)**

I. OVERVIEW OF IDENTIFIED NEED AND PROCUREMENT PLAN REQUIREMENT

In Decision (“D.”) 14-03-004 (the “Track 4 Decision”), the California Public Utilities Commission (the “Commission”) determined that new resources are required to meet the local capacity requirement (“LCR”) need resulting from the retirement of the San Onofre Nuclear Generating Station (“SONGS”), as well as load growth and the mandatory retirement of once-through cooling (“OTC”) resources located in Southern California in accordance with State Water Resources Control Board (“SWRCB”) regulations.¹ Accordingly, the Track 4 Decision authorizes San Diego Gas & Electric Company (“SDG&E”) to procure through an all-source request for offers (“RFO”) or through bilateral negotiations between 500 and 800 Megawatts (“MW”) of electrical capacity in its territory to meet long term local capacity requirements by the end of 2021.² Such procurement must include at least 25 MW of energy storage resources as part of 200 MW of preferred resources consistent with the Loading Order of the Energy Action Plan.³

The Track 4 Decision directs SDG&E to submit for review and approval by the Commission’s Energy Division a procurement plan (the “Track 4 Procurement Plan”) explaining how it will procure the resources authorized by the Track 4 Decision.⁴ The decision permits SDG&E to submit the conventional gas-fired resources portion of its Track 4 Procurement Plan for review separately from the preferred resources portion.⁵ This document sets forth the preferred resources portion of SDG&E’s Track 4 Procurement Plan. SDG&E addresses below the plan requirements set forth in the Track 4 Decision that are relevant to preferred resource procurement (see Appendix A – “Roadmap of Procurement Plan Requirements Pursuant to D.14-03-004 and D.13-02-015”).

II. SUMMARY OF THE PREFERRED RESOURCE PROCUREMENT STRATEGY

In an effort to procure preferred resources to meet the requirements set forth in the Track 4 Decision, SDG&E will issue Request for Offers (“RFO”) for preferred resources in the third

¹ In May, 2010, the SWRCB adopted its statewide *Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (Resolution No. 2010-0020), which applies to power plants located along the California coast that rely on OTC technology (the “OTC Policy”). The OTC Policy implements § 316(b) of the federal Clean Water Act, which seeks to minimize the adverse environmental impacts of cooling water intake structures, and requires OTC facilities to meet certain requirements or retire by a specified compliance date.

² D.14-03-004, *mimeo*, Ordering Paragraphs (“OPs”) 2 and 3.

³ *Id.*

⁴ *Id.* at OP 7.

⁵ OP 7 of D.14-03-004 states that SDG&E’s procurement plan “shall be subject to the same procurement plan requirements of OP 6, 7 and 8 of D.13-02-015 (SCE’s Local Capacity Requirement decision). OP 8 of D.13-02-015 states that “[SCE] may provide the conventional gas-fired resources portion of the procurement plan for review ahead of its full procurement plan. If Energy Division approves this portion of the plan, [SCE] may go forward with that procurement.”

quarter of 2014 (the “Preferred Resources RFO”). SDG&E’s proposed Preferred Resources RFO characteristics are described below:

A. Quantity and Products to be Solicited

SDG&E will solicit bids for up to 200 MW to be delivering in 2021 from new Energy Efficiency (“EE”), Demand Response (“DR”), Energy Storage (“ES”), Renewables, Combined Heat and Power (“CHP”), and Distributed Generation (“DG”) products. SDG&E will target a minimum of 25 MWs of ES, as required by the Track 4 Decision.⁶ Specific minimum procurement targets will not be established for any other resource type.

B. Location / Point of Interconnection

Products must provide capacity that will reduce load or add capacity that will count towards SDG&E’s local Resource Adequacy (“RA”) requirements. This means that projects must be located in SDG&E’s local sub-area – *i.e.*, physically located in SDG&E’s service territory and connected to SDG&E-owned transmission or distribution facilities at a point that is (i) at or electrically west of the Miguel or Suncrest substations and (ii) electrically south of the SONGS 230 kV switchyard (projects connecting at the Miguel or Suncrest substations are considered to be local area projects for these purposes). For DR and EE resource types, customers included must be located in San Diego County.

C. Term

Products may come online as early as January 1, 2018 and as late as July 1, 2021 in order to ensure availability by the deadline of December 31, 2021. SDG&E will consider proposals for any contract duration as long as the product will be available in 2021, but preferred contract terms for each product are described in the solicitation documents in Attachment C.

D. Evaluation Process

SDG&E will select bids based on a least cost/best fit (“LCBF”) / net market value (“NMV”) analysis to determine the project or group of projects that best meets LCR need. SDG&E will not give preference to one product over another, but may apply qualitative factors to select a portfolio of bids that presents the best value for customers.

E. Consultation with the California Independent System Operator (“CAISO”)

The CAISO has provided a set of locational effectiveness factors that will be used in evaluating each project’s ability to contribute toward meeting LCR need. The CAISO report⁷ that includes these factors is included as Attachment D.

⁶ D.14-03-004, *mimeo*, Ordering Paragraph 9.

⁷ *Locational Effectiveness Factor Calculations in the San Diego Area*, April 23, 2014. Available on the CAISO website at: http://www.caiso.com/Documents/LocationalEffectivenessFactors-SanDiego_2013-2014.pdf

F. Bilaterals

SDG&E may also consider bilateral negotiations when timing considerations, product complexity and/or other factors make RFO participation inappropriate. SDG&E will evaluate such projects using the same LCBF / NMV methodology used for RFO bids and compare them to relevant market data and/or solicitation results if they are available.

G. Timing

SDG&E intends to issue the solicitation in the third quarter of 2014 and to submit a shortlist for approval in the first quarter of 2015. This schedule will provide developers with sufficient time to bring projects to fruition by the December 31, 2021 deadline established in the Track 4 Decision. SDG&E expects to file an application seeking approval of winning bids by year-end, 2015; however, this date could change due to the Commission requirement that that all resources procured through this RFO be filled in a single application⁸.

III. PROCUREMENT CONSIDERATIONS

A. Emerging Markets and Processes

The emerging energy storage market may not produce a large number of sufficiently developed bids; the Commission itself has acknowledged the experimental nature of this market.⁹ SDG&E intends to use the “shadow cost curve” concept to benchmark the cost-effectiveness of such bids. The shadow cost curve concept is described in more detail in Section VI.A below.

SDG&E recognizes that procurement of many of the preferred resources through an RFO process has not been the standard method of procuring these resources in California. Thus SDG&E expects that throughout the process SDG&E will need to communicate with bidders to obtain additional information to fully evaluate the offer. SDG&E also expects to receive bids for projects that do not fit squarely into a single product type (*e.g.*, renewable/storage hybrids, aggregated roof-top solar/storage or other creative unforeseen combinations of preferred resources). SDG&E encourages market creativity and will not exclude such proposals from consideration as long as the basic conformance requirements are met (see the ‘Preferred Resources Conformance Requirements Summary Table’ below in Section VI.B.). SDG&E encourages bidders to use the bid form that allows them to best describe their offer and submit questions through SDG&E’s Q&A process to get further guidance on which product type is most appropriate for their project. If SDG&E selects such bids, it may modify one of the existing form contracts or develop new contract forms that do not match the pro formas in Attachment B.

B. Incremental Procurement

The Track 4 Decision requires that the procurement authorized in the decision be incremental to the preferred resource assumptions included in the CAISO’s Track 4 technical studies that the Commission relied upon when establishing the LCR (the “CAISO Track 4

⁸ D. 14-03-004, *mimeo*, p. 113 and Ordering Paragraph 8.

⁹ D.14-03-004, *mimeo*, p. 60.

Studies”).¹⁰ Since the CAISO’s assumptions include forecasts of future preferred resource capacity that has not yet materialized, and thus is not precisely defined, it may be difficult to demonstrate satisfaction of this “incremental” requirement in some cases. SDG&E currently offers many procurement programs that solicit preferred resources located anywhere within its service territory. Unlike Pacific Gas & Electric Company (“PG&E”) and Southern California Edison Company (“SCE”), however, SDG&E’s service territory occupies essentially the same footprint as its LCR area, making it even more difficult for SDG&E to differentiate LCR procurement from existing program procurement. To the extent that these other procurement activities occur at the same time as this Preferred Resources RFO, SDG&E will review the results of those processes prior to making any formal offers in this RFO. SDG&E discusses this concept further in Section VI below.

In an effort to identify preferred resources that are incremental to those assumed in the CAISO Track 4 Studies, especially for EE and DR products, SDG&E encourages the market to bid products into the Preferred Resources RFO that are innovative and that the CAISO may not have considered in the CAISO Track 4 Studies. SDG&E discourages bids that are solely an extension or expansion of existing or planned programs. The specific method used to procure preferred resources (Preferred Resources RFO v. existing programs) and the difficult question of whether the resource is incremental should not impede progress towards the overarching goal of procuring sufficient cost-effective preferred resource capacity by the end of 2021. SDG&E’s procurement strategy is intended to be flexible enough to take advantage of any cost-effective preferred resources that can help it meet its LCR need. SDG&E describes in more detail below how it intends to help the market make this distinction for EE and DR products.

To ensure that the solicitation results in the most effective procurement of incremental preferred resources, the Commission should also consider the inclusion of DR and EE efforts related to rate design and programs. For the majority of customers, specifically residential, the current rate structure is broken and provides perverse price signals that have no direct relationship to the utility’s cost of service. The re-examination of residential rate design is being assessed in the Residential Rates Order Instituting a Rulemaking (“RROIR”)¹¹. In the RROIR proceeding, the Commission is examining current residential electric rate design, including the tier structure in effect for residential customers, the state of time variant and dynamic pricing, potential pathways from tiers to time variant¹ and dynamic pricing, and preferable residential rate design to be implemented when statutory restrictions are lifted. The RROIR provides guidance for residential rate design, including: (1) rates should encourage conservation and energy efficiency (Principle 4); and (2) rates should encourage reduction of both coincident and non-coincident peak demand (Principle 5). Further, in the Energy Division Staff proposal on Residential Rate Reform indicated that one of the major issues to be addressed in the RROIR is the lack of progress in realizing the Commission’s policy of transitioning customers to time-variant pricing as part of a comprehensive demand

¹⁰ D.14-03-004, *mimeo*, OP 6 (directing SDG&E to issue an RFO that includes the elements specified by OP 4 of D.13-02-015, which required a demonstration that the resource is “incremental to the assumptions used in the California ISO studies, to ensure that a given resource is not double counted.”); *id.* at Exhibit B.

¹¹ Rulemaking 12-06-013.

response policy articulated in its 2003 Vision Statement¹².

1. Incremental EE

To demonstrate that the EE products bid into the Preferred Resources RFO are incremental, SDG&E will provide descriptions and references to the EE assumptions used in the CAISO Track 4 Studies in its solicitation materials and advise bidders that they must explain how their EE products are incremental to these assumptions. SDG&E will encourage RFO participants to provide creative products that are not part of existing or planned programs that made up the assumptions used by the CAISO Track 4 Studies.

Bidders may refer to the following sources, which describe SDG&E's EE baseline, in order to determine whether their projects is incremental: (1) SDG&E's current 2013-2014 EE program portfolio; (2) SDG&E's proposed 2015 EE program portfolio; (3) the market potential, which is currently the basis of the Commission's 2015 EE goals;¹³ or (4) 2013 Integrated Energy Policy Report ("IEPR") DR forecast¹⁴. In addition to these sources, a bidder may also propose programs that target hard-to-reach markets that have not been traditionally addressed by programs; EE technologies that are not currently in Emerging Technologies or in the market potential or existing programs.

2. Incremental DR

SDG&E will follow the same process outlined for EE to direct DR bidders to explain how their product is incremental to the DR assumptions used in the CAISO Track 4 Studies. For example, a program that would utilize new rate structures that abide by the RROIR principles described in Section III.B above could result in incremental DR. These type of rate structures were not in place at the time the CAISO Track 4 Studies were completed, thus products that utilize such structures would be incremental to volumes assumed in the study. Proposals for new products that target a specific customer segment that current programs to not address, such as agricultural pumping load, may also be considered incremental. Such products should include rationale for why these customers have not been able to participate in an existing offering and how the proposal will address these concerns.

In D.14-03-026, the Commission bifurcated demand response programs into load modifying and supply resources¹⁵ in order to improve the efficiency of demand response and increase the use of demand response programs. Supply resources are integrated into the CAISO wholesale electricity market. Each bidder will be asked to explain how their DR program would fit into either the load modifying or the supply category. Offers for supply resources should also

¹² California Demand Response: A Vision for the Future (2002-2007)

¹³ See Navigant Consulting, Inc., *2013 California Energy Efficiency Potential and Goals Study*, reflected as Attachments 1, 2, 3 and 4 to the March 3, 2014 *Assigned Commissioner's Ruling Amending Scoping Memorandum, and Providing Guidance on Energy Savings Goals for Program Year 2015*.

¹⁴ See the SDG&E Mid.xls file at: http://www.energy.ca.gov/2013_energypolicy/documents/demand-forecast_CMF/mid_case/

¹⁵ D.14-03-026, ordering paragraph 1.

address how the product can be bid into the CAISO markets.

Bidders may refer to the following sources, which describe SDG&E's DR baseline, in order to determine whether their projects is incremental: (1) SDG&E's current 2012-2014 DR program portfolio¹⁶; (2) SDG&E's proposed 2015-2016 DR program portfolio¹⁷; and / or (3) 2013 Integrated Energy Policy Report ("IEPR") DR forecast¹⁸.

C. Alternative Methods of Meeting LCR Need

Evaluating multiple resources through one solicitation will lead to better understanding of how preferred resources can meet LCR needs in a cost-effective way. However, many of the product types that SDG&E will solicit in the Preferred Resources RFO involve emerging technologies or hybrids that are new to the market. Also, SDG&E's smaller service territory may impact the volume, and correspondingly, the competitiveness of bids for preferred resources. SDG&E will closely monitor how these issues impact the cost and effectiveness of the bids. If SDG&E is unable to procure the targeted 200 MW through this Preferred Resources RFO, it will consider one or more of the following opportunities: (1) utilize existing preferred resource programs in an effort to fulfill any remaining LCR need; (2) hold additional solicitations for preferred resources to meet LCR needs; or (3) continue working towards bilateral arrangements. SDG&E will also strive to learn more about which resources best meet local reliability needs so that LCR procurement can be more targeted. SDG&E discusses this effort in more detail in Section VIII below. Due to the timing of these alternative opportunities, SDG&E may have to file these products separately from RFO products procured in this RFO.

SDG&E may also be able to meet some of its LCR need with preferred resource capacity obtained through efforts outside of solicitations, existing programs, or bilateral agreements. For example, SDG&E is in the process of revamping its rate structure to better incentivize customers to decrease loads at peak hours. Any resulting DR is the result of rate reforms that were not in place when the CAISO Track 4 Studies were performed and therefore is incremental to volumes assumed in Track 4. SDG&E intends to evaluate the contribution of additional DR associated with the evolution of its electric rate structure, or any other non-procurement mechanisms that result in incremental preferred resource capacity, towards the 200 MW minimum required by the Track 4 Decision. SDG&E may also explore potential transmission options that reduce the LCR need.

IV. OVERLAP BETWEEN THE PREFERRED RESOURCES RFO AND EXISTING PREFERRED RESOURCES PROGRAMS

¹⁶ See <http://www.sdge.com/business/demand-response-overview> for information about SDG&E's current 2012-2014 DR program portfolio.

¹⁷ See https://www.pge.com/regulation/DemandResponseOIR-2013/Pleadings/SDGE/2014/DemandResponseOIR-2013_Plea_SDGE_20140303_297882.pdf for information about SDG&E's proposed 2015-2016 DR program portfolio.

¹⁸ See the SDG&E Mid.xls file at: http://www.energy.ca.gov/2013_energypolicy/documents/demand-forecast_CMF/mid_case/

SDG&E will continue to comply with all Commission orders in other dockets regarding the procurement of preferred resources. Rules applicable to the procurement of preferred resources in existing programs may impact Track 4 Procurement. SDG&E discusses some examples of this interaction below.

A. Bid Evaluation Conflicts

Many of SDG&E's existing programs for preferred resource procurement will occur within the same timeframe as this Preferred Resources RFO. It is inevitable that SDG&E will evaluate similar products in two separate domains. SDG&E's goal is to maximize value for its customers by using all available market data to evaluate bids in all of its procurement processes. For example, if a project bid into the Preferred Resources RFO provides the same benefits as a project bid into a Renewable Auction Mechanism ("RAM") solicitation, SDG&E will evaluate the pricing providing in each venue in order to ensure that ratepayers secure the best deal. Additionally, SDG&E will include existing cost-effectiveness standards used in EE and DR programs in its evaluation of EE and DR products bid into the Preferred Resources RFO. SDG&E will compare EE and DR bids to other preferred resources bid into the RFO, but it will also consider whether such bids are cost-effective based on the existing cost-effectiveness standards used in EE and DR programs. SDG&E will use these types of evaluation tools from existing programs whenever possible to ensure that preferred resources are the most cost-effective choice for meeting LCR need, while also maintaining a sense of whether the price for each specific product is within the range of market prices for that resource type.

B. Identifying LCR Eligible Procurement Through Existing Programs

Many of SDG&E's existing preferred resource procurement programs already encourage participation from local projects. For example, the RAM program prioritizes local projects through its evaluation process and the Renewable Market Adjusting Tariff ("ReMAT") is restricted to local projects. SDG&E may identify resources through its existing programs that could contribute to meeting its LCR need. SDG&E will count these resources towards its LCR if it can demonstrate that these cost-effective programs are incremental to assumptions used in the CAISO Track 4 Studies. Furthermore, if SDG&E identifies a project that is ineligible for the existing program to which it was submitted, it will consider whether it can contribute to LCR need. Depending on when SDG&E identifies such projects, it will either request that they bid into the Preferred Resources RFO or negotiate bilaterally. Timing may also demand that SDG&E file such projects for approval separately from projects identified through this Preferred Resources RFO. Examples of how SDG&E might identify LCR products through existing programs include the following:

1. Energy Efficiency

SDG&E will continue to file applications to seek the Commission's approval to continue existing programs and to implement new programs, among other requests. Additionally, SDG&E will continue to expand its offering by increasing penetration of existing measures into hard-to-reach areas. Additionally, with SDG&E's 2015 pilot programs, Energy Marketplace and CVR, SDG&E is investigating alternative ways to achieve more energy savings.

2. *Demand Response*

SDG&E will continue to file applications to seek the Commission's approval to continue existing programs and to implement new programs, among other requests. Additionally, SDG&E will continue to expand its offering and use of dynamic rates to help manage the system load.

3. *Energy Storage*

Pursuant to the D.13-10-040 (the "Energy Storage Decision") and its Energy Storage Procurement Application (A.14-02-006 filed February 28, 2014), SDG&E will solicit a total of 165 MW of qualifying ES through four biennial solicitations, the first of which will be conducted as part of the Preferred Resources RFO. SDG&E will seek to procure ES products through the Preferred Resources RFO that will count towards both the Track 4 Decision requirement and the Energy Storage Decision requirement.¹⁹ If SDG&E fails to procure the targeted 25 MW of ES through this solicitation, it will continue to seek these volumes through subsequent biennial ES solicitations.

4. *Renewables*

a. Large-Scale RPS Solicitation

Although SDG&E does not anticipate soliciting large scale RPS solicitation in 2014, it may choose to do so in future years. If an LCR need exists at the time that SDG&E issues a large scale RPS solicitation, it will encourage participation from local resources.

b. Small-Scale Renewable Procurement Programs

SDG&E will continue to procure renewables through its RAM and ReMAT programs. The next scheduled RAM solicitation will occur in June of 2014. Additional RAM solicitations may occur if the remaining program requirement is not met in June. The ReMAT program will continue to offer PPAs to qualified developers every other month until its program ends pursuant to the provisions in SDG&E's Re-MAT Tariff. SDG&E may also identify LCR resources through its Connected to the Sun program and the bioenergy feed-in tariff currently under review by the Commission.

5. *Combined Heat and Power*

SDG&E will continue to procure CHP through at least two additional dedicated CHP RFOs (in addition to the two CHP RFOs already conducted by SDG&E to date). The first of these two additional CHP RFOs is tentatively scheduled to be issued in the spring of 2015 and the last CHP RFO will be associated with the second program period as described in the CHP

¹⁹ See D.13-10-040, *mimeo*, p. 34; and D.14-03-004, *mimeo*, pp. 61 and OP 2.

settlement agreement.²⁰

6. *Distributed Generation*

SDG&E anticipates continuing to interconnect DG, such as rooftop solar, in large numbers in the coming years. To the degree that such roof-top solar installations exceeds the projections adopted by the CAISO / CEC in their load forecasts, SDG&E would consider those installations to be incremental as required by the Track 4 Decision²¹. Other types of distributed generation are also routinely interconnected with SDG&E's system and more information on this process can be found on SDG&E's website at: <http://www.sdge.com/generation-interconnections/overview-generation-interconnections>.

SDG&E is also aware of certain preferred resource procurement programs that were not included in the CAISO Track 4 Studies. For example, SDG&E expects to begin procuring additional renewable capacity for its Connected to the Sun program as early as the spring of 2015.²² SDG&E is also currently working with the Commission on the implementation of the proposed Demand Response Auction Mechanism. In order to maximize value to ratepayers, SDG&E intends to evaluate how these programs fit within the identified LCR needs.

C. *Conflicting Program Rules*

SDG&E notes that any products procured through the Preferred Resources RFO should not be precluded from counting towards their respective existing program goals, even if the evaluation methodology used differs from that used in the applicable existing program. For example, all greenhouse gas ("GHG") reductions captured through the procurement of any CHP resources will count towards the MW and GHG targets required by the CHP Settlement.

It is also unclear how the RPS Procurement Expenditure Limitation ("PEL") currently under development at the Commission might impact the procurement of renewables under the Track 4 Procurement Plan. SDG&E will monitor this proceeding and consider its impact, if any, to renewable procurement through the LCR process.

D. *The Role that Preferred Resources Can Play in Addressing LCR Need*

²⁰ The "Qualifying Facility and Combined Heat and Power Program Settlement Agreement" (the "Settlement Agreement") was filed on October 8, 2010 and approved in D.10-12-035. The Settlement Agreement became effective on November 23, 2011 with the satisfaction of the necessary conditions precedent contained in the agreement. The initial and second program periods are described on page 8 of the Settlement Agreement.

²¹ See *supra*, note 10.

²² The program, initially proposed in an SDG&E application, will permit all bundled customers to access solar energy regardless of whether they own their home or their premises can support on-site solar. Recently adopted Senate Bill ("SB") 43 provides a statutory basis for the program. The Commission is currently working to implement this legislation through A.12-01-008, *et al.* If the Commission issues a decision in this proceeding in the fall of 2014, SDG&E could begin procurement early in 2015.

Preferred resources have played a role in addressing SDG&E’s LCR need in the past and will continue to play a role in the future. For example, SDG&E’s past energy efficiency efforts have lowered loads in SDG&E local capacity area, thus lowering the need for local generation.²³ SDG&E has also historically assessed the incremental value/prioritized the procurement of local resources when evaluating RPS and RAM bids. However, in the future, SDG&E believes the procurement of preferred resources will need to be more focused with targeted objectives to obtain the maximum benefits. This customization will evolve over time as the nature of the need evolves. SDG&E will work with the Commission to adjust its procurement strategy in all preferred resource procurement proceedings as needed in order to allow these changing needs to play out. This concept is discussed more in Section VIII below.

V. SOLICITATION PROCESS

A. Solicitation Timeline

SDG&E proposes to issue the preferred resources RFOs three to four weeks following Energy Division approval of the preferred resources portion of its Track 4 Procurement Plan. Based on current estimates, SDG&E anticipates that this will likely occur in the third quarter of 2014. SDG&E proposes to close the RFOs (*i.e.*, establish the bid due date) in the fourth quarter of 2014 (currently targeting the week before Thanksgiving). This proposed timeline is consistent with securing resources in time to meet an end-of-year 2021 LCR need and will allow time to involve stakeholders.

SDG&E proposes the following timeline for its preferred resources procurement effort (roughly 18 months beginning with the date Energy Division approves this preferred resources portion of its Track 4 Procurement Plan):

SDG&E’s Proposed Preferred Resources procurement timeline

Target Date / Days relative to approval	Event / Procurement Step
May 1, 2014	SDG&E submits the preferred resources portion of its Track 4 Procurement Plan to Energy Division
T+0	Energy Division approves the preferred resources portion of the Track 4 Procurement Plan
T+21	Preferred Resources RFO issued
TBD / ~T+60- T+90	Bidders conference(s) / stakeholder outreach event(s)
T+160	Offers due
T+275	Shortlist determination
Next avail meeting	SDG&E briefs its PRG on its proposed shortlist

²³ The local capacity area where the resources need was identified is basically equal to the SDG&E service area.

T+300	SDG&E notifies shortlisted bidders
T+310	Shortlisted bidders accept / withdraw from shortlisted position
T+311	Commence negotiations
T+500	Negotiations complete / contracts for all product types executed
T+530	Application filed requesting approval of Preferred Resources contracts

B. Solicitation Structure

SDG&E proposes a solicitation structure consistent with previous procurement efforts associated with programs such as the Renewable Portfolio Standard (“RPS”). SDG&E’s proposed solicitation structure includes outreach events over a one-month period followed by a single date upon which offers are due.

SDG&E intends to utilize a Preferred Resources RFO Internet webpage with a narrative that describes the process, along with the RFO document for each product type, question and answers, outreach event / bidder’s conference materials, the various forms and files that are associated with each Preferred Resource product type (such as pricing forms, credit application, pro forma agreements and project descriptions forms for example), the solicitation schedule, instructions for submitting offers and guidance for offers that do not fit squarely into one of the product types included.

SDG&E intends to leverage its PowerAdvocate platform for receiving offers. SDG&E has successfully used this web-based platform numerous times in the past and believes that it will effectively handle the numerous offers anticipated. In short, bidders register on the site to receive a user name and password and are provided instructions for logging in and providing all the required forms and files necessary to evaluate their offer.

C. Contract Documents

SDG&E will provide pro forma agreements for most of the preferred resource types. These documents will serve as a starting point for negotiations. Since the procurement of preferred resources specifically for LCR purposes is a relatively new endeavor, SDG&E expects these forms to change based on input from counterparties and lessons learned throughout the procurement process. For example, SDG&E anticipates that it may wish to structure contract provisions that encourage phased in project development. This would allow SDG&E to develop a sense for which projects have real potential to produce the needed capacity within the required timeframe and to avoid the false sense of security associated with procuring large volumes of resources several years before their output is required. SDG&E’s pro forma agreements for each product type are discussed briefly below. SDG&E is not seeking approval of these forms through this Track 4 Procurement Plan and will continue working with Energy Division as the documents evolve.

- i. Energy Efficiency and Demand Response

SDG&E has not included a pro forma for EE and DR resources due to the wide range of programmatic designs that might be possible. SDG&E will outline conformance requirements in the respective RFO documents for each product and then provide an appropriate form contract for shortlisted offers.

ii. Energy Storage

SDG&E intends to utilize the Energy Storage Power Purchase Tolling Agreement (“ESPPTA”) that was filed as part of A.14-02-006 on February 28, 2014 requiring that resources are required to be located / interconnect within the San Diego Local subarea and meet RA counting rules.

iii. Renewables

SDG&E will provide a pro forma Power Purchase Agreement (“Renewable PPA”) that represents its preferred terms and conditions for renewables. The Renewable PPA will be based upon SDG&E’s 2013 RFO Model PPA, which SDG&E filed as part of its 2013 RPS Procurement Plan (approved in D.13-11-024 on November 20, 2013). SDG&E intends to use this contract for the Preferred Resources RFO even though there will be minor modifications to address the requirement to procure resources in order to meet local capacity need. SDG&E has been consistently improving its RFO Model PPA and believes that it has the optionality necessary to accommodate the various products sought.

iv. Combined Heat and Power

SDG&E intends to utilize the CHP pro forma agreement from its most recent CHP solicitation that closed in September of 2013 with few modifications (such as for locational / interconnection requirements and any other necessary changes to meet the LCR need).

v. Distributed Generation

SDG&E has not included a form contract for DG resources. Since DG can vary widely between rooftop solar to 20 MW systems, it is not practical to develop one form for all DF products. Instead, SDG&E will evaluate bids and determine which of the forms for other products may serve as the best starting point for contract negotiations with DG counterparties.

D. Other Solicitation Documents

Draft forms of the bidder’s instructions for each resource type are also attached. As discussed in Section V above, SDG&E has provided separate RFO protocols for each product type, but will evaluate all projects together. The RFO protocols for each product type are attached at Appendix C. Note that SDG&E will continue working with the ED, PRG and IE to improve these forms as the solicitation approaches, including conforming the EE RFO documents to more closely match the format of the other products.

E. Role of the Independent Evaluator, Cost Allocation Mechanism Procurement Review Group and Procurement Review Group

1. Independent Evaluator (IE)

The purpose of an IE in the RFO solicitations is to ensure a fair, competitive procurement process free of real or perceived conflicts of interest.²⁴ SDG&E worked with the Energy Division to select PA Consulting to serve as the IE for the Preferred Resources Solicitation. PA consulting has the breadth of experience and sufficient resources to provide advice on such a wide range of products. The IE will be involved in the preparation of bid forms and protocols, and will work with SDG&E to ensure that bids are evaluated fairly and accurately.

2. Cost Allocation Mechanism Procurement Review Group (CAM PRG)

Public Utilities Code § 365.1(c)(2)(A)-(B) requires that upon a Commission determination that new generation is required to meet local or system area reliability needs for the benefit of all customers in an IOU's service area, the net capacity costs for the new capacity must be allocated in a fair and equitable manner to all benefitting customers, including direct access ("DA"), community choice aggregation ("CCA") and bundled load customers.²⁵ In other words, if new generation resources provide reliability benefits to all customers, the net capacity costs of such resources must likewise be allocated to all customers. As the Commission made clear in D.11-05-005, application of the CAM is mandatory where the statutory conditions are met.²⁶

SDG&E intends to recover the costs of all resources procured for purposes of meeting its LCR need through the CAM, as appropriate. If a utility intends to recover costs through CAM, it must convene a CAM PRG. SDG&E will work with its CAM PRG on a regular basis throughout the RFO process. SDG&E will review the draft bid forms attached to this plan with the CAM PRG to solicit feedback, and SDG&E will update the CAM PRG on its progress in selecting bids once the RFO has been issued. SDG&E will also present its selected projects to the CAM PRG to solicit feedback before submitting them for Commission approval. If SDG&E determines for any reason that it will not seek CAM treatment for any of the LCR resources that it intends to procure, it will work with its regular PRG.

F. Applicable Rules and Statutes

SDG&E's procurement is undertaken pursuant to Public Utilities Code § 454.5, in accordance with its approved Long-Term Procurement Plan. Pursuant to D.14-03-044, SDG&E is authorized to procure between 500 and 800 MW of electrical capacity in its territory to meet long-term local capacity requirements by the end of 2021. At least 200 MW must come from preferred resources. D.14-03-044 directs SDG&E to hold a RFO to solicit preferred resources. Ordering Paragraph 6 requires that RFOs issued in accordance with the D.14-03-004 meet all

²⁴ D.07-12-052, *mimeo*, p. 140.

²⁵ See D.13-02-015; D.11-05-005; D.08-09-012; D.07-09-044; and 06-07-029.

²⁶ D.11-05-005, *mimeo*, p. 6.

previous CPUC requirements including D.07-12-052. SDG&E's procurement plan is subject to the same procurement plan requirements of Ordering Paragraph 6, 7 and 8 in Decision 13-02-015. The requirements of Ordering Paragraph 11 of Decision 13-02-015 also apply. Per D.02-10-062 notification of the solicitation will be widely distributed. SDG&E also intends to seek CAM treatment for new LCR RFO-executed contracts pursuant to D.06-07-029 and D.14-03-004.

SDG&E's solicitation will comply with the confidentiality rules determined in accordance with D.06-06-066, as modified by D.07-05-032 and D.08-04-023. SDG&E will also rely upon and simultaneously claim the protection of Public Utilities Code §§ 454.4(g) and 583, Govt. Code § 6254(k) and General Order 66-C

As authorized in D.14-03-004, SDG&E may also consider bilateral negotiations when timing considerations, product complexity or other factors make RFO participation inappropriate. This approach is consistent with D.04-07-028, in which the Commission expressly recognized the utilities' authority to engage in bilateral negotiated contracts for capacity and energy from power plants where the purpose is to enhance local area reliability.

SDG&E will further address any relevant procurement rules when it submits its application requesting Commission approval of new LCR executed contracts.

VI. VALUATION AND SELECTION PROCESS

A. Valuation and Selection Process Overview

In evaluating the offers that are submitted in response to the Preferred Resource RFO, SDG&E's valuation and selection approach is intended to evaluate the different resource types on as equal a footing as possible. Initially, all offers will go through a conformance check to ensure that RFO requirements are met; as part of this conformance check, the EE and DR offers will be evaluated via the Total Resource Cost ("TRC") process with a minimum threshold established for passing this test. Conforming offers will then go through the LCBF / NMV analysis described below to rank the offers. Potentially, SDG&E may be faced with a situation once this ranking process is complete (from highest NMV to lowest NMV) where there may not be enough capacity from positive NMV offers to reach the 25 MW threshold for energy storage offers and the 175 MW threshold for other preferred resource offers. In this case, SDG&E will carefully consider whether offers with a negative NMV (that is, offers whose associated costs are greater than the associated benefits) will be shortlisted and pursued or whether it is preferable to rely on alternative procurement tools to meet the 200 MW LCR preferred resource goal.

SDG&E utilizes an LCBF approach for its evaluation process. This includes both quantitative and qualitative assessments, evaluated separately, and then applied to an overall ranking of offers. The primary quantitative metric used in SDG&E's LCBF process is an NMV calculation. The NMV calculation is a quantification of the value of an offer when compared to a set of price benchmarks for capacity, electrical energy, ancillary services, natural gas, and GHG compliance. The price benchmarks are derived from current broker quotes, recent RFO offers, historical prices, recently executed transactions, and price curves extrapolated from that data to

extend into future years where market data is unavailable. The NMV shows the value of an offer relative to purchasing the same product(s) from wholesale markets at current market prices. A higher NMV would result in a higher bid ranking.

SDG&E may also develop “shadow cost curves” for products that cannot be benchmarked using its market-based price curves. The shadow cost curves will be forecasts of estimated costs, based on SDG&E’s experience with developing new customer programs. The shadow cost curves will allow the use of an NMV calculation to evaluate offers that do not fit into typical wholesale market categories, such as DR and EE programs.

The shadow cost curves will allow SDG&E to determine if offers are priced reasonably relative to current and future expected costs, and then evaluate whether to defer (delay) procurement or select alternative resources. Due to the short development time of certain resources, such as DR and EE programs, as well as the expectation that advances in technology will lead to a significant number of program alternatives prior to the identified LCR need (by 2022²⁷), SDG&E may reserve procurement for future periods. This may allow for procurement of higher loading order preferred resources than are currently available.

B. Preferred Resources Conformance Requirements Summary Tables

Energy Efficiency	Program Type / Program Rqmts	Must be incremental. Respondents will be provided these references to assist them in describing how their proposals are incremental: 1) http://www.sdge.com/industry-segment - includes information about EE programs currently in SDG&E's portfolio 2) http://www.sdge.com/business/trade-professionals/program-policy-updates - information and link to SDG&E's 2015 EE Programs proposal, and 3) http://www.energy.ca.gov/2013_energypolicy/documents/demand-forecast_CMF/mid_case/ for DR assumptions included in the IEPR/ CEC load forecast 4) http://www.energy.ca.gov/2013_energypolicy/documents/demand-forecast_CMF/Additional_Achievable_Energy_Efficiency/ - link to the CEC forecast for additional achievable EE
	Term of the Agreement	Program must extend through year-end, 2022
	Nameplate / Program size rqmts	up to 175 MW
	Interconnection/ Delivery Point	Enrolled customers must be in San Diego County
	Resource Adequacy (RA)	EE programs reduce load and therefore provide RA value
	Timing (on-line)	Program start: 1/ 1/ 2018 - 7/ 1/ 2021 program must extend through year-end 2022 at a minimum
	Deliverability Status	n/ a
	Interconnection Progress Rqmts	n/ a

²⁷ D.14-03-004, *mimeo*, p. 2 (authorizing SDG&E “to procure between 500 and 700 MW and SDG&E to procure between 500 and 800 MW by 2022 to meet local capacity needs stemming from the retired SONGS.”).

Demand Response	Program Type / Program Rqmts	Must be incremental. Respondents will be provided these references to assist them in describing how their proposals are incremental: 1) http:// www.sdge.com/ business/ demand-response-overview - includes information about DR programs currently in SDG&E's portfolio 2) https:// www.pge.com/ regulation/ DemandResponseOIR-2013/ Pleadings/ SDGE/ 2014/ DemandResponseOIR-2013_Plea_SDGE_20140303_297882.pdf - link to SDG&E's 2015-16 DR Programs proposal, and 3) http:// www.energy.ca.gov/ 2013_energypolicy/ documents/ demand-forecast_CMF/ mid_case/ for DR assumptions included in the IEPR/ CEC load forecast
	Term of the Agreement	Long enough to extend through year-end, 2022
	Nameplate / Program size rqmts	2 MW to 175 MW
	Interconnection/ Delivery Point	Enrolled customers must be in San Diego County
	Resource Adequacy (RA)	Program must meet RA counting rules
	Timing (on-line)	Program start: 1/ 1/ 2018 - 7/ 1/ 2021 program must extend through year-end 2022 at a minimum
	Deliverability Status	n/ a
Interconnection Progress Rqmts	n/ a	

Renewables	Generating Facility	Eligibility criteria are set forth by the CEC in its Renewable Portfolio Standard Eligibility Guidebook available at: http:// www.energy.ca.gov/ 2013publications/ CEC-300-2013-005/ CEC-300-2013-005-ED7-CMF.pdf
	Term of the Agreement	Will consider any proposed program term
	Nameplate	3 MW - 175 MW (AC)
	Interconnection/ Delivery Point	In SDG&E's local sub-area – i.e., physically located in SDG&E's service territory and connected to SDG&E-owned transmission or distribution facilities at a point that is (i) at or electrically west of the Miguel or Suncrest substations and (ii) electrically south of the SONGS 230 kV switchyard (projects connecting at the Miguel or Suncrest substations are considered to be local area projects for these purposes)
	Resource Adequacy (RA)	Offers must be found to be fully deliverable / be seeking full capacity deliverability status (FCDS).
	Timing (on-line)	On-line dates between 1/ 1/ 2018 and 7/ 1/ 2021
	Deliverability Status	Offers must be found to be fully deliverable / be seeking full capacity deliverability status (FCDS).
Interconnection Progress Rqmts	CAISO Phase II study or equivalent	

Energy Storage	Generating Facility	Any facility that provides energy storage that meets the definition included in CPUC Code 2835
	Term of the Agreement	Will consider any proposed program term
	Nameplate	500 kW – 200 MW
	Interconnection / Delivery Point	In SDG&E's local sub-area – i.e., physically located in SDG&E's service territory and connected to SDG&E-owned transmission or distribution facilities at a point that is (i) at or electrically west of the Miguel or Suncrest substations and (ii) electrically south of the SONGS 230 kV switchyard (projects connecting at the Miguel or Suncrest substations are considered to be local area projects for these purposes)
	Resource Adequacy (RA)	Must qualify for RA counting rules / must qualify for local RA credit on SDG&E's RA showings
	Timing (on-line)	On-line dates between 1/ 1/ 2018 and 7/ 1/ 2021
	Deliverability Status	Offers must be found to be fully deliverable / be seeking full capacity deliverability status (FCDS).
Interconnection Progress Rqmts	No minimum requirement, but will consider phase I or II study completion to be an indication of a more viable project	
CHP	Generating Facility	CHP Baseload Facility ("CHP") / Utility Prescheduled Facility ("UPF")
	Term of the Agreement	7 Years for Existing and Repowered, 12 Years for New and Expanded meeting Credit requirements (Section 3).
	Nameplate	Larger than 5 MW
	Interconnection/ Delivery Point	Within the San Diego Local Subarea – as defined by the CAISO
	Resource Adequacy (RA)	Respondents with new projects must apply for interconnection and seek to be evaluated as an RA resource, which requires a CAISO deliverability study. Evidence of the application must be included in the offer.
	Timing (on-line)	Within 24 months of PPA Execution (Existing Facilities) Within 36 months of CPUC Approval (Expanded Facilities) Within 60 months of CPUC Approval (New and Repowered Facilities)
	Deliverability Status	Offers must be found to be fully deliverable / be seeking full capacity deliverability status (FCDS).
	Interconnection Progress Rqmts	The project must have completed a CAISO Phase I Study, or , if interconnecting at the distribution level, must have completed a WDAT or Rule 21 interconnection study in order to determine interconnection cost estimates

C. LCBF / NMV Evaluation Methodology

1. Overview

SDG&E's LCBF approach includes both quantitative and qualitative assessments, applied to create an overall ranking of offers when conducted in conjunction with an RFO. When evaluating bilateral offers, the evaluation process is identical; however, comparisons are made to other bilateral offers or recent solicitations to determine the relative value of the offer.

The NMV calculation consists of calculating a discounted sum of all quantifiable benefits less the discounted sum of all quantifiable costs.

In addition to the quantitative valuation, an offer may have other qualitative benefits that would be evaluated separately.

2. *Contract Benefits*

a. Energy and Ancillary Service (A/S) Benefits

For non-dispatchable resources, the energy benefit valuation includes only an intrinsic value, based on the offer's expected generation profile multiplied by the energy forward price curve.

For dispatchable resources, the energy benefit valuation is a co-optimized energy and A/S dispatch profile multiplied by the corresponding energy and A/S forward price curves. A simulation process is used to create a distribution of outcomes based on price forecasts, historical volatility and correlation. These processes result in both an intrinsic and extrinsic (option) value for the resource, reflecting its ability to adjust its operation to changing market conditions and extract additional value. The benefits provided by resources with greater flexibility will be reflected here as they are able to be dispatched to capture the most beneficial price increments, or in the case of energy storage, the optimal price spread between charging hours and discharging hours as market conditions fluctuate.

Inputs to the valuation model include unit or program characteristics such as capacity, heat rate, minimum and maximum operating levels, ramp rates, variable operating and maintenance costs, GHG compliance costs, startup fuel and costs, run-time limits (or number and length of event limits), and any other operational constraints. Price inputs include forward curves for energy, A/S, natural gas, GHG allowances and historical price volatilities and correlations.

SDG&E uses a blended market-based/fundamental approach to forecast its power, natural gas, and GHG allowance forward price curves. Near-term prices are based on forward market prices, and extrapolated towards longer-term fundamental prices. Any regulatory influences, such as the GHG allowance auction price floor, are used as constraints in the extrapolation process. Historical prices are used to calculate price volatilities and correlations used in the simulation. They are also used to validate power/natural gas/GHG allowance relationships in the extrapolation process.

b. Resource Adequacy (RA) / Capacity Benefits

Value of RA Qualifying Capacity (as determined by CAISO RA counting rules and adjusted by Locational Effectiveness Factors (“LEFs”)) multiplied by the corresponding capacity forward curves (local or flexible). Capacity forward curves are derived from prices observed in recent RFOs, recently executed bilateral contracts and backstop penalties assessed by the CAISO.

To ensure that capacity procurement addresses CAISO-identified needs, SDG&E worked with the CAISO to develop SDG&E specific LEFs.²⁸ In short, the CAISO divided SDG&E’s service territory into three subareas – North & Northwest, South and Southwest, and Eastern (defined by groupings of transmission substations) and two scenarios defined by whether or not certain transmission upgrade projects move forward. In particular, the CAISO references the Imperial Valley flow controller as a critical upgrade, the success of which is uncertain. In the scenario where the Imperial Valley flow controller is implemented, the CAISO assigned a 100% effectiveness factor to each subarea, which would result in no impact to SDG&E’s evaluation process. Even in the scenario where the Imperial Valley flow controller is not implemented, the CAISO assigned an effectiveness factor of 91.7% to only one of the subareas with the result being that the effectiveness factors should not have a material impact to SDG&E’s evaluation process. See Appendix D for the CAISO’s LEF report for SDG&E.

In order to determine a peak capacity for resources for which there is not a currently approved methodology for determining a Net Qualifying Capacity (“NQC”), SDG&E intends to work with the CAISO to determine a reasonable approach.

3. *Contract Costs*

a. Dispatch and Energy Costs

For non-dispatchable resources, this may include fuel costs, GHG compliance, variable operations and maintenance (“O&M”), and energy price.

For dispatchable resources, this may also include start costs, and additional variable O&M.

Fuel costs may include the cost of natural gas or power (for energy storage). Start costs may have a fixed cost component and a fuel cost component associated with its current state (hot, warm, or cold start). GHG compliance costs are associated with the cost of acquiring GHG allowances as required by the California Cap & Trade program for facilities that emit GHG.

b. Capacity Payments

²⁸ See Appendix D: *Locational Effectiveness Factor Calculations in the San Diego Area*, April 23, 2014. Available at <http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=69EF19AF-353C-4110-80A0-40DC9ECF4E6A>

Capacity payments represent the fixed payments from SDG&E to the seller for delivery of energy, capacity, and any other benefit contractually provided by the resource.

c. Debt Equivalence

As SDG&E executes an increasing number of PPAs to meet its procurement targets, the cumulative debt equivalence of all procurement activities may affect SDG&E's credit profile, and consequently, its financial standing. Rating agencies include long-term fixed financial obligations, such as power purchase agreements, in their credit risk analysis. These obligations are treated as additional debt during their financial ratio assessment and resulting credit profile. Debt equivalence negatively impacts some of these financial ratios, and unless mitigated, may negatively impact SDG&E's credit profile. SDG&E may consider the potential debt equivalence costs and the associated impact in its valuation process.

d. Transmission Cost

For offers of new projects or projects proposing to increase the size of existing facilities, SDG&E will include in its analysis the anticipated costs for transmission network upgrades or additions that are to be directly reimbursed to the bidder/developer using the relevant transmission network upgrade cost studies or estimates submitted with the bids. For some product types (such as renewables and CHP) that have been solicited numerous times in the past the expectation is that transmission upgrade cost studies such as Phase 1 Interconnection Study or equivalent will be required in order for the offer to be considered conforming. For more nascent technology types (such as energy storage) that have not been through the study and bidding process in the past, more flexibility is intended. In both cases, however, an estimate of interconnection costs to be borne by ratepayers will be considered in the evaluation.²⁹

e. Congestion Cost

SDG&E will consider, to the extent possible, the impact on congestion costs associated with each offer. Generally, a marginal analysis is conducted to determine the difference in locational pricing between the project's point of delivery and SDG&E's default load aggregation point ("DLAP") to establish this cost.

f. GHG Cost

GHG compliance costs are typically embedded in the dispatch and energy costs of a resource. For any additional GHG costs that are incurred by the seller and passed directly to SDG&E, the costs will be evaluated in the same way as indirect GHG costs, that is, benchmarked relative to our GHG forward price curve.

D. Other Quantitative Considerations

²⁹ Details can be found in the RFO documents for each product type.

If SDG&E can reasonably calculate additional benefits or costs related to a specific offer, these will be included in the offer's NMV calculation. For example, if an offer not only meets an LCR need, but also meets a distribution reliability need which would defer the need for a reliability upgrade, this avoided cost would be an additional benefit to the offer.

4. Demand Side Management (DSM)

Third party demand side management (DSM) providers may be unwilling to submit binding offers more than several years in advance of their proposed program start date. To limit the potential procurement of less attractive DR and EE in advance of potential cost declines for these resource types, SDG&E may use shadow cost curves to measure their potential effectiveness and compare EE and DR to other available solicitation options (other resource types). If SDG&E's shadow cost curves indicate that deferring the procurement of DSM programs is the most economic option for addressing LCR requirements, SDG&E will likely seek to defer procurement to a later solicitation or through existing programs.

DSM valuations will be via a NMV approach similar to wholesale market valuations. Discounted program costs will be subtracted from discounted program benefits to determine NMV.

5. Qualitative Assessment

In addition to the quantitative valuation, SDG&E will consider qualitative aspects of each offer to further differentiate them based on their non-quantifiable attributes. SDG&E may consider:

- Project development status:
 - Electrical interconnection status
 - Permitting status
 - Fuel and water interconnections
 - Site control
- Developer attributes
 - Project financing
 - Development experience
 - Project viability
- Diverse Business Enterprise (“DBE”) status
- Other attributes
 - Contribution to other procurement targets (CHP, RPS, Energy Storage)
 - Non-quantifiable flexibility and curtailment options
 - Portfolio fit (Capacity, energy, term, etc.)
 - Technology risk

For resources for which there is not a currently approved methodology for determining

other reliability capabilities (e.g. voltage support), SDG&E intends to discuss such capabilities with the developers, its distribution and/or transmission engineering groups and the CAISO, as appropriate.

6. Constraints And The Selection

As stated in the Track 4 Decision, SDG&E is authorized to procure 200 MW of preferred resources, of which 25 MW must come from energy storage. Besides the energy storage specific target of 25 MW, SDG&E does not have any pre-defined mix of preferred resources it is targeting, but rather will select the offers or group of offers that present the best value for SDG&E's ratepayers as shown by having the highest NMV and when considering the qualitative factors listed above.

VII. DESCRIPTION OF EXISTING PREFERRED RESOURCES PROGRAMS THAT COULD PRODUCE LCR PRODUCTS IN THE EVENT OF RFO FAILURE

As discussed in Section III.C above, if SDG&E is not successful in reaching its 200 MW minimum of preferred resources through the solicitation process described herein, it may use existing programs to continue searching for qualified products. In general, SDG&E would continue soliciting preferred resources according to their respective program procurement schedules, and would encourage LCR qualifying projects to participate. In the event SDG&E identified such a project, it would determine whether it is demonstrably incremental to the assumptions made CAISO Track 4 Studies. If the product does not meet this standard, SDG&E would not consider it for LCR procurement. If SDG&E can demonstrate that it is incremental and cost-effective, it will submit the product for Commission approval. Examples of how SDG&E might identify LCR products through existing programs include the following:

A. Energy Efficiency

SDG&E will continue to file applications to seek the Commission's approval to continue existing programs and to implement new programs, among other requests. Additionally, SDG&E will continue to expand its offering by increasing penetration of existing measures into hard-to-reach areas. Additionally, with SDG&E's 2015 pilot programs, Energy Marketplace and CVR, SDG&E is investigating alternative ways to achieve more energy savings.

B. Demand Response

SDG&E will continue to file applications to seek the Commission's approval to continue existing programs and to implement new programs, among other requests. Additionally, SDG&E will continue to expand its offering and use of dynamic rates to help manage the system load.

C. Energy Storage

Pursuant to the Energy Storage Decision and its Energy Storage Procurement Application (A.14-02-006 filed February 28, 2014), SDG&E seeks to acquire a total of 165 MW of

qualifying Energy Storage through four bi-annual solicitations, the first of which is being conducted as part of the Preferred Resources RFO. If SDG&E fails to procure the targeted 25 MW of ES through this solicitation, it will continue to seek these volumes through subsequent bi-annual ES solicitations.

D. Renewables

1. Large-Scale RPS Solicitation

Although SDG&E does not anticipate soliciting large scale RPS solicitation in 2014, it may choose to do so in future years. If an LCR need exists at the time that SDG&E issues a large scale RPS solicitation, it will encourage participation from local resources.

2. Small-Scale Renewable Procurement Programs

SDG&E will continue to procure renewables through its RAM and ReMAT programs. The next scheduled RAM solicitation will occur in June of 2014. Additional RAM solicitations may occur if the remaining program requirement is not met in June. The ReMAT program will continue to offer PPAs to qualified developers every other month until its program ends pursuant to the provisions in SDG&E's Re-MAT Tariff. SDG&E may also identify LCR resources through its Connected to the Sun program and the bioenergy feed-in tariff currently under review by the Commission.

E. Combined Heat and Power

SDG&E will continue to procure CHP through at least two additional dedicated CHP RFOs (in addition to the two CHP RFOs already conducted by SDG&E to date). The first of these two additional CHP RFOs is tentatively scheduled to be issued in the spring of 2015 and the last CHP RFO will be associated with the second program period as described in the CHP settlement agreement.³⁰

F. Distributed Generation

SDG&E anticipates continuing to interconnect DG, such as rooftop solar, in large numbers in the coming years. To the degree that such roof-top solar installations exceeds the projections adopted by the CAISO / CEC in their load forecasts, SDG&E would consider those installations to be incremental as required by the Track 4 Decision³¹. Other types of distributed generation are also routinely interconnected with SDG&E's system and more information on this process can be found on SDG&E's website at: <http://www.sdge.com/generation-interconnections/overview-generation-interconnections>.

³⁰ The "Qualifying Facility and Combined Heat and Power Program Settlement Agreement" (the "Settlement Agreement") was filed on October 8, 2010 and approved in D.10-12-035. The Settlement Agreement became effective on November 23, 2011 with the satisfaction of the necessary conditions precedent contained in the agreement. The initial and second program periods are described on page 8 of the Settlement Agreement.

³¹ See *supra*, note 10.

VIII. TARGETED PREFERRED RESOURCE AND ES PROGRAM

In the Track 4 Decision, the Commission found SCE's concept of a "Preferred Resource Living Pilot Program" ("Living Pilot") to be "promising both as a way to meet LCR needs and as a laboratory for innovation regarding preferred resources."³² It "strongly encourage[d] SDG&E to pursue its own Living Pilot, or a tailored version of it."³³

In SCE's filings discussing its plans to meet local capacity requirements due to the shutdown of SONGS and once-through-cooling units, SCE describes its plan for an aggressive pursuit of preferred resources through a Living Pilot in the vicinity of the Johanna and Santiago substations in the LA Basin (these substations are in Orange County, in the west LA portion of the LA Basin). The purpose of the Living Pilot is to aggressively pursue energy efficiency, demand response and distributed generation resources in this high impact area. SCE intends to use the Pilot to demonstrate the value that preferred resources can contribute to meeting LCR needs. SCE anticipates that development of the Pilot will be a collaborative process undertaken with substantial input from the CAISO and other stakeholders. SCE did not seek approval of the Living Pilot in its filing and may file a future application on this topic.

SDG&E's unique position, relative to the other IOUs, of having its entire service area in a single local capacity area, has been procuring preferred resources that have help address local capacity issue through lower total loads or by adding new local capacity. However, SDG&E sees the need to procure them through a much more targeted process than has historically been used. Thus SDG&E is also looking into to maximize the value of preferred resources.

There are several reasons why SDG&E's efforts can and should be similar to SCE's, these include:

- Existence of a statewide objective to increase reliance on preferred resources for overall system energy needs. These resources tend to have a relatively fixed generation patterns and the lack of dispatch ability that will put new strains on the grid.
- Growth in cost-effective distributed resources will lead to new demands on the system as customers have more options in meeting their own energy needs.
- The increased usage of preferred resources will help the state meet its GHG reduction goals.

However, there are several reasons why SDG&E's efforts could be different from SCE's, these include:

- SDG&E's transmission and distribution systems are different in design and capability. Given SDG&E's transmission system is a looped system, SDG&E studies have shown that load reductions or generation additions almost anywhere in its service area are equally effective in addressing its grid reliability concerns. However, this may change as new transmission or resources additions are made.

³² D.14-03-004, *mimeo*, p. 66.

³³ *Id.*

- Customer make-up is substantially different and thus uses of power and opportunities to deploy solutions will be different.
- The local area peak load is occurring late in the afternoon and can continue into the evening hours.³⁴ Overall system needs are likely to be in the evening as the system loses generation from solar resources.³⁵
- The amounts of preferred resources that have already been or are expected to be deployed under existing programs may limit the effectiveness of adding more of the same.
- The State's overall understanding of how preferred resources can meet local needs will be advanced through a program unique to SDG&E as compared to a program that simply replicates SCE's actions.

SDG&E has significant experience in EE and DR procurement, as well as in procurement of renewable resources. Past programs have relied on generic assumptions regarding program benefit, however, and have promoted statewide standardization. In order to rely on preferred resources and energy storage to meet local capacity need, it will be necessary to grant the IOUs the flexibility to tailor programs to address their specific needs and circumstances.

SDG&E's planning efforts are focused on how best to integrate a number of ongoing efforts. In compliance with AB327, SDG&E is currently reviewing its distribution planning process. As part of this review, SDG&E will consider integrating distributed renewable energy resources, energy efficient programs, energy storage devices, and demand response technologies. It is critical to understand that integrating these resources will require that they be located where needed, sized at the appropriate generating capacity, available when needed, and able to provide physical assurance or a performance guarantee in order to maintain the safe and reliable operating of its electrical system.

SDG&E also is looking to integrate its smart grid activities. As an example, this year SDG&E will be deploying its Distributed Energy Resource Management System ("DERMS") in Borrego Springs. DERMS is meant to be a distributed control system performing real-time monitoring and control of distributed energy resources ("DER"). DERMS coordinates the operation of conventional grid assets (*i.e.* capacitors, LTCs, etc.) as well as DER to optimize operations based on current network topology. SDG&E will look to leverage its learnings from the Borrego Springs experience to make wider use of both existing and new preferred resources to meet grid reliability needs.

Thus SDG&E's efforts will start with a review of locations where targeted deployment of preferred resources and energy storage will provide additional benefits to customers. Once the location or locations have been identified, a separate study will be needed to determine the characteristics of the resources required to address this specific area. SDG&E will then include these specific needs within its existing procurement process.

SDG&E looks forward to working through this process with the Commission, the CAISO, and other parties. SDG&E agrees with the Commission that the Living Pilot will serve

³⁴ [Data regarding 2013 peak to be provided].

³⁵ [CAISO/CEC data to be provided].

as a “laboratory for innovation,” and that, as with any innovation, development must occur in a deliberate, but measured, manner.³⁶

³⁶ See D.14-03-004, *mimeo*, p. 66.

APPENDIX A

Roadmap of Procurement Plan Requirements Pursuant to D.14-03-004 and D.13-02-015

Specific Requirements from Track 4 Decision	Page #
<p>Overall description of procurement process:</p> <ul style="list-style-type: none"> • Major procurement steps (i.e. soliciting bids, bid evaluation, selection of bids/signing contracts, filing application for Commission approval, expected decision, on-line date.) • Include details on contingent contract process including triggers that would necessitate the execution of contingent contracts, option cost, contract terms, and a detailed break up of costs. • Describe which elements of the solicitation will be made public 	<p>pp. 1-3</p> <p>n/a</p> <p>p. 14</p>
<p>Timeline:</p> <ul style="list-style-type: none"> • Detailed timeline that includes an estimate for when resources with specific MW quantities are expected to come online up to the year of authorization • Also include: <ul style="list-style-type: none"> ○ Major procurement steps (i.e. soliciting bids, bid evaluation, selection of bids/signing contracts, filing application for Commission approval, expected decision, and on-line date ○ Sub-timeline for any contingent contracts ○ Major decision points for backup procurement when resources do not materialize 	<p>pp. 10-13</p> <p>pp. 10-22</p> <p>n/a</p> <p>pp. 22-25</p>
<p>Location Details:</p> <ul style="list-style-type: none"> • Indicate the substations and the locational effectiveness of the sites where the utility plans to procure resources 	<p>p. 2</p>

<p>Description and quantification of how authorized demand-side resources are incremental:</p> <ul style="list-style-type: none"> • Detail plans to distinguish resources procured for the purpose of meeting LCR capacity/energy from resources procured within existing IOU-DSM programs like energy efficiency and demand response. <ul style="list-style-type: none"> ○ For energy efficiency: establish baseline planning assumptions that reflect LTPP planning assumptions. <ul style="list-style-type: none"> ▪ Detail how the utility will direct bidders to propose resources whose procurement would exceed the baseline. ▪ State the methodology and assumptions by which the utility will conduct an assessment to quantify the energy efficiency program baseline and the capacity and energy saving values of the incremental resources. ▪ Document how the assessment uses methods and assumptions consistent with current Commission adopted policy concerning the estimation of savings for energy efficiency projects and measures. ○ For demand response: similar to energy efficiency, demand response load impact from the selected bids should be incremental to the CEC load forecast and the supply assumptions used for this decision <ul style="list-style-type: none"> ▪ Establish RFO criteria that are consistent with all approved Commission decisions in the demand response rulemaking (R.13-09-011), Commission resolutions addressing demand response, Electric Rule 24 and any approved CAISO determinations of operational characteristics required of demand response to meet local reliability needs. ▪ RFO criteria should provide flexibilities for meeting future adopted demand response policy if the Commission decisions in the demand response rulemaking (R.13-09-011) are pending. ▪ Detail how the utility will direct bidder to propose resources capable of meeting these criteria. ▪ State the methodology by which the utility will quantify and verify the operation of demand response resources to meet local reliability needs. 	<p>p. 5</p> <p>p. 5</p> <p>p. 7</p> <p>pp. 5-6</p> <p>pp. 5-6</p> <p>pp. 5-6</p> <p>pp. 5-6</p>
---	---

<p>LCR and flexible attributes:</p> <ul style="list-style-type: none"> • Detail the LCR and flexible attributes of the various technology-specific resources considered for procurement. • Apply RA counting rules and the CAISO “non transmission alternatives” study in most cases. • In cases where these are no defined attributes for a resources, propose attributes with a detailed rationale. 	<p>pp. 7-9; pp. 15-18 pp. 15-18 p. 16</p>
<p>Procurement Process:</p> <ul style="list-style-type: none"> • Include detailed description of the procurement process resources, specifying the structure of any RFO, bilateral contract, existing procurement programs or alternative procurement process and related timelines. • Include information on structures of offers, selection, short listing and cost competitiveness threshold 	<p>pp. 11-13 pp. 15-21; p. 7</p>
<p>Evaluation Details:</p> <ul style="list-style-type: none"> • Process to evaluate different resources in a non-discriminatory fashion • Method to quantify costs and benefits related to capacity, energy, flexibility, GHG, ancillary services, etc for all resources • Standardized assumptions for costs and benefits across resource type • Method to capture non-energy and other quantitative benefits. 	<p>p. 7 pp. 14-22 p. 7; pp. 14-22 p. 22</p>
<p>CAM Details:</p> <ul style="list-style-type: none"> • Indicate which resources should be subject to CAM treatment • Indicate which procured resources will count towards IOU program goals 	<p>pp. 13-14 p. 9</p>
<p>Project Details:</p> <ul style="list-style-type: none"> • Detail how utility plans to evaluate the viability of preferred resource projects. • Include the following details for each technology type: <ul style="list-style-type: none"> ○ Desired start dates for delivery ○ Acceptable contract durations ○ Minimum size in terms of capacity ○ Interconnection requirements 	<p>pp. 15-18</p>

<p>Other Details:</p> <ul style="list-style-type: none"> • Bidder outreach before and after the solicitation including details like bidder conferences, advertisements and webinars • Participation of disadvantaged business enterprises • Independent Evaluator details and role 	<p>pp. 10-11</p> <p>p. 22</p> <p>p. 13</p>
<p>Other statutes affecting procurement:</p> <ul style="list-style-type: none"> • Cite relevant state laws and Commission decisions influencing this procurement 	<p>p. 14</p>
<p>Documents:</p> <ul style="list-style-type: none"> • Include non-binding pro formas and draft solicitation documents 	<p>Appendix B</p>

Specific Requirements from D.13-02-015, Ordering Paragraphs 6, 7 and 8 of (SCE's LCR Decision)	Page #
A list of all applicable rules and statutes impacting the plan	p. 14
A detailed description of how it intends to procure resources, specifying the structure of any RFO or alternative procurement process and related timelines	pp. 11-13
A statement as to whether or not SDG&E intends to seek Commission reconsideration of the solicitation and bilateral contracting determinations in its 2012 RPS procurement plan	n/a
A detailed list of the RPS procurement authorizations and processes that support SDG&E's plans to acquire RPS-eligible resources to meet LCR needs	p. 8; p. 14
A methodology for determining least cost/ best fit that includes evaluating and quantifying performance characteristics that vary among resource type (e.g. time to start, output at various times, variable cost, effectiveness in meeting contingencies, etc.)	pp. 18-22
What type of price benchmark will be used in determining cost-effectiveness for resources	p. 7; pp. 18-22
An explanation for each resource type indicating whether modifications will be made to existing programs or if a new approach will be utilized	pp. 7-10
A methodology for determining peak capacity for resources for which there is not a currently approved methodology for determining Net Qualifying Capacity	p. 19
A methodology for determining other reliability capabilities (e.g. voltage support) for resources for which there is not a currently approved methodology for determining these capabilities	p. 21

APPENDIX B
Pro Forma Contracts

APPENDIX C
Draft Solicitation Protocols

APPENDIX D
Locational Effectiveness Factors

