

Application No. 16-03-____
Exhibit No.: (SDG&E-____)

**PREPARED DIRECT TESTIMONY OF
PATRICK K. CHARLES
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

March 1, 2016



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1 **PREPARED DIRECT TESTIMONY OF**

2 **PATRICK K. CHARLES**

3 **ON BEHALF OF SDG&E**

4 **I. INTRODUCTION / OVERVIEW**

5 The purpose of my testimony is to describe the procurement methodology that San Diego
6 Gas & Electric Company (“SDG&E”) will utilize in procuring energy storage during the 2016
7 procurement cycle, pursuant to California Public Utilities Commission (“CPUC” or
8 “Commission”) decision (“D.”) 13-10-040¹ (“the Energy Storage Decision”). Initially, I will
9 discuss the methodology more generally related to SDG&E’s overall, longer term energy storage
10 procurement effort, and then I will provide more detail with regard to the 2016 energy storage
11 procurement cycle in particular. SDG&E respectfully requests approval of the procurement
12 methodology set forth in this testimony.

13 **II. PROCUREMENT METHODOLOGY**

14 **A. General Energy Storage Procurement Methodology**

15 The general energy storage procurement methodology that SDG&E will employ is
16 intended to fully support the guiding principles included in the Energy Storage Decision. As
17 further discussed in the prepared direct testimony of Joshua Gerber, the storage resources that
18 SDG&E will procure are intended to further (1) the optimization of the grid, including peak
19 reduction, contribution to reliability needs or deferral of transmission and distribution upgrade
20

¹ D.13-10-040 – Decision Adopting Energy Storage Procurement Framework and Design Program – was issued on October 21, 2013 and can be found on the CPUC website at: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M079/K533/79533378.PDF>, Ordering Paragraph 4 at 77.

1 investments; (2) the integration of renewable energy; and (3) the reduction of greenhouse gas
2 emissions.

3 SDG&E’s energy storage procurement methodology for systems that will primarily
4 operate in the wholesale market is intended to be consistent with its Long-Term Procurement
5 Plan (“LTPP”),² in particular the procurement practices and methods for long-term transactions
6 described in that plan.³ Energy storage systems intended to participate in wholesale markets
7 may be installed on SDG&E’s transmission or distribution network. For energy storage systems
8 that are not intended to participate in wholesale markets (and that will not provide Resource
9 Adequacy (“RA”)), but rather are intended for distribution reliability or other purposes (such as
10 capital/infrastructure deferral or other use cases such as reliability/outage management
11 support) and that are installed on SDG&E’s distribution network, SDG&E will utilize
12 procurement methods historically used to procure distribution assets as authorized in the Energy
13 Storage Decision.⁴

14 Energy storage systems within the customer domain will be pursued in the 2016
15 solicitation cycle via the 2016 Preferred Resources Local Capacity Requirement Request for
16 Offers (“2016 LCR RFO”), specifically within the Demand Response product type. Within all
17 three grid domains, SDG&E sees the value of employing a competitive process such as an RFO
18

² SDG&E’s current LTPP/Bundled Procurement Plan (“BPP”) was filed January 20, 2016 – Advice Letter 2850-E and can be found on SDG&E’s website, here: <http://regarchive.sdge.com/tm2/pdf/2850-E.pdf>

³ See SDG&E Advice Letter 2850-E at section II.A.5.b, sheet no. 43 ‘Procurement Contracting Methods and Practices’, ‘Long-Term Transactions’ of SDG&E’s LTPP/BPP.

⁴ See D.13-10-040, Appendix A, section 3) a) – Procurement Schedule – p. 5, “Storage projects involving distribution reliability applications shall be procured via existing processes used by IOUs for other distribution reliability utility assets.”

1 or Request for Proposals (“RFP”) process and intends to utilize these processes to procure
2 energy storage systems, as described in more detail below.

3 The RFO process discussed in SDG&E’s LTPP⁵ and associated with longer-term, non-
4 standard products is appropriate for soliciting the energy storage systems that SDG&E intends to
5 procure to meet its local capacity requirement and these storage systems may reside within the
6 transmission or distribution domains. As described in the LTPP, this process is generally
7 comprised of the following steps: (1) portfolio need analysis; (2) RFO documentation
8 development; (3) bid evaluation criteria development; (4) RFO promulgation to the marketplace;
9 (5) bid evaluation; and (6) contract negotiation. Other steps that are included, but not
10 specifically enumerated in this listing, are the receipt of offers, conformance checks,
11 development of a short list, as well as the overarching involvement of SDG&E’s Independent
12 Evaluator (“IE”) and the Procurement Review Group (“PRG”). Additionally, as discussed in the
13 LTPP, SDG&E has authority to enter into bi-lateral contracts to purchase longer term non-
14 standard products, and although SDG&E prefers and intends to utilize the RFO process
15 discussed herein, it may pursue such a bi-lateral opportunity if circumstances warrant such an
16 approach.⁶

17 SDG&E’s procurement methodology for energy storage systems to be installed at
18 distribution level for distribution reliability, for power quality purposes or for other specific use
19 cases that do not involve wholesale market participation, consists of its standard procurement

⁵ See SDG&E Advice Letter 2850-E, section II.A.5.b., sheet no. 43, ‘Procurement Contracting Methods and Practices’ and ‘Long-Term Transactions.’ This advice letter can be found on SDG&E’s website at: <http://regarchive.sdge.com/tm2/pdf/2850-E.pdf>

⁶ *Id.*

(“SDG&E will utilize the authorized products and mechanisms detailed above for purchasing, selling and contracting for resources. The actual quantities transacted through any one of these means are a function of SDG&E’s need, capacity limits, the product availability and pricing. The products listed herein may

1 procedures associated with the procurement of regular course of business distribution reliability
2 assets. This includes a multiple step RFO process detailed below in section II.B.2.a.
3 (Distribution Reliability / Power Quality / Other use cases).

4 Within the customer domain for the 2016 procurement cycle, SDG&E is soliciting for
5 Demand Response (“DR”) products, which may include behind-the-meter energy storage
6 systems. For future solicitation cycles, SDG&E may pursue other energy storage opportunities
7 within the customer domain, but the exact procurement methodology that SDG&E will utilize
8 has yet to be determined, given potential business model evolution related to DR (such as
9 continued development of distributed energy resource aggregators directly participating in the
10 California Independent System Operator (“CAISO”) markets).

11 In accordance with the Energy Storage Decision, SDG&E will conduct up to four
12 solicitation cycles: the initial cycle from 2014 (described in SDG&E’s application A.14-02-006
13 and approved by D.14-10-045), the 2016 cycle (discussed in detail within this Application) as
14 well as upcoming cycles in 2018 and 2020. These four solicitation cycles are being conducted in
15 pursuit of energy storage resources as defined in California Public Utilities code section 2835⁷
16 and as directed by D.13-10-040 and D.14-10-045. SDG&E will consider utility-owned, third-
17 party owned, customer-owned, and jointly owned energy storage as it pursues the energy storage
18 targets outlined in the Energy Storage Decision including contracting with customer-sited
19 storage resources directly or via aggregation by third parties.

not always perfectly match the needs of SDG&E’s portfolio. Hence, the need may arise to pursue structured products through bilateral transactions.”)

⁷ Except for pumped storage resources with capacities that exceed 50MW, as specified in the Energy Storage Decision.

1 SDG&E intends to consider utility ownership in both the transmission and distribution
2 domains in the 2016 solicitation cycle. The transmission domain level projects will be
3 considered as part of the 2016 Preferred Resources Local Capacity Requirement Request for
4 Offer (“LCR RFO”) process and includes options for turnkey project development through both
5 a build-own-transfer approach and an engineering, procurement, and construction approach.⁸
6 Therefore, throughout its energy storage procurement effort, SDG&E will pursue a competitive
7 process consistent with that described in CPUC Decision 07-12-052.⁹ As SDG&E considers
8 potential utility ownership in the three grid domains in future solicitation cycles, SDG&E will
9 determine whether an RFO for turnkey development under a Purchase and Sale Agreement
10 (“PSA”) is appropriate or whether another approach such as the utilization of a Joint Venture
11 Agreement, an Engineering, Procurement and Construction (“EPC”) contract, Build, Own,
12 Transfer (“BOT”) or straight utility build project approach is appropriate.

13 1. Need Discussion

14 The Energy Storage Decision requires reference be provided to a needs study of the
15 CAISO, if available¹⁰ as part of this Application. In response, SDG&E points to:

- 16 a. The 2016 Local Capacity Technical Analysis conducted by the CAISO;¹¹
- 17 b. The SDG&E’s 2014 LTPP;

⁸ Further detail is available in the Energy Storage RFO issued as part of the overall 2016 Preferred Resources LCR RFO. This RFO is available on SDG&E’s website at <http://www.sdge.com/2016PrefResourcesLCRRFO> and is included as Attachment A.

⁹ D.07-12-052 was issued on December 21, 2007 and adopts the LTPP of SDG&E, Pacific Gas and Electric Company (“PG&E”) and Southern California Edison Company (“SCE”) and can be found on the CPUC’s website at:

http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/76979.PDF. The requirement to pursue this type of competitive process can be found at p. 6 of Appendix A to the Energy Storage Decision.

¹⁰ See D.13-10-040, Appendix A, p. 8.

¹¹ The CAISO Local Capacity Technical Analysis final report and study results for 2016 can be found on the CAISO website at:

<https://www.caiso.com/Documents/Final2016LocalCapacityTechnicalReportApr302015.pdf>

- 1 c. The CAISO’s 2012-2016 Strategic Plan;
- 2 d. The CAISO’s 2014-2015 Transmission Plan (“Transmission Plan”); and
- 3 e. The joint California state agency document titled “Advancing and Maximizing
- 4 the Value of Energy Storage Technology, a California Roadmap” (“Storage
- 5 Roadmap”) published in December, 2014.¹²

6 Please note that these studies and documents generally address local and system

7 resources needs. They do not address needs or issues related to the distribution system that

8 energy storage could potentially address. For example, utilizing energy storage on the

9 distribution network to address the high penetration of distributed photo voltaic systems and the

10 power quality challenges such a situation presents was addressed in SDG&E’s 2012 General

11 Rate Case application (A.10-12-005) and the Commission’s subsequent decision approving that

12 application (D.13-05-010).¹³

13 The CAISO 2016 Local Capacity Technical Analysis and associated Local Capacity

14 Requirements are outlined in the CAISO’s April 30, 2015 report. To summarize, the report

15 states that “[o]verall, the LCR needs have decreased by about 1,000 MW or about 3.9% from

16 2015 to 2016. The LCR needs have decreased in the following areas: Sierra and Bay Area due

17 to downward trend for load; Kern and LA Basin due to new transmission projects and San

18 Diego/Imperial Valley due to downward trend for load and new transmission projects.”¹⁴

19 Although the 2016 Local Capacity Technical Analysis for 2016 states that the LCR needs have

¹² The Storage Roadmap document is the result of collaboration between the CAISO, CPUC and California Energy Commission (“CEC”) and can be found on the CAISO website at:

https://www.caiso.com/Documents/Advancing-MaximizingValueofEnergyStorageTechnology_CaliforniaRoadmap.pdf

¹³ D.13-05-010 can be found on the CPUC website at:

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M065/K336/65336060.PDF>; see page 210 for the table of approved Smart Grid related projects and related discussion.

¹⁴ See page 3 of the CAISO ‘2016 Local Capacity Technical Analysis – Final Report and Study Results’ found on the CAISO website at:

<http://www.caiso.com/Documents/Final2016LocalCapacityTechnicalReportApr302015.pdf>

1 decreased from 2015 to 2016, it is important to keep in mind that the needs study associated with
2 track four of the 2012 LTPP was focused on both an interim (2018) and long-term (2022) local
3 reliability need,¹⁵ so although the 2015-16 LCR needs have decreased, the local reliability needs
4 related to the 2022 period remain.

5 In its 2014 LTPP, SDG&E includes a need discussion of some length¹⁶ and to
6 summarize, SDG&E plans for its bundled customers' energy and capacity need, as well as the
7 grid reliability needs in SDG&E's service territory, over a ten-year planning horizon.¹⁷ This is
8 done by looking at load forecasts, and existing and committed resources. Then, in response to
9 utility procurement related requests, the Commission will authorize or require SDG&E to meet
10 the resource needs of its bundled customers and to procure any new resources that are required to
11 meet grid reliability requirements. Energy Storage possessing the necessary attributes can also
12 contribute to meeting these needs.¹⁸

13 The CAISO has outlined in its 2014-2016 Strategic Plan, "Building a Sustainable Energy
14 Future"¹⁹ the challenge of managing the grid during this period of industry transformation that is
15 currently underway. The increasing flexibility that is needed to maintain stability in our electric
16 system given the growing amounts of non-dispatchable renewable resources – primarily solar

¹⁵ See the May 21, 2013 Revised Scoping Ruling and Memo of the Assigned Commissioner and Administrative Law Judge in R.12-03-014 at p. 4: "The CAISO is developing a study to assess both the interim (2018) and long-term (2022) local reliability need in the Los Angeles Basin local area and San Diego sub-area resulting from an extended SONGS [San Onofre Nuclear Generating Station] outage."

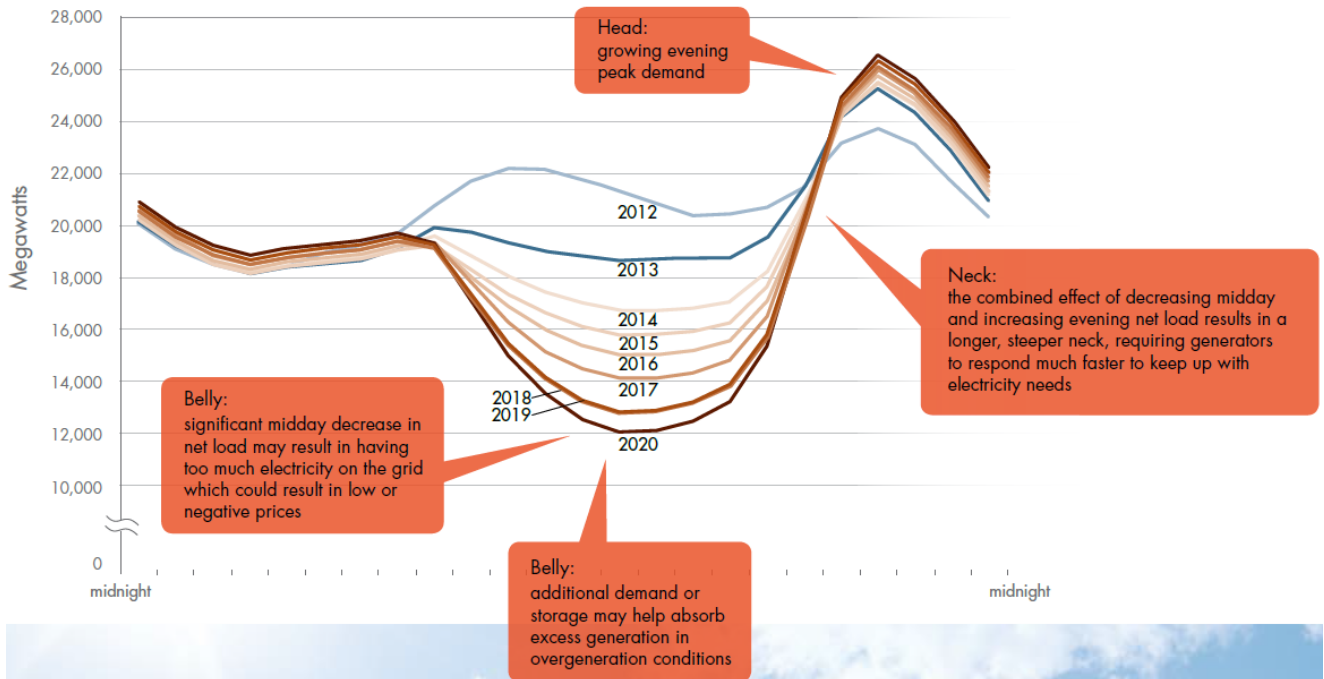
¹⁶ See SDG&E Advice Letter 2850-E, section III.D. (Need Determinations), sheet no. 88.

¹⁷ See, Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans issued by the CPUC on December 30, 2013 (R.13-12-010), p. 4: "Also as part of the LTPP, the IOUs are responsible for submitting procurement plans that project their resource needs for bundled customers, and their action plans for meeting those needs, over a ten-year horizon."

¹⁸ SDG&E Advice Letter 2850-E, section IV.G., sheet no. 94(Procurement Strategy by Resource Type – Energy Storage Resources).

¹⁹ This plan can be found on the CAISO website at: <http://www.caiso.com/Documents/2014-2016StrategicPlan-ReaderFriendly.pdf>

1 resources – is well illustrated by the so-called CAISO ‘Duck Chart’ (also from the CAISO 2014-
2 2016 Strategic Plan):



3
4 The deepening belly of the duck is a clear indication that increasingly flexible resources – such
5 as energy storage - will be needed as we look ahead to 2020.

6 The 2014-2015 Board Approved CAISO Transmission Plan provides an evaluation of the
7 CAISO transmission grid to identify needed upgrades.²⁰ To summarize one portion of this plan,
8 it recognizes the challenges faced in maintaining southern California reliability in light of the
9 retirement of SONGS and mentions the following among three areas that require further study:
10 “continuing the coordinated and iterative process of assessing southern California (LA Basin and
11 San Diego area) needs with an emphasis on preferred resources, and in particular, assessing the
12 progress made on the planned mitigations to consider the need for additional, alternative

²⁰ The CAISO 2014-2015 Board Approved Transmission Plan is available on the CAISO website at: <https://www.caiso.com/Documents/Board-Approved2014-2015TransmissionPlan.pdf> ; p. 1

1 measures.”²¹

2 Moreover, in the Storage Roadmap, the need for continued procurement of energy
3 storage to support higher levels of nondispatchable renewables on the grid is made clear:

4 “The state has seen explosive growth in renewable energy in the past several years,
5 particularly with solar installations more than doubling in recent years. The next step in
6 this fast-moving shift towards a more sustainable grid is energy storage technology.
7 Incorporating variable resources requires an accompanying portfolio of resources and
8 contract provisions that provide operational flexibility to quickly change electricity
9 production and consumption and maintain needed output levels for the time required.
10 Energy storage resources are by their nature flexible resources and therefore beneficial to
11 reliable, low-carbon grid operations.”²²

12 **B. Procurement Methodology for the 2016 Solicitation Cycle**

13 With regard to the 2016 energy storage procurement cycle, as was done for the 2014
14 cycle, SDG&E is utilizing a two-pronged approach. The initial prong is the energy storage
15 product type within the 2016 Preferred Resources LCR RFO issued on February 26, 2016²³
16 (“2016 LCR RFO”), and the second prong will be an RFP for utility owned storage for power
17 quality or reliability (or another specific use case) to be issued on or about December 1, 2016,
18 following the disposition of this Application.

19 The storage resources procured via the 2016 LCR RFO must meet all of the criteria
20 included in D.14-03-004 (the “Track 4 Decision”) including: (1) complying with the Resource
21 Adequacy (“RA”) counting rules, (2) being interconnected within the San Diego local subarea

²¹ See the CAISO 2014-2015 Board Approved Transmission Plan, p. 13 (plan available at:
<https://www.caiso.com/Documents/Board-Approved2014-2015TransmissionPlan.pdf>)

²² Storage Roadmap, Introduction, Guidance to Advance Energy Storage, pg. 2; Storage Roadmap is
available on the CAISO website here: [https://www.caiso.com/Documents/Advancing-
MaximizingValueofEnergyStorageTechnology_CaliforniaRoadmap.pdf](https://www.caiso.com/Documents/Advancing-MaximizingValueofEnergyStorageTechnology_CaliforniaRoadmap.pdf)

²³ As stated in the RFO documents that are available on SDG&E’s website, here:
<http://www.sdge.com/procurement/2016PrefResourcesLCRRFO> , this solicitation being conducted in
accordance with both the Energy Storage Decision and D.14-03-004 (the “Track 4 Decision”) and is a
follow-up to SDG&E’s 2014 All Source solicitation (details regarding the 2014 All Source solicitation
are available here: <http://www.sdge.com/all-source-2014-rfo>).

(as defined by the CAISO²⁴), (3) having a portion of the delivery term of the agreement encompass all of calendar year 2022, and (4) be demonstrably incremental to the CAISO study assumptions underlying the Track 4 authorization.²⁵

The following table illustrates SDG&E’s procurement intent for the 2016 solicitation cycle:

**Table PKC-1
2016 Solicitation Cycle – SDG&E Procurement Intent**

Domain	Program – Short Description	Capacity (MW)	3 rd Party Ownership	IOU Ownership
Transmission	LCR Storage (Energy Storage product type - 2016 Preferred Resources LCR RFO)	Up to 140 MW (in aggregate among all product types)	Y	Y
Distribution	LCR Storage (Energy Storage product type - 2016 Preferred Resources LCR RFO)	Up to 140 MW (in aggregate among all product types)	Y	Y
	Distribution Reliability / Power Quality or other specific use case	Up to 5 MW	N	Y
Customer	LCR Storage (Demand Response product type - 2016 Preferred Resources LCR RFO)	Up to 140 MW (in aggregate among all product types)	Y	N

1. Transmission Domain

For the 2016 procurement cycle, SDG&E intends to procure energy storage within the transmission domain via the 2016 LCR RFO issued on February 26, 2016 for either third-party-owned systems that will be contracted via SDG&E’s Energy Storage System Tolling Agreement or utility owned systems via either the Engineering, Procurement and Construction (or “EPC”)

²⁴ See the “2016 Local Capacity Technical Analysis – Final Report and Study Results”, April 30, 2015, available on the CAISO website, here: <https://www.caiso.com/Documents/Final2016LocalCapacityTechnicalReportApr302015.pdf>

1 approach or BOT approach described in SDG&E’s Energy Storage RFO document.²⁶ The 2016
2 Preferred Resources LCR RFO was issued on February 26, 2016 and for each product type
3 includes sections on background information, the procurement process, eligibility requirements,
4 interconnection, evaluation criteria, schedule, website and communications with potential
5 vendors and response instructions. Along with the RFO documents, other forms and information
6 provided to and/or required from potential bidders include an offer form (excel file), project
7 description form, electric interconnection documentation, credit application, supplier diversity
8 information as well as a red lined version of the form agreement.²⁷

9 For the 2016 solicitation cycle, SDG&E is seeking up to 140 MW in total (among the
10 five product types included in the 2016 LCR RFO²⁸) and will be considering both third-party-
11 owned energy storage systems and utility-owned systems within the transmission domain.
12 SDG&E may procure less than 140 MWs based on the offers received.

13 In the transmission domain for the 2016 solicitation cycle, SDG&E is seeking energy
14 storage that will count towards the San Diego area Local Capacity Requirement (“Local”). In
15 future solicitation cycles, SDG&E may also consider energy storage systems that provide
16 capacity in the Greater San Diego – Imperial Valley LCR area (“Local – IV”) or other LCR sub-
17 areas in which SDG&E owns transmission. Additionally, for future solicitation cycles SDG&E
18 may seek energy storage that will count towards system capacity requirements (“System”).

²⁵ See the May 21, 2013 “Revised Scoping Ruling and Memo of the Assigned Commissioner and Administrative Law Judge” issued in R.12-03-014. The study assumptions are included in Attachment A to that ruling.

²⁶ See Attachment A to this testimony.

²⁷ These files are available on SDG&E’s website, here: <http://www.sdge.com/2016PrefResourcesLCRRFO>.

²⁸ The product types included in the 2016 LCR RFO are: 1) energy efficiency, 2) demand response, 3) renewables, 4) distributed generation and 5) energy storage. Combined Heat & Power (CHP) is not included since SDG&E issued a CHP-only RFO on February 19, 2016.

1 **2. Distribution Domain**

2 SDG&E intends to procure energy storage within the distribution domain via both an
3 RFO process – the 2016 Preferred Resources LCR RFO (for either third-party owned, contracted
4 resources or utility-owned resources – see above for a more comprehensive discussion of
5 SDG&E’s 2016 Preferred Resources LCR RFO) – and an RFP process for utility owned systems
6 intended to meet distribution reliability / power quality needs or perhaps for other use cases
7 (“Distribution Level RFP”). With regard to the 2016 Preferred Resources LCR RFO, SDG&E
8 will be considering up to 140 MW in aggregate for all product types, and for the distribution
9 level RFP will be considering systems up to 4 MW. For the Distribution Level RFP, SDG&E
10 proposes utility ownership for the 2016 solicitation cycle. As detailed in the Energy Storage
11 Decision, the energy storage systems procured via the Distribution Level RFP are intended to be
12 for distribution reliability purposes, and intended to fit within the following language from that
13 decision: “storage projects involving distribution reliability applications shall be procured via
14 existing processes used by IOUs for other distribution reliability utility assets.”²⁹

15 **a. Distribution Level RFP**

16 SDG&E intends to solicit storage systems to be installed at the distribution level for
17 reliability / power quality or perhaps for other use cases such as reliability / outage management
18 support via an RFP for up to four (4) MWs in capacity utilizing a process similar to that used for
19 the purchase of other utility distribution reliability assets. Procurement of energy storage
20 systems for the distribution domain intended for these purposes will be conducted by SDG&E’s
21 Supply
22

²⁹ See D.13-10-040 at 5.

1 Management Department (“Supply Management”). SDG&E’s procurement process for utility
2 owned assets installed as part of its electric distribution system is summarized as follows:

- 3 1. The procurement process to procure company owned assets begins with
4 representatives of Supply Management meeting with representatives of the
5 business unit(s) involved (ie: Distribution Planning) and other stakeholders
6 (together, this working group is referred to as the “Sourcing Team”) to develop
7 the business requirements, supplier qualifications, and to gather and summarize
8 the specifications for the equipment and the associated scope of work for the
9 company asset to be procured.
- 10 2. Creating the RFP. Supply Management creates the RFP document based on
11 input, review and approval from multiple disciplines including engineering, legal
12 and risk management. The RFP document contains all applicable schedules that
13 include but are not limited to: specifications, drawings, scope of work, company
14 terms and conditions and insurance requirements.
- 15 3. Promulgating the RFP document. Upon review and approval by all stakeholders,
16 including legal, the RFP document is promulgated by Supply Management to the
17 suppliers identified earlier in the process. The RFP document is published
18 electronically and includes a schedule with deadlines for questions and answers,
19 bidder conference and proposal submittal.
- 20 4. Evaluating supplier proposals. Prior to the publication of the RFP, an internal,
21 confidential scoring matrix is developed and approved by the Sourcing Team to
22 evaluate all proposals. The evaluation criteria may include such things as the
23 suppliers technical capabilities, pricing, services offered, exceptions to SDG&E’s
24 terms and conditions, supplier’s financial stability, risk profile of the submittal
25 and Diversified Business Enterprise (“DBE”) qualification of the bidder and / or
26 DBE subcontracting commitment. The Sourcing Team evaluates each proposal
27 using the same criteria and assigns a score to each supplier’s offer. SDG&E’s
28 current intent with regards to the evaluation protocol methodology is discussed in
29 Mr. Nicholson’s testimony.
- 30 5. Contract award. After review and scoring of all proposals, a meeting is conducted
31 by Supply Management with all stakeholders to review and discuss the results and
32 come to a consensus to award a contract. Once consensus is reached, Supply
33 Management notifies the winning supplier of the contract award. If the awarded
34 supplier has not conducted business with SDG&E in the past, a plant qualification
35 is performed at the factory where the assets to be procured will be manufactured.
36 In some cases, the Sourcing Team may want to further interview the top suppliers
37 before making an award decision.
- 38 6. Contract negotiation and execution. Following contract award notification,
39 Supply Management drafts the contract incorporating SDG&E’s terms and

1 conditions and Supply Management and or other members of the sourcing team
2 engage the supplier in negotiations. After reaching agreement on the contract
3 terms, the contract is executed by both parties at the appropriate level within the
4 organization (depending on the level of the commitment).

5 SDG&E currently envisions that the Distribution Level RFP may focus on soliciting
6 utility-owned energy storage systems to potentially enable some measure of capacity deferral or
7 perhaps provide reliability / outage management support:

- 8 1) *Capacity Deferral* – this use case involves the use of utility-owned storage
9 systems to mitigate system overloads, reliability concerns, and congestion points
10 as a potential solution for deferral of traditional distribution capital infrastructure
11 upgrades. These systems may be located in or near load-serving substations or
12 along distribution circuits. SDG&E intends to evaluate different energy storage
13 technologies via its Distribution Level RFP process to provide the capacity
14 deferral discussed in this section. System and operational requirements for these
15 energy storage systems will be fully defined as part of the competitive RFP
16 process; however, the following table provides a high level overview of the
17 requirements for these systems:

18 **Table PKC-2**

Size	Greater than 500 kW
Duration	Site Dependent
Portability	Dependent on deployment duration

- 19 2) *Reliability / Outage Management Support* – in this use case, SDG&E will solicit
20 small, potential mobile (truck mounted) storage resources to provide support in
21 outage conditions, resolve short duration reliability issues, and/or assist in
22 maintenance operations. SDG&E is interested in exploring whether mobile
23 storage devices can support to a variety of distribution system operations and
24 issues, and if so, whether such a solution is a cost-effective alternative to more
25 conventional solutions. System and operational requirements will be fully
26 defined as part of the competitive RFP process described earlier in my testimony.
27

1 **3. Customer Domain**

2 For the 2016 solicitation cycle, SDG&E intends to procure third party owned energy
3 storage via the 2016 LCR RFO discussed above. Specifically, energy storage systems in the
4 customer domain may be included in offers received within the demand response (“DR”) product
5 type³⁰ (“DR RFO”). Although the DR RFO is not limited to energy storage (any type of demand
6 response meeting the conformance requirements included in the DR RFO may compete),
7 SDG&E does anticipate receiving competitive energy storage based DR offers. The energy
8 storage systems associated with DR offers will be installed behind the customer’s meter and help
9 to offset customer load during specified DR events.

10 **III. CONCLUSION**

11 SDG&E respectfully requests approval of the procurement methodology set forth in this
12 testimony. This concludes my prepared direct testimony.

13

³⁰ Attachment B to this testimony includes this RFO document.

1 **IV. STATEMENT OF QUALIFICATIONS**

2 My name is Patrick K. Charles and I am the Origination Analytics Manager for
3 SDG&E’s Origination and Portfolio Design group in the Electric and Fuel Procurement
4 (“E&FP”) department. My business address is 8315 Century Park Court, San Diego, California
5 92123. I have worked in the energy industry for SDG&E for approximately 16 years.

6 In my current job, I am responsible for analyzing the offers received in response to
7 various request for offers (“RFOs”) that SDG&E issues in support of such programs as
8 Combined Heat and Power (“CHP”) and the Renewable Portfolio Standard (“RPS”) as well as
9 supporting the Renewable Auction Mechanism (“RAM”) and Renewable Energy Market
10 Adjusting Tariff (“ReMAT”) among other programs. My group also conducts the analysis of
11 offers related to conventional power plants such as Resource Adequacy (“RA”) and tolling
12 agreements. Additionally, the analytics team that reports to me is responsible for various
13 regulatory reporting functions (such as the RPS compliance report and CHP semi-annual report)
14 and for supporting various origination efforts.

15 Prior to taking my current position at SDG&E I have worked as an analyst in technical
16 project management, as Customer Service Support Manager in the Federal Accounts department,
17 as Planning and Analysis Manager on our Smart Meter effort, as a contract negotiator in E&FP
18 and as the Smart Grid Customer Solutions Manager on SDG&E’s Smart Grid team.

19 I received a bachelor’s degree in business (marketing) from the University of Colorado in
20 Boulder and an MBA from the University of Missouri at Kansas City.

21 I have previously provided testimony to the Commission.

Attachment A

2016 Preferred Resources LCR RFO:
Energy Storage Product Type

Energy Storage RFO Document



SAN DIEGO GAS AND ELECTRIC COMPANY
ELECTRIC AND GAS PROCUREMENT DEPARTMENT
8315 CENTURY PARK COURT, CP21D
SAN DIEGO, CA 92123

SDG&E's 2016 ENERGY STORAGE SYSTEM ("ESS") RFO

2016

LOCAL CAPACITY
REQUIREMENT

REQUEST FOR OFFERS ("RFO")

Seeking

ENERGY STORAGE SYSTEM
POWER PURCHASE TOLLING AGREEMENTS

ENERGY STORAGE SYSTEM TURN-KEY
BUILD, OWN, TRANSFER AGREEMENTS

ENERGY STORAGE SYSTEM TURN-KEY
ENGINEERING, PROCUREMENT & CONSTRUCTION
AGREEMENTS

ISSUED
FEBRUARY 26, 2016

OFFERS DUE
JULY 1, 2016

RFO WEBSITE
<http://www.sdge.com/2016PrefResourcesLCRRFO>

EMAIL QUESTIONS/COMMENTS TO
PrefResourcesRFO@semprautilities.com

RECORD OF CHANGES

Date	Description of Change	Section / Page of Document

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1.0 BACKGROUND

In accordance with Decision (D.) D. 14-03-004 – Decision Authorizing Long-Term Procurement for Local Capacity Requirements due to the Permanent Retirement of the San Onofre Nuclear Generation Station (the “Track 4 Decision”) approved on March 13, 2014, and associated documents¹, D.13-10-040 – Decision Adopting Energy Storage Procurement Framework and Design Program (the “Energy Storage Decision”) approved on October 17, 2013 and D.14-10-045 – Decision Approving SDG&E, PG&E and SCE’s Storage Procurement Framework and Program Applications for the 2014 Biennial Procurement Period approved on October 16, 2014, San Diego Gas and Electric Company (“SDG&E”) is issuing its 2016 Preferred Resources LCR Energy Storage System Request for Offers (“2016 Energy Storage RFO” or “ES RFO”) to solicit offers from owners and operators of ES facilities, ES developers and ES developers / equipment suppliers.

SDG&E is issuing this 2016 ES RFO to achieve its megawatt (“MW”) targets established in the Energy Storage Decision and to help meet its remaining Local Capacity Requirements (“LCR”) established in the Track 4 Decision. As authorized in the Track 4 Decision, and following SDG&E’s 2014 All Source RFO, SDG&E is seeking up to 140 MW in this solicitation². SDG&E will consider ESS offers ranging from 500 kW to 140 MW in size (more detail is provided in Section 3.0(A) of this RFO). To summarize, this RFO is intended to meet both the Track 4 Decision requirements and the Energy Storage Decision requirements.

This RFO solicits offers for both third party owned, contracted resources and two types of utility owned resources; more specifically, SDG&E is seeking:

- 1) Offers from owners and operators of Energy Storage System (“ESS”) facilities to negotiate and enter into an Energy Storage System Power Purchase Tolling Agreement (“ESSPPTA”), or
- 2) Offers from ESS developers to negotiate and enter into an Energy Storage System Turn-key Build, Own, Transfer Agreement (“ESSBOT”) under which the ESS developers would construct an ESS project on its land and SDG&E would acquire the ESS project from the ESS developer upon project completion, or
- 3) Offers from ESS developers / contractors / equipment suppliers to negotiate and enter into an Energy Storage System Turn-key Engineering, Procurement and Construction Agreement (“ESSEPC”) under which the ESS developers / contractors / equipment suppliers would construct an ESS facility on SDG&E land.

ESSBOT and ESSEPC offers will be coordinated by an internal group at SDG&E that will be assembling offers for potential utility ownership (“SDG&E’s Cost Development Team”). ESSBOT and ESSEPC Respondents must provide a formal written expression of interest as more

¹ For example, SDG&E filed Application (A.) 14-02-006 – the Energy Storage Procurement Application - in response to the Energy Storage Decision. A.14-02-006 can be found on SDG&E’s website at: <http://www.sdge.com/regulatory-filing/10246/sdgc%E2%80%99s-energy-storage-procurement-application>

² The Track 4 Decision authorizes SDG&E to procure up to 800 MW, at least 200 MW of which must come from preferred resources. Of this 200 MW of preferred resources, at least 25 MW must come from energy storage leaving up to 175 MW for other preferred resource types. In this solicitation, SDG&E is targeting up to 140 MW in aggregate from all product types.

fully described below in section 7 (RFO Website and Communications, in particular the section titled ‘RFO Response Instructions’) to SDG&E’s Cost Development Team on or before March 11, 2016 to participate in this RFO. Additionally, ESSEPC Respondents are required to execute a nondisclosure agreement (“NDA”) by March 18, 2016 that will be provided upon receipt of the formal expression of interest. Following NDA execution, ESSBOT and ESSEPC Respondents will receive additional information related to providing information to SDG&E’s Cost Development Team (an “Addendum” to this RFO) that more precisely describes the process for ESSBOT and ESSEPC offers, including a detailed schedule, pre-bid process description, pre-evaluation and ranking process description, and process for submitting final offers on or before the Closing Date (July 1, 2016). Additionally, the Addendum will contain an Energy Storage Specification, pro forma contract, and for EPC respondents, site descriptions of utility owned land available for ESSEPC offers. While general instructions describing the ESSBOT and ESSEPC processes are included throughout this RFO (in particular in sections 2 (Procurement Process), 6 (RFO Schedule), 7 (RFO Website and Communication and the RFO Response Instructions portion of section 7), specific instructions including a detailed schedule are only available in the Addendum documents provided to ESSBOT and ESSEPC Respondents after formal written expression of interest and NDA execution.

This solicitation sets forth the terms and conditions of SDG&E’s 2016 ES RFO. By responding to this RFO, the bidder agrees to be bound by all the terms, conditions, and other provisions of this RFO and any changes or supplements to it that may be issued by SDG&E, prior to the bidder’s response.

In this RFO, SDG&E will entertain offers for two of the three ES resource domains as defined in the Energy Storage Decision: transmission domain and distribution domain. Customer domain storage respondents should refer to the demand response RFO also issued by SDG&E as part of its 2016 Preferred Resources LCR RFO.

Table 1 – ES Requirements Summary for Transmission and Distribution Domains

Contract Term	Although SDG&E is not authorized to limit bids to any specific contract length, SDG&E prefers ESSPPTA contract terms of 3-20 years for ESS
Contract / Agreement Type	ESSPPTA, ESSBOT or ESSEPC ³
Nameplate / Offer size	ESSPPTA: 500 kW ⁴ – 140MW ESSBOT: 10 MW – 140 MW ESSEPC: Varies by location. Additional information available upon formal expression of interest and NDA execution.

³ ESSBOT and ESSEPC will entail a range of agreements including equipment supply and maintenance agreements (among other agreements). The terms ESSBOT and ESSEPC are shorthand for the various agreements that will be necessary to enable these arrangements.

⁴ Note that SDG&E will consider the administrative burden/feasibility of negotiating a high volume of agreements when selecting its shortlist.

Interconnection / Delivery Point	Within the San Diego Local Subarea – as defined by the CAISO ⁵
Resource Adequacy (RA)	Must be eligible to contribute to SDG&E’s local RA requirements
Technology Type	Any type of energy storage that meets the definition included in PU Code 2835
Cycles	ESPPTA, ESSBOT or ESSEPC: Although SDG&E will not require a minimum for annual cycles, SDG&E has a preference for systems with a minimum of 50 cycles per year
Charging/ Discharging Durations	ESPPTA, ESSBOT or ESSEPC: No charging duration requirements ESPPTA, ESSBOT or ESSEPC: Discharging duration requirements must be based on qualification for local RA requirements (3 consecutive days, 4 hours per day); additionally qualitative consideration will be given to resources that can meet category 1 flexible RA. See section 5 ‘Evaluation Criteria’ for further information
System Efficiency	ESPPTA, ESSBOT or ESSEPC: No minimum system efficiency requirements
Warranty/ Guarantee	ESPPTA: SDG&E does not require a capacity guarantee. ESSBOT and ESSEPC: SDG&E will require a capacity guarantee.

The purpose of this document is to provide an overview of the process that SDG&E will use to implement this RFO. It will serve to set forth each bidder’s obligations with respect to the RFO as well as describe the procedures that each bidder must adhere to.

To be considered in this RFO, an offer must be uploaded to the SDG&E RFO platform in accordance with this RFO Protocol no later than 1:00 PM Pacific Prevailing Time (“PPT”), on July 1, 2016. Note, for ESSEPC and ESSBOT offerors, cost and other information will be provided ahead of this deadline to SDG&E’s Cost Development Team. The exact schedule is described in the Addendum documents available to ESSBOT and ESSEPC Respondents after formal expression of interest and NDA execution.

The RFO Schedule is subject to change at SDG&E’s sole discretion at any time. All changes to the RFO Schedule will be posted to SDG&E’s RFO website. The RFO Schedule may be affected by (but not limited to) issues such as: discussions with shortlisted bidders, proceedings before the CPUC, and efforts to obtain regulatory approval. SDG&E intends to notify bidders of any schedule change, but will not be liable for any change in schedule or for failing to provide notice of any change. A schedule detailing SDG&E’s plans throughout the entire initial program period can be found in Section 6.

Once bidders have accepted their shortlisted position with SDG&E and remitted the Shortlist Acceptance Fee⁶, further ESSPPTA, ESSBOT or ESSEPC contract negotiations may

⁵ See the CAISO “Local Capacity Technical Analysis” –for 2015 available at: http://www.caiso.com/Documents/Final2015LocalCapacityTechnicalStudyReportApr30_2014.pdf. To summarize, San Diego Local subarea projects are those located in SDG&E’s service territory connecting to SDG&E owned transmission or distribution facilities at a point that is at or electrically west of the Miguel or Suncrest substations and electrically south of the San Onofre Nuclear Generating Station 230 kV switchyard.

⁶ See section 3.D.i. of this RFO for further details

commence and continue until mutual agreement has been achieved and a contract has been executed. Being short listed does not guarantee that an ESSPPTA, ESSBOT or ESSEPC will be negotiated or signed with the bidder.

SDG&E will seek CPUC approval of all executed agreements resulting from this RFO. SDG&E reserves the right to execute agreements with individual bidders at any time after short listing and to seek CPUC approval for individual agreements in order to expedite the approval process.

2.0 PROCUREMENT PROCESS

Respondents to this solicitation shall comply with the requirements described in this RFO document. ESSBOT and ESSEPC Respondents shall also comply with the requirements described in the Addendum documents to be provided following submission of a written expression of interest.

All offers shall meet the minimum eligibility requirements as set forth in Section 3.0. All conforming offers will be evaluated in accordance with the Evaluation Criteria described in Section 5.0 of the RFO. SDG&E will initially select a shortlist in pursuit of its ESS target for this RFO by selecting offers that are evaluated as most attractive via the quantitative and qualitative methodology described in Section 5.0. If SDG&E does not acquire the full target in this RFO or if it is not achieved through various other procurement alternatives available to it (such as a bi-lateral process), any shortfall will be carried over to the next biannual ESS RFO. SDG&E may select up to 140 MW in aggregate associated with all of the product types included in its 2016 Preferred Resources LCR RFO including Energy Storage.⁷

SDG&E is mindful of the impact that interconnection costs can have on successful project development. To ensure SDG&E can evaluate bids on an equitable basis -- and to ensure projects solicited through this solicitation can meet a year-end 2021 commercial operation date -- SDG&E requires that ESSPPTA, ESSBOT, and ESSEPC offers can demonstrate the expected full deliverability status of the project and the expected interconnection costs through either a completed Phase I study or a repowering of a comparably sized existing facility in accordance with the CAISO Business Practice Manual for Generator Management (note that in the ESSEPC case, the SDG&E Cost Development Team is responsible for developing and submitting those estimated network upgrade and other deliverability costs). Gentic costs, those that benefit the project alone and are not reimbursable, should be included in the contract pricing. ESSPPTA or ESSBOT offers with completed interconnection studies or repowering opportunities shall include copies of those studies, descriptions of any repowering, and estimates of such costs. For offers associated with an ESSEPC, the SDG&E Cost Development Team will manage the interconnection study process and the third party Respondents need not include interconnection study and cost information; the SDG&E Cost Development Team will include the interconnection study and cost information that it develops in its ESSEPC bids.

SDG&E intends for projects selected from this RFO to count towards SDG&E's local Resource Adequacy ("RA") obligations. Respondents pursuing an ESSPPTA or ESSBOT must follow the appropriate process for obtaining a deliverability study from the CAISO so that the project(s) can become eligible for RA, if not already eligible. ESSPPTA or ESSBOT Agreements resulting from this RFO will require Respondents to perform all activities necessary to facilitate local RA recognition for the projects. Respondents pursuing an ESSPPTA or ESSBOT shall be responsible for all costs to facilitate local RA recognition, including any deliverability study fees or upfront funding of deliverability upgrade costs and should include these costs in the offer price.

⁷ Resources sought by SDG&E include Demand Response, Energy Efficiency, Renewables, Energy Storage and Distributed Generation.

In this RFO, SDG&E requires that ESSPPTA, ESSBOT, and ESSEPC projects seek and receive Full Capacity Deliverability Status (“FCDS”) and that they will count towards SDG&E’s RA obligations. In order to achieve FCDS, Respondents pursuing an ESSPPTA or ESSBOT must apply for a deliverability study to be conducted by the CAISO or be eligible as a repowering of a comparably sized existing facility. ESSPPTA or ESSBOT Respondents with winning bids for FCDS projects must demonstrate that the project has been assessed for deliverability or the project is eligible as a repowering of a comparably sized existing facility. This condition must be met for winning bids that will interconnect at either the distribution or transmission level. For winning FCDS project bids that result in an executed and approved ESSPPTA or ESSBOT, during the project development process, the project is required to obtain final interconnection studies (i.e. for transmission level projects, a final Phase II interconnection study report, or for distribution level projects, a final interconnection facilities study report (or equivalent)). All ESSEPC projects that the SDG&E Cost Development Team pursues will likewise need to establish FCDS.

On July 2, 2013, the CAISO published the ‘Generator Interconnection and Deliverability Study Methodology Technical Paper’ and Section One of the paper provides background information and an overview of the deliverability study methodology. Respondents may find this paper at: <http://www.caiso.com/Documents/TechnicalPaper-GeneratorInterconnection-DeliverabilityStudyMethodology.pdf> . For projects that will interconnect at distribution level, information on the interconnection process can be found at: <http://www.sdge.com/generation-interconnections/overview-generation-interconnections>

For ESSEPC Respondents: SDG&E requires that a formal expression of interest be provided to SDG&E no later than 5pm, March 11, 2016. This expression of interest shall be in written form (an e-mail to 2016ESSEPCBOTRFO@SempraUtilities.com) and should provide company and contact information. SDG&E will require additional bidding procedures for Respondents with ESSEPC offers, such as entering into a Nondisclosure Agreement (“NDA”) with the SDG&E allowing the exchange of detailed and confidential information between the parties (such as site or technology specific information). This NDA must be executed on or before March 18, 2016. Further details regarding the NDA and other ESSEPC specific instructions/information will be given to those ESSEPC Respondents who provide the necessary expression of interest.

For ESSBOT Respondents: SDG&E requires that a formal expression of interest be provided to SDG&E no later than 5pm, March 11, 2016. This expression of interest shall be in written form (an e-mail to 2016ESSEPCBOTRFO@SempraUtilities.com . SDG&E will require additional bidding procedures for Respondents with ESSBOT offers. Confidentiality for ESSBOT shall be in accordance with section 10.0 of this RFO document. Other ESSBOT specific instructions/information will be given to those ESSBOT Respondents who provide the necessary expression of interest.

3.0 ELIGIBILITY REQUIREMENTS

Respondents to this solicitation shall comply with the requirements herein. SDG&E, at its sole discretion, may change the terms, requirements and schedule of the solicitation. Respondents should monitor the RFO Website for announcements regarding any change.

A. PARTICIPATION CRITERIA

Terms of participation are listed below. Respondents not meeting all minimum participation criteria may be deemed ineligible / nonconforming and their offers may not be considered.

1. ESS Facilities must meet the definition included in PU Code 2835.⁸
2. Acceptable capacity range.
 - a. ESSPPTA Respondents -minimum size of 500 kW and maximum size of 140 MW.
 - b. ESSBOT Respondents - minimum size of 10 MW and maximum size of 140 MW.
 - c. ESSEPC Respondents - minimum and maximum ESS facility sizes vary by location. ESSEPC Respondents will receive additional details upon formal expression of interest and NDA execution as described in further detail, below.
3. The ESS facility shall be located and interconnected within the San Diego local sub-area, as defined by the CAISO⁹.
4. The resource must meet all applicable RA counting rules in order to qualify as local RA. Qualitative consideration will be given to ESS facilities that can count as Category 1 Flexible RA, but the minimum conformance standard is to meet the local RA requirement.

NOTE: SDG&E is aware that the RA counting rules change frequently. If the capabilities of the system, facility or program that the Respondent is describing in its offer are currently non-conforming, specifically with regard to the local RA requirement, but the Respondent believes that the RA counting rules may change prior to SDG&E short-listing, the Respondent is instructed to submit their offer and note that it is currently non-conforming due to current RA rules. If and when the RA rules change resulting in the offer conforming to the new RA rules, the Respondent should notify SDG&E (via the RFO e-mail address - PrefResourcesRFO@semprautilities.com) and the IE (jon.jacobs@paconsulting.com and Barbara.Sands@PAConsulting.com).

5. SDG&E prefers start dates as early as 2018 but will consider later start dates. Some portion of the project's delivery term must include the entire calendar year of 2022.

⁸ See: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=puc&group=02001-03000&file=2835-2839> ; of note, the definition specifically requires, among other things, that the technology be “commercially available.”

⁹ See the CAISO “Local Capacity Technical Analysis” –for 2015 available at: http://www.aiso.com/Documents/Final2015LocalCapacityTechnicalStudyReportApr30_2014.pdf . To summarize, San Diego Local subarea projects are those located in SDG&E's service territory connecting to SDG&E owned transmission or distribution facilities at a point that is at or electrically west of the Miguel or Suncrest substations and electrically south of the San Onofre Nuclear Generating Station 230 kV switchyard.

6. ESS facility must be incremental to the assumptions used in the CAISO studies¹⁰ associated with the 2012 long term procurement plan proceeding that served as a basis for SDG&E's Track 4 authorized need.
7. ESSPPTA and ESSBOT Respondents must apply for interconnection and seek to be evaluated as a San Diego Sub-area local RA resource, which requires a CAISO deliverability study or the repowering of a comparably sized existing facility in accordance with the CAISO Business Practice Manual for Generator Management. Respondents pursuing an ESSPPTA or ESSBOT must demonstrate their expected deliverability and interconnection costs through either a completed Phase I interconnection study or a repowering of a comparably sized existing facility. Evidence of an existing interconnection agreement, study, application or explanation of interconnection status must be included in the offer, along with relevant cost estimates.
8. Respondents pursuing an ESSPPTA or ESSBOT must demonstrate how their project will meet the requirements of the current local RA counting rules¹¹. All ESSEPC projects that the SDG&E Cost Development Team pursues will likewise need to demonstrate compliance with the current local RA counting rules.
9. ESSPPTA, ESSBOT and ESSEPC offers must include a permitting plan, schedule, and progress report for permits that are necessary for the facility to operate for the entirety of the proposed contract term.
10. Respondents pursuing an ESSPPTA or ESSBOT must have, at time of bidding, site control. For ESSPPTA offers, site control must be for the duration of the term proposed within the ESSPPTA. Site control may be evidenced by documentation of:
 - a. direct ownership;
 - b. a lease; or
 - c. an option to lease or purchase upon ESSPPTA approval. The option must be an exclusive option to the Bidder that will last until the completion of the RFO cycle.All ESSEPC projects that the SDG&E Cost Development Team pursues will likewise need to demonstrate site control.
11. ESSPPTA Respondents will own the facilities and have responsibility for development, land acquisition, permitting, financing, construction and operation of the ESS facilities.
12. ESSBOT Respondents will own the facilities and have responsibility for development, land acquisition, permitting, financing and construction of the ESS facilities. For ESSBOT facilities, SDG&E will take title, control, and risk of loss of the ESS facilities only upon successful completion and documentation of factory acceptance tests prior to equipment shipments, and pursuant to successful project commissioning. For the ESSEPC facilities, successful completion and documentation of factory acceptance tests are required prior to equipment shipments. SDG&E will take title to the equipment throughout the EPC process,

¹⁰ See ordering paragraph 6 of the Track 4 Decision.

¹¹ See the following CPUC decisions for guidance: D.10-06-036, D.11-06-022, D.12-06-025 and D.13-06-024 among others. Additionally, see the CAISO's "Flexible Resource Adequacy Criteria and Must-Offer Obligation", Market and Infrastructure Policy Revised Draft Final Proposal of March 7, 2014. To summarize, currently the requirement for energy limited resources is availability of the resource for three consecutive days for four hours per day.

- but the ESSEPC shall be responsible for all sales tax. SDG&E will take control and risk of loss of the ESS facilities only upon commissioning.
13. For Respondents pursuing an ESSBOT or ESSEPC, the following high-level requirements and minimum performance specifications must be met by the ESS equipment being offered. ESSBOT and ESSEPC Respondents will receive additional, detailed requirements and performance specifications upon completing the formal expression interest outlined in Section 7, below.
- a. ESS must be commercially operational on or before December 31, 2021.
 - b. Respondents will be required to guarantee/warrant capacity.
 - c. Respondents shall price in Operations and Maintenance (“O&M”) services through the end of the expected useful life of the equipment.
 - d. ESSBOT and ESSEPC Respondents shall state exactly what equipment is included in the offer. For example, ESS modules, control systems, inverters (as applicable), etc.
 - e. High level ESS performance requirements / specifications:
 - i. SDG&E will not require a minimum amount of annual cycles. However, SDG&E will give priority to ESS capable of at least 50 cycles per year.
 - ii. SDG&E will not specify charging duration requirements for the ESS. In terms of discharging duration, ESS must comply with the requirements for qualification as local RA.
14. The Respondent must state any affiliate relationship with Sempra Energy, if one exists.

B. MODIFICATIONS TO THE PRO-FORMA ESSPPTA

ESPPTA Bidders may modify the Pro Forma ESPPTA submitted as part of their offer package to the extent such modifications add value to the offer. However, SDG&E discourages extensive modifications and will consider materiality of such changes on a qualitative basis as it evaluates the offers received. Form agreements associated with ESSBOT and ESSEPC will be provided following completion of the expression of interest process outlined in section 7, below.

C. CREDIT SUPPORT TERMS AND CONDITIONS

Winning bidders will be required to comply with the credit support requirements set forth in their relevant agreement. The amount of such requirements will be determined by SDG&E at the time of shortlisting and will be based on product, deliveries, price, and term, among other variables. For clarity, bidders should **not** include credit costs within their bid price (note: respondents are required to provide information regarding the added cost of collateral per \$100,000 increment to satisfy the initial collateral requirement if SDG&E decides not to extend unsecured credit – this information will be gathered via the credit application form. This information will be included in the credit application, available on the RFO Website and the Power Advocate ® site. These costs will be considered as discussed in the quantitative evaluation section within this document).

1) SHORTLIST ACCEPTANCE FEE

The Shortlist Acceptance Fee is the greater of \$100,000 or \$2 per kW of project nameplate (ESPPTA) or aggregate ESS size (ESSBOT or ESSEPC) and shall be required to be paid to SDG&E within ten (10) business days of notification by SDG&E that the offer has been shortlisted.

The Shortlist Acceptance Fee shall be refunded (with interest for cash deposits) to Respondent if Respondent and SDG&E fail to reach an agreement and such failure is not due to Respondent's withdrawal of its offer or a material misrepresentation of pricing or non-pricing information provided by Respondent.

For questions regarding credit terms, please contact Ms. Judy Delgadillo at (213) 244-4343. Project-specific questions and answers will not be disclosed to other Respondents.

D. ASC 810 (FIN46(R), CONSOLIDATION OF VARIABLE INTEREST ENTITIES) REQUIREMENTS

Generally Accepted Accounting Principles and SEC rules require SDG&E to evaluate whether or not SDG&E must consolidate a Seller's financial information. SDG&E will require access to financial records and personnel to determine if consolidated financial reporting is required. If SDG&E determines at any time that consolidation is required, SDG&E shall require the following during every calendar quarter for the term of any resultant agreement:

- a) Unaudited financial statements with footnotes, within 15 calendar days of the end of each quarter;
- b) Audited financial statements with footnotes within 90 calendar days of the end of the year,
- c) Financial schedules underlying the financial statements, within 15 calendar days of the end of each quarter;
- d) Access to records and personnel, so that SDG&E's internal or independent auditor can conduct financial audits (in accordance with generally accepted auditing standards) and internal control audits (in accordance with Section 404 of the Sarbanes-Oxley Act of 2002)) and SDG&E can meet its SEC filing requirements. The rights and obligations under the agreement shall survive the termination of this agreement for a period of two years;
- e) Certifications by duly authorized representatives as may be reasonably requested by SDG&E; and
- f) Such other information as reasonably requested by SDG&E.
- g) If consolidation is required and considered material by the buyer to buyer's financial statements or its parent company's financial statements and buyer reasonably determines seller's internal controls over financial reporting are considered to be significantly deficient or a material weakness, then seller is to remediate within 30 calendar days;
- h) Seller to provide to buyer any SEC Form 8K disclosures, two calendar days after the occurrence of the SEC Form 8K event; and
- i) Seller to notify buyer at any time during the term of the agreement of any consulting (non-independent) services proposed to be provided to seller by the buyer's independent auditor.

Any information provided to SDG&E shall be treated as confidential, except that it may be disclosed for financial statement purposes. Full details of SDG&E's requirements in connection with consolidation are set forth in the Model PPA.

4.0 FACILITY INTERCONNECTION

ESSPPTA and ESSBOT Respondents must either have:

- 1) Completed a Phase I interconnection study, or have passed the Wholesale Distribution Access Tariff (“WDAT”) or California Independent System Operator (“CAISO”) Fast Track screen and provide a copy of the most recent completed study or evidence of having passed the Fast Track screening process with their offer, or
- 2) Provide evidence that the project is a repowering of a comparably sized existing facility in accordance with the CAISO Business Practice Manual for Generator Management.

Transmission level projects are required to apply for interconnection through the CAISO Large Generator Interconnection Agreement/Small Generator Interconnection Agreement process. Distribution level projects will be required to apply through SDG&E’s WDAT process. Respondents may visit: <http://www.sdge.com/business/interconnection.shtml> or <https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Generator%20Management> for additional information. Respondents pursuing an ESSPPTA and ESSBOT are responsible for all non-reimbursable interconnection costs that are allocated to the project and these costs should be incorporated into the ESSPPTA or ESSBOT offer’s contract pricing. Reimbursable network upgrade costs borne by SDG&E customers will be included in the evaluation and ranking of offers.

SDG&E intends that ESS projects count towards SDG&E’s local RA obligations. In order to become RA eligible, Respondents pursuing an ESSPPTA or ESSBOT must apply for a deliverability study to be conducted by the CAISO or be pursuing a repowering of a comparably sized existing facility in accordance with the CAISO Business Practice Manual for Generator Management. ESSPPTA and ESSBOT Respondents must demonstrate that the project has been assessed for deliverability or the project is eligible as a repowering of a comparably sized existing facility. This condition must be met for ESSPPTA and ESSBOT offers that will interconnect at either the distribution or transmission level. For offers that result in an executed and approved ESSPPTA or ESSBOT, during the project development process, the project is required to obtain final interconnection studies (i.e. for transmission level projects, a final Phase II interconnection study report, or for distribution level projects, a final interconnection facilities study report (or equivalent)). All ESSEPC projects that the SDG&E Cost Development Team pursues will likewise need to establish FCDS.

For more information:

SDG&E Interconnection Website: [**http://www.sdge.com/business/interconnection.shtml**](http://www.sdge.com/business/interconnection.shtml)

- Download and review SDG&E Interconnection Handbook,
- Links to CASIO interconnection queue, tariffs and websites,
- Links to SDG&E interconnection queue, tariffs and websites,
- Link to NERC/WECC Reliability Standards,
- Links to Process Summaries,
- Link to SDG&E Self Generation Technologies site.

CAISO Generation Interconnection Process Contact:

- Project Manager: Judy Brown (916) 608-7062; [**JBrown@caiso.com**](mailto:JBrown@caiso.com)

SDG&E Contact:

- Transmission level - Gen. Interconnection Project Manager: Marlene Mishler (858) 654-8640 ; MMishler@semprautilities.com
- Distribution level – Customer Generation Manager: Ken Parks (858) 636-5581; KParks@semprautilities.com

5.0 EVALUATION CRITERIA

All incoming offers will be assessed for conformance based on the requirements outlined in Section 3 (Eligibility Requirements). Respondents' offers shall conform with minimum participation criteria and eligibility requirements in order to be considered.

SDG&E will utilize all the information provided in the required forms and narratives to evaluate all offers. Respondents are responsible for the accuracy of all discussions, figures and calculations. Errors discovered during evaluation may impact a Respondent's potential short-list status.

As required by the Track 4 Decision, SDG&E is soliciting a broad range of resources including energy efficiency, demand response, renewables, distributed generation and energy storage. SDG&E has provided a separate RFO document outlining instructions and requirements for each resource type (and in the case of energy storage, contract type as well). SDG&E's valuation and selection approach is intended to evaluate the different resource (and contract) types on as equal a footing as possible. Initially, all offers will go through a conformance check to ensure that the project meets the requirements outlined in the RFO document for that particular resource type. Conforming offers will then go through a Least-Cost / Best-Fit (LCBF) / Net Market Value ("NMV") analysis.

QUANTITATIVE EVALUATION

SDG&E evaluates and ranks offers based on Least-Cost/Best-Fit ("LCBF") principles. The LCBF analysis evaluates both quantitative and qualitative aspects of each offer to estimate its value to SDG&E's customers and its relative value in comparison to other offers. The valuation of an offer takes into account both benefits and costs. The primary quantitative metric used in SDG&E's LCBF process is a Net Market Value ("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 Green House Gas ("GHG") compliance. Additionally, SDG&E may consider portfolio effects (costs or benefits) associated with the offer on the portfolio. These benefit and cost components are netted and discounted to yield a NMV for each offer. The NMV of an offer is compared to the NMV of other offers to determine whether that offer is one of the highest ranked. The initial evaluation will be done without regard to credit costs. Once an initial listing of the highest ranked offers is determined, a credit analysis will be conducted and credit costs will be considered. The economic evaluation normalizes the MW size differences of offers by finding the most attractive NMV per MW of capacity ("Least Cost"). In the case of ESSEPC and ESSBOT offers, SDG&E's Cost Development Team will estimate and include utility related costs alongside the costs provided by the Respondent (for ESSEPC offers, the Respondent will include equipment and installation costs, O&M costs, and other costs as appropriate – SDG&E will include site costs, permitting and interconnection costs --- see the offer form (excel file) for more detail. For ESSBOT offers, the Respondent will include all development costs through commissioning, and SDG&E will include post commissioning utility related costs).

SDG&E evaluates the quantifiable attributes of each offer individually. These individual attributes will include: capacity benefits, energy benefits, ancillary service benefits, contract payments (or anticipated SDG&E equipment ownership (ESSBOT or ESSEPC offers) and project

development costs – for siting, permitting and interconnection – (ESSEPC offers)), GHG emissions and costs, congestion costs, and transmission losses and costs.

A. NET CAPACITY BENEFITS

Capacity benefits are calculated by comparing the capacity costs in the offer to the capacity value to SDG&E.

B. NET ENERGY AND ANCILLARY SERVICES BENEFITS

The net energy benefit valuation includes an optimized energy and A/S dispatch profile multiplied by the corresponding energy forward price curves, less the variable costs associated with generating that energy.

C. TRANSMISSION/DISTRIBUTION SYSTEM IMPACTS

Upgrade costs that solely benefit the project and are paid for by the developer (Gen-tie Costs) should be reflected in the offer pricing, and reimbursable network upgrade costs that benefit the grid broadly and are ultimately borne by customers will be considered in the economic evaluation of the offer (Network Upgrade Costs). SDG&E requires that Respondants have either completed Phase 1 or Phase 2 study results or be the repowering of a comparably sized existing facility as the basis for including appropriate interconnection cost estimates in its evaluation.

D. RESIDUAL CAPACITY AND ENERGY BENEFITS

For all ESSEPC and ESSBOT offers, SDG&E will require that bidders guarantee the rated capacity of the ESS for some term (10 years or expected useful life). At the end of the capacity guarantee period, the ESS will have 100% of its rated capacity, and can be operated for some additional period; providing residual benefits without incurring additional capacity guarantee costs. SDG&E will require ESSEPC and ESSBOT Respondents to state manufacturer's degradation using an agreed-upon post-maintenance period use profile, and will use this information to quantify residual capacity and energy benefits for these offers.

E. RESOURCE SPECIFIC BENEFITS AND COSTS

Any quantifiable benefits or costs that are unique to a particular resource type, will be added to the NMV calculation. For example, renewable resources that offer Renewable Energy Credits will have the value of those credits added as a benefit to the NMV.

QUALITATIVE EVALUATION

Qualitative factors and benefits will be used to determine which projects are the “Best Fit” for SDG&E's portfolio. SDG&E may use these factors to determine advancement onto the short list. Qualitative factors may include, but are not limited to:

A. PROJECT VIABILITY

SDG&E is seeking experienced companies and development teams to develop and operate facilities utilizing commercially available, known and proven technology. Another aspect of project

viability will include its ability to contribute to meeting the Local Capacity Requirement. SDG&E works with the CAISO in modeling resource and program portfolios to ensure SDG&E's LCR is met.

B. ADHERENCE TO ESSPPTA TERMS AND CONDITIONS

ESSPPTA Respondents may modify the ESSPPTA as part of their submittal package to the extent that modifications add value to the offer. SDG&E will review modifications to any terms and conditions proposed in the offer and consider the materiality of these changes.

C. SUPPLIER DIVERSITY

SDG&E strongly encourages Diverse Business Enterprises (“DBEs”), “Women-Owned Businesses” or “Minority-Owned Businesses” or “Disabled Veteran Business Enterprises” as defined in G.O. 156¹², to participate in this RFO. Furthermore, SDG&E strongly encourages developers to utilize DBEs during various stages of project development and construction. As a part of G.O. 156, SDG&E will require developers to identify, verify and report their DBE contractors/subcontractor spending if any. Additional information on SDG&E's DBE program can be found at:

<http://www.sempra.com/about/supplier-diversity/>
<http://www.cpuc.ca.gov/puc/supplierdiversity/>

SDG&E's DBE Program representatives will provide a presentation during the pre-bid conference. DBEs can request additional information by contacting SDG&E at vendorrelations@semprautilities.com.

D. LOADING ORDER RANKING

SDG&E seeks resources in accordance with the loading order described in the Energy Action Plan (see footnote 2, above). SDG&E will give preference to higher loading order ranked resources.

E. SAFETY

SDG&E will gather information regarding respondents' safety plans in the project or program description form and will evaluate, on a qualitative basis, proposed projects from a safety perspective based on this information. The safety of our customers, our employees and the individuals that work on projects or programs under contract with SDG&E is of paramount concern to SDG&E and a viable and robust safety plan associated with each program or project is a must.

F. CATEGORY 1 FLEXIBLE RA CAPABILITIES

SDG&E will give preference to resources that are able to meet the CAISO's prevailing Flexible Resources Availability Criteria and Must Offer Obligations (“FRAC-MOO”)¹³ and obtain

¹² See <http://www.thesupplierclearinghouse.com/eligibility/default.asp> for the definition of a DBE.

¹³ A must-offer obligation, or MOO, is a commitment to be available for dispatch by the CAISO. The MOO is distinct from the four hour capability requirement for continuous operation upon dispatch. System and Local RA resources, whether DR or storage, may
(*footnote continued*)

an Effective Flexible Capacity (“EFC”) greater than zero. In addition, SDG&E will differentiate flexible attributes based on their Flexible Resource Categories, with Base Ramping (Category 1 Flex) providing the greatest benefit. More information on EFC and current resource category requirements can be found in section 10 of the CAISO Business Practice Manual for Reliability Requirements located here:

<https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Reliability%20Requirements>.

Respondents providing Flexible RA value will be presented with contracts reflecting those requirements and this value.

BID CONFORMANCE EVALUATION

In addition to the elements described above, SDG&E may also reject an offer if:

1. SDG&E uncovers evidence of market manipulation in the bid preparation and offer process;
2. the Respondent does not provide adequate evidence that it meets minimum participation criteria;
3. the Respondent cannot fulfill the terms and conditions of the ESSPPTA; and/or,
4. the Respondent is unable to comply with RFO timing and other solicitation requirements.

SDG&E WILL NOT REIMBURSE RESPONDENTS FOR THEIR EXPENSES UNDER ANY CIRCUMSTANCES, REGARDLESS OF WHETHER THE RFO PROCESS PROCEEDS TO A SUCCESSFUL CONCLUSION OR IS ABANDONED BY SDG&E IN ITS SOLE DISCRETION.

either bid into the CAISO markets or self-schedule. The proposed MOO for Flexible RA resources (FRAC-MOO) aims to ensure that flexible resources will be available to contribute to the times of greatest system ramping. The proposed FRAC-MOO requirements can be found at <https://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleResourceAdequacyCriteria-MustOfferObligations.aspx>

6.0 RFO SCHEDULE

The following schedule and deadlines apply to this RFO. SDG&E reserves the right to revise this schedule at any time and in SDG&E's sole discretion. Respondents are responsible for monitoring the RFO Website for updated schedules and possible amendments to the RFO or the solicitation process.

NO.	ITEM	Date		
		ESSPPTA	ESSBOT	ESSEPC
1	RFO Issued	2/26/2016		
2	Pre-Bid Conference / Bidder Outreach Event	April 13, 2016		
3	DEADLINE for Respondents to provide a written expression of interest to SDG&E (e-mail to 2016ESSEPCBOTRFO@semprautilities.com or other written correspondence) containing company name and contact information by 5:00PM	N/A	3/11/2016	3/11/2016
4	Nondisclosure Agreements (NDAs) sent out to Respondents expressing interest.	N/A	N/A	3/11/2016
5	DEADLINE to receive Executed NDA. This information should be e-mailed to 2016ESSEPCBOTRFO@semprautilities.com by 5:00pm to receive PowerAdvocate registration details required for Commercial Viability Details submission.	N/A	N/A	3/18/2016
6	DEADLINE TO SUBMIT QUESTIONS. Question submittal cut-off date. Answers to all questions will be posted on the website no later than June 24, 2016.	6/17/2016 – date applies to ESSPPTA, ESSEPC and ESSBOT		
7	DEADLINE TO REGISTER for PowerAdvocate access / to download RFO forms and documents	6/24/2016	See Addendum	See Addendum
8	CLOSING DATE: For ESSPPTA offers: offers must be uploaded to and received on Power Advocate ® no later than 1:00 PM Pacific Prevailing Time on July 1, 2016 For ESSEPC and ESSBOT Offers: SDG&E's Cost Development Team will submit final offer documents on or before the CLOSING DATE.	7/1/2016 – date applies to ESSPPTA. For ESSEPC and ESSBOT Offers, SDG&E's Cost Development Team will submit the final offer documents on or before the CLOSING DATE		
9	SDG&E Begins Bid Evaluation Process	7/2/2016		
10	Shortlist determination	10/24/2016		
11	SHORTLIST NOTIFICATION SDG&E notifies Shortlisted Bidders	10/28/2016		
12	SHORTLISTED BIDDERS ACCEPTANCE/WITHDRAWAL Letter due from Shortlisted Bidders indicating: a. Withdrawal from SDG&E's solicitation; OR b. Acceptance of shortlisted standing and including Shortlist Acceptance Fee SHORTLIST NOTIFICATION	+10 Days after Shortlist Notification Date applies to ESSPPTA, ESSEPC and ESSBOT		
13	SDG&E issues appreciation notices to unsuccessful Respondents	+3 Weeks after Shortlisted Bidders accept/withdraw Date applies to ESSPPTA, ESSEPC and ESSBOT		

14	SDG&E commences with ESSPPTA, ESSBOT, and ESSEPC negotiations	+11 Days after Shortlist Notification Date applies to ESSPPTA, ESSEPC and ESSBOT
15	Target date to complete contract negotiations	End of Q1, 2017
16	SDG&E Submits agreements to CPUC for approval ¹⁴	Q2 2017 Date applies to ESSPPTA, ESSEPC and ESSBOT
* Negotiation time will vary depending on proposal specifics including proposed contract modifications. SDG&E Submits Advice letters with ESSPPTAs or applications with ESSBOTs and ESSEPCs to CPUC for approval		

PRE-BID CONFERENCE / BIDDER OUTREACH EVENTS

SDG&E will host a bidder outreach event for all respondents on April 13, 2016. This event will be an in-person event for all resource types (with dial-in / webinar available for those that cannot attend in-person). Participation in this event is NOT mandatory in order to submit an offer.

In addition, the Cost Development Team will host one outreach event to describe the the ESSBOT and ESSEPC pre-offer and pre-evaluation processes and timelines. More information about this event, including the date, is described in the Addendum documents that will be provided to ESSBOT and ESSEPC Respondents once their formal expression of interest has been provided and, for ESSEPC Respondents, an NDA has been executed.

Please monitor the RFO Website for further details (such as conference presentation materials and final arrangements for the events (dates, times and location)). SDG&E will make efforts to notify bidders of outreach event details via e-mail as well as provide this information via the RFO Website.

Any party interested in attending these events should email the following information to PrefResourcesRFO@semprautilities.com

- Company name, and
- Attendees' names, titles and contact information

¹⁴ D.14-10-045 – Decision Approving the IOU's Storage Procurement Framework and Program Applications for the 2014 Biennial Procurement Period – section 6.5.4.3, p. 92 discusses the one year timing requirement for filing of applications requesting approval of energy storage contracts.

7.0 RFO WEBSITE AND COMMUNICATION

The RFO and all subsequent revisions and documents are available for download from the RFO Website (<http://www.sdge.com/2016PrefResourcesLCRRFO>) and the 2016 ENERGY STORAGE SYSTEM (ESSPPTA) RFO event on the PowerAdvocate® website. Potential Respondents are responsible for monitoring the RFO Website and PowerAdvocate® for subsequent updates, notices and postings.

Logging In

You access the PowerAdvocate platform via a web browser.

To log in

1. Open a web browser and go to www.poweradvocate.com.

PowerAdvocate functions in most web browsers; however, using browsers other than Internet Explorer (IE) version 6 or higher may cause certain functionality to work unexpectedly. Should you encounter problems, PowerAdvocate support may be unable to provide assistance until the issue has been replicated in a supported version of Internet Explorer.

2. Click **Login**.

The Login page appears; you may wish to bookmark it for quick access.

3. Enter your account **User Name** and **Password**.

Both are case-sensitive.

If you do not have an account, go to poweradvocate.com and click the **Registration** link at the top of the page. If you have an account but do not remember your user information, click **Forgot User Name** or **Forgot Password** and they will be emailed to you.

4. Click **Login**.

The 2016 ENERGY STORAGE SYSTEM (ESSPPTA) RFO event on the PowerAdvocate® website contains the following: required RFO forms, documents, and schedule. Respondents intending to bid but who do not yet have an existing account with PowerAdvocate® must first register to create a username/password in order to receive access to the event. See below for instructions to log in/register: First-time users must register as a Supplier using the instructions above and the Referral information below to access the RFO event:

ENERGY STORAGE SYSTEM (ESSPPTA)

Referral Information

Are you registering for a specific Event: * Yes
 No, I would simply like to register.

Who referred you to this Event: *

Name of that individual's company: *

Name or description of the Event: *

* Required Field

Users with an existing PowerAdvocate® account may request access to the event using the link below:

<https://www.poweradvocate.com/pR.do?okey=56973&pubEvent=true>

For ESSEPC and ESSBOT Respondents: Upon providing the required formal expression of interest, ESSEPC and ESSBOT Respondents will be provided with information regarding how and when Respondent's must provide cost and other offer information to SDG&E's Cost Development Team. SDG&E's Cost Development Team will then provide the final ESSBOT and ESSEPC offers via the Power Advocate ® platform on July 1, 2016. This process will be described in the Addendum documents available to ESSBOT and ESSEPC Respondents after formal expression of interest (and NDA execution in the case of ESSEPC Respondents).

The RFO website contains RFO forms and documents, the RFO Schedule, and a Question and Answer forum. All questions or other communications regarding this RFO must be submitted via email to PrefResourcesRFO@semprautilities.com by the DEADLINE TO SUBMIT QUESTIONS as specified in Section 6.0 RFO Schedule. SDG&E will not accept questions or comments in any other form, except during scheduled bidders conferences.

RFO RESPONSE INSTRUCTIONS

Respondents are required to submit the below files / forms / documents in response to this solicitation. Forms are available on the RFO Website and through the PowerAdvocate site. Failure to provide the listed information may result in the proposal being deemed non-conforming and may disqualify the proposal from further consideration.

Formal expression of interest: ESSBOT and ESSEPC Respondents shall contact SDG&E's Cost Development Team via e-mail (at 2016ESSEPCBOTRFO@semprautilities.com) to provide their formal expression of interest. This e-mail shall be provided to SDG&E's Cost Development Team no later than March 11, 2016. Upon receipt of this formal expression of interest, SDG&E's Cost Development Team will provide further instructions regarding documents, files and other information that must be provided in order to complete the offer.

Limit on Number of Bids

A MAXIMUM OF SIX (6) OFFERS PER RESPONDENT PER PROJECT OR PROGRAM WILL BE ACCEPTED.

Defining what a separate project entails: Variation of significant project details, including the following, will constitute a separate ‘project’ or ‘program’:

- Differing commercial operation dates or delivery start dates
- Differing delivery terms
- Differing energy deliveries or dispatchable configurations
- Differing maximum capacity
- Differing points of interconnection
- Differing operational constraints
- Differing equipment suppliers

Fill out separate offer forms for each offer. Only one Project Description Form is required per Respondent (per project) to the extent that all bids can be adequately summarized in the space provided.

If the respondent has questions or concerns regarding bid limits, please contact SDG&E at: PrefResourcesRFO@semprautilities.com

Required Participation Forms:

NOTE: ESSPPTA Respondents will complete all forms and submit via Power Advocate®. ESSEPC and ESSBOT Respondents will provide all required forms and information to SDG&E’s Cost Development Team pursuant to the processes and timelines set forth in the Addendum documents that will be provided upon receipt of a formal expression of interest. SDG&E’s Cost Development Team will submit final offer packages on or before the CLOSING DATE. ESSEPC and ESSBOT Respondents will receive detailed process information upon completing the formal expression interest process outlined in Section 7, above.

- 1) **Energy Storage Offer Form** – Note that Bidders must include in their offer form proposed pricing and if multiple pricing or capacity or other options are contemplated, multiple offer forms should be submitted. There are additional / separate tabs within the workbook for ESSPPTA offers, and utility owned offers (ESSBOT and ESSEPC). SDG&E’s Cost Development Team may gather additional information and in different forms ahead of the closing date in support of final Offer Form submission.
- 2) **Project Description Form**
- 3) **Electric Interconnection / Repowering Information** – Please provide copies of either (1) completed interconnection studies (and provide the name of the substation and interconnection voltage applicable to the facility as well as the nearest substation (if known) in the offer form (listed above), or (2) Information regarding the

- repowering of a comparably sized existing facility in accordance with the CAISO Business Practice Manual for Generator Management.
- 4) **Credit Application** – Changes to credit terms and conditions within either the ESSPPTA may render the offer non-conforming and disqualify the project from further consideration.
 - 5) **Diverse Business Enterprise Subcontracting Commitment and Reporting Requirements (DBE) Form (optional)** - Provide a copy of certification documents received from the California Public Utilities Commission. An application can be made before submission of the offer and referenced in the offer.
 - 6) **Redline forms of the ESSPPTA Pro Forma Agreement** - ESSPPTA Respondents only.

The Participation Summary, Project Description Form, Credit Application, and redlines to the Model ESSPPTA must be in Word or Word-compatible format (not in PDF). The offer form must be in Excel or Excel-compatible format (not in PDF).

Submissions containing unsolicited materials or submissions of individual bid documents in file formats other than the formats of the original bid forms may be rejected. This RFO is an electronic only Solicitation; Respondents need not submit paper documents, or e-binders.

ESSPPTA Respondents interested in submitting an offer must register to receive access to the 2016 ENERGY STORAGE SYSTEM (ESSPPTA) RFO event on PowerAdvocate® in order to submit an offer. To register, Respondents must follow the instructions outlined in Section 7, RFO Website and Communications. All offers must be uploaded to the PowerAdvocate® no later than **1:00 p.m.**, Pacific Prevailing Time, on the CLOSING DATE (see RFO Schedule). If Respondents encounter technical difficulties with the uploading process, they should provide evidence of such difficulties (e.g. a screen shot of the error message) and email the bid to:

The RFO mailbox: PrefResourcesRFO@semprautilities.com
Carbon Copy (CC) to: Jon.Jacobs@paconsulting.com and Barbara.Sands@PAConsulting

Emails shall be received by 1:00 p.m., Pacific Prevailing Time, on the Closing Date.

All offer materials submitted in accordance with the above Response Instructions shall be subject to the confidentiality provisions of Section 10 Confidentiality of this RFO.

SDG&E will review and may utilize all information, if any, submitted by a Respondent that is not specifically requested as a part of any forms. During all stages of the RFO process, SDG&E reserves the right to request additional information from individual Respondents or to request any Respondent to submit supplemental materials in fulfillment of the content requirements of this RFO or to meet additional information needs. SDG&E also reserves the unilateral right to waive any technical or format requirements contained in the RFO.

8.0 REJECTION OF OFFERS

SDG&E SHALL TREAT ALL RESPONDENTS FAIRLY AND EQUALLY AND SHALL EVALUATE ALL OFFERS IN GOOD FAITH. WHILE SDG&E IS MINDFUL OF THE BENEFITS OF ENERGY FROM ESS FACILITIES AND IS VIGOROUSLY PURSUING THE GOALS OF THE ENERGY STORAGE DECISION AND TRACK 4 DECISION, IT MAKES NO GUARANTEE THAT A CONTRACT AWARD SHALL RESULT FROM THIS RFO, EVEN AFTER AN OFFER HAS BEEN SHORTLISTED. SDG&E RESERVES THE RIGHT AT ANY TIME, AT ITS SOLE DISCRETION, TO ABANDON THIS RFO PROCESS, TO CHANGE THE BASIS FOR EVALUATION OF OFFERS, TO TERMINATE FURTHER PARTICIPATION IN THIS PROCESS BY ANY PARTY, TO ACCEPT ANY OFFER OR TO ENTER INTO ANY DEFINITIVE AGREEMENT, TO EVALUATE THE QUALIFICATIONS OF ANY RESPONDENT OR THE TERMS AND CONDITIONS OF ANY OFFER, OR TO REJECT ANY OR ALL OFFERS, ALL WITHOUT NOTICE AND WITHOUT ASSIGNING ANY REASONS AND WITHOUT LIABILITY OF SEMpra ENERGY, SDG&E, OR ANY OF THEIR SUBSIDIARIES, AFFILIATES, OR REPRESENTATIVES TO ANY RESPONDENT. SDG&E SHALL HAVE NO OBLIGATION TO CONSIDER ANY OFFER.

9.0 CONFIDENTIALITY

EXCEPT WITH THE PRIOR WRITTEN CONSENT OF SDG&E, RESPONDENTS MAY NOT DISCLOSE (OTHER THAN BY ATTENDANCE ALONE AT ANY MEETING TO WHICH MORE THAN ONE RESPONDENT IS INVITED BY SDG&E) TO ANY OTHER RESPONDENT OR POTENTIAL RESPONDENT THEIR PARTICIPATION IN THIS RFO, AND RESPONDENTS MAY NOT DISCLOSE, COLLABORATE ON, OR DISCUSS WITH ANY OTHER RESPONDENT, OFFER STRATEGIES OR THE SUBSTANCE OF OFFERS, INCLUDING WITHOUT LIMITATION THE PRICE OR ANY OTHER TERMS OR CONDITIONS OF ANY INDICATIVE OR FINAL OFFER.

SDG&E WILL USE THE HIGHER OF THE SAME STANDARD OF CARE IT USES WITH RESPECT TO ITS OWN PROPRIETARY OR CONFIDENTIAL INFORMATION OR A REASONABLE STANDARD OF CARE TO PREVENT DISCLOSURE OR UNAUTHORIZED USE OF RESPONDENT'S CONFIDENTIAL AND PROPRIETARY INFORMATION THAT IS LABELED AS "PROPRIETARY AND CONFIDENTIAL" ON THE OFFER PAGE ON WHICH THE PROPRIETARY INFORMATION APPEARS ("CONFIDENTIAL INFORMATION"). RESPONDENT SHALL SUMMARIZE ELEMENTS OF THE OFFER(S) IT DEEMS CONFIDENTIAL. THE SUMMARY MUST CLEARLY IDENTIFY WHETHER OR NOT PRICE, PROJECT NAME, LOCATION, SIZE, TERM OF DELIVERY AND TECHNOLOGY TYPE (EITHER COLLECTIVELY OR INDIVIDUALLY) ARE TO BE CONSIDERED CONFIDENTIAL INFORMATION. CONFIDENTIAL INFORMATION MAY BE MADE AVAILABLE ON A "NEED TO KNOW" BASIS TO SDG&E'S DIRECTORS, OFFICERS, EMPLOYEES, CONTRACTORS, CONSULTANTS, THE INDEPENDENT EVALUATOR, AGENTS AND ADVISORS ("REPRESENTATIVES"), BUT SUCH REPRESENTATIVES SHALL BE REQUIRED TO OBSERVE THE SAME CARE WITH RESPECT TO DISCLOSURE AS SDG&E.

NOTWITHSTANDING THE FOREGOING, SDG&E MAY DISCLOSE ANY OF THE CONFIDENTIAL INFORMATION TO COMPLY WITH ANY LAW, RULE, OR REGULATION OR ANY ORDER, DECREE, SUBPOENA OR RULING OR OTHER SIMILAR PROCESS OF ANY COURT, SECURITIES EXCHANGE, CONTROL AREA OPERATOR, GOVERNMENTAL AGENCY OR GOVERNMENTAL OR REGULATORY AUTHORITY AT ANY TIME EVEN IN THE ABSENCE OF A PROTECTIVE ORDER, CONFIDENTIALITY AGREEMENT OR NON-DISCLOSURE AGREEMENT, AS THE CASE MAY BE, WITHOUT NOTIFICATION TO THE RESPONDENT AND WITHOUT LIABILITY OR ANY RESPONSIBILITY OF SDG&E TO THE RESPONDENT.

IT IS EXPRESSLY CONTEMPLATED THAT MATERIALS SUBMITTED BY A RESPONDENT IN CONNECTION WITH THIS RFO WILL BE PROVIDED TO THE CPUC, ITS STAFF, THE CEC, ITS STAFF, SDG&E'S INDEPENDENT EVALUATOR, SDG&E'S PRG, AND THE COST ALLOCATION METHODOLOGY ("CAM") GROUP. ADDITIONALLY, SDG&E MAY PROVIDE LIMITED INFORMATION SUCH AS (BUT NOT LIMITED TO) ON-LINE DATE, INTERCONNECTION POINT, TECHNOLOGY AND OTHER OPERATIONAL CHARACTERISTICS TO THE CAISO FOR MODELING PURPOSES. SDG&E WILL SEEK CONFIDENTIAL TREATMENT PURSUANT TO

PUBLIC UTILITIES CODE SECTION 583 AND GENERAL ORDER 66-C OF THE CPUC, WITH RESPECT TO ANY RESPONDENT CONFIDENTIAL INFORMATION SUBMITTED BY SDG&E TO THE CPUC. SDG&E WILL ALSO SEEK CONFIDENTIALITY PROTECTION FROM THE CALIFORNIA ENERGY COMMISSION (“CEC”) FOR RESPONDENT’S CONFIDENTIAL INFORMATION AND WILL SEEK CONFIDENTIALITY AND/OR NON-DISCLOSURE AGREEMENTS WITH THE PROCUREMENT REVIEW GROUP (“PRG”). SDG&E CANNOT, HOWEVER, ENSURE THAT THE CPUC OR CEC WILL AFFORD CONFIDENTIAL TREATMENT TO A RESPONDENT’S CONFIDENTIAL INFORMATION OR THAT CONFIDENTIALITY AGREEMENTS OR ORDERS WILL BE OBTAINED FROM AND/OR HONORED BY THE PRG, CEC, OR CPUC.

SDG&E, ITS REPRESENTATIVES, SEMPRA ENERGY, AND ANY OF THEIR SUBSIDIARIES DISCLAIM ANY AND ALL LIABILITY TO A RESPONDENT FOR DAMAGES OF ANY KIND RESULTING FROM DISCLOSURE OF ANY OF RESPONDENT’S INFORMATION.

10.0 ESS PROGRAM PARAMETERS

THIS RFO'S ROLE IN THE STATE OF CALIFORNIA'S ENERGY STORAGE PROGRAM

In early 2010, AB 2514 (titled “Energy Storage Systems”) was introduced in the state legislature and subsequently signed into law by the Governor. This resulted in the addition of Public Utilities Code sections 2835, 2836 and associated sections and the passage of the Energy Storage Decision. The Energy Storage Decision sets a goal for SDG&E to procure 165 MW of energy storage to be installed no later than year-end, 2024. This RFO is the first of four ESS RFOs that SDG&E will issue in pursuit of this goal. Additionally, the Track 4 Decision requires that SDG&E procure at least 25 MW of energy storage as part of its LCR requirement. The ESS resources that SDG&E is seeking via this RFO are intended to meet both the requirements of the Energy Storage Decision and the Track 4 Decision.

PROCUREMENT REVIEW GROUP

The Procurement Review Group (PRG) and Cost Allocation Mechanism (CAM) PRG are CPUC-endorsed entities and are composed of non-market participants such as ratepayers’ advocacy groups, state energy and water commissions, power authorities, utility-related labor unions and other non-commercial, energy-related special interest groups. Each IOU has its own PRG and CAM PRG. The PRG and CAM PRG are charged with overseeing the IOU’s procurement process, reviewing procedural fairness, examining overall procurement prudence and providing feedback during all stages. From RFO language development to offer evaluation to contract negotiation, IOU’s brief the PRG and/ or the CAM PRG on a periodic basis during the entire process.

Respondents are hereby notified that revealing confidential offer information to the PRG and/or CAM PRG is required during briefings in accordance with Section 11 (“Confidentiality”). Each Respondent must clearly identify, as part of its offer, what type of information it considers to be confidential.

INDEPENDENT EVALUATOR

The CPUC requires each IOU to use an Independent Evaluator (“IE”) to evaluate and report on the IOU’s entire solicitation, evaluation, and selection process. The IE will review SDG&E’s implementation of the RFO process and final selections. The IE also makes periodic presentations regarding its findings to the IOU and the IOU’s PRG, including the CPUC Energy Division staff. The intent of these IE presentations is to preserve the independence of the IE by ensuring free and unfettered communication between the IE and the CPUC, as well as an open, fair, and transparent process that the IE can affirm.

SDG&E is committed to ensuring an open and transparent solicitation, and to providing a fair, reasonable and competitive process.

The Independent Evaluator (“IE”) for this solicitation is PA Consulting.

11.0 SDG&E BACKGROUND

SDG&E provides electric service to approximately 1.3 million customers in San Diego County and the southern portion of Orange County. SDG&E also provides natural gas service to approximately 775,000 gas customers. The electric customer base comprises 89% residential and 11% commercial and industrial customers.

SDG&E's electric transmission network is comprised of 130 substations with 884 miles of 69-kV, 265 miles of 138-kV, 349 miles of 230-kV, and 215 miles of 500-kV transmission lines. Local ("on system") generating resources include the Encina plant (connected into SDG&E's grid at 138 kV and 230 kV), the Palomar Energy Center (connected at 230kV) and a number of combustion turbine facilities located around the service area (connected at 69 kV). Imported resources are received via the Miguel Substation as the delivery point for power flow on the Southwest Power Link, which is SDG&E's 500-kV transmission line that runs from Arizona to San Diego along the U.S./Mexico border as well as the Sunrise Power Link – a second 500kV transmission line that runs from the Imperial Valley substation and ending in San Diego's north county.

The figure below shows a simplified diagram of existing SDG&E's service area, which encompasses an area of 4,100 square-miles and spans 2 counties and 25 communities.



For a map California IOU service territories please visit:
http://www.energy.ca.gov/maps/serviceareas/electric_service_areas.html

Attachment B

2016 Preferred Resources LCR RFO:

Demand Response Product Type

Demand Response RFO Document



SAN DIEGO GAS AND ELECTRIC COMPANY
ELECTRIC AND FUEL PROCUREMENT DEPARTMENT
8315 CENTURY PARK COURT, CP21D
SAN DIEGO, CA 92123

SDG&E's 2016 DEMAND RESPONSE RFO

2016
PREFERRED RESOURCES
LOCAL CAPACITY
REQUIREMENT
REQUEST FOR OFFERS
("RFO")
seeking
DEMAND RESPONSE RESOURCES

INITIAL VERSION – FEBRUARY 26, 2016

ISSUED
FEBRUARY 26, 2016

OFFERS DUE
JULY 1, 2016

RFO WEBSITE
<http://www.sdge.com/2016PrefResourcesLCRRFO>

EMAIL QUESTIONS/COMMENTS TO
PrefResourcesRFO@semprautilities.com

Record of Changes

Date	Explanation of Change	Section / Page of Document

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1.0 BACKGROUND

In accordance with Decision (“D.”) 14-03-004 – Decision Authorizing Long-Term Procurement for Local Capacity Requirements (“LCR”) due to the Permanent Retirement of the San Onofre Nuclear Generation Station (the “Track 4 Decision”) approved on March 13, 2014, San Diego Gas & Electric Company (“SDG&E”) is issuing its 2016 Preferred Resources LCR – Demand Response (“DR”) Request for Offers (“RFO”) to solicit Demand Response resources.

As authorized in the Track 4 Decision, and following SDG&E’s 2014 All Source RFO, SDG&E is seeking up to 140 MW in this solicitation¹. In this RFO, SDG&E will entertain offers for a minimum resource capacity of 500 kW in aggregate.

This solicitation sets forth the terms and conditions of SDG&E’s 2016 DR RFO. By responding to this RFO, the bidder agrees to be bound by all the terms, conditions, and other provisions of this RFO and any changes or supplements to it that may be issued by SDG&E, prior to the bidder’s response.

The purpose of this document is to provide an overview of the process that SDG&E will use to implement this RFO. It will serve to set forth each bidder’s obligations with respect to the RFO as well as describe the procedures that each bidder must adhere to. If there is a conflict or inconsistency between the terms and conditions contained here and the terms and conditions contained within the Pro Forma Agreement attached to these instructions, the terms and conditions in the Pro Forma Agreement will prevail.

To be considered in this RFO, an offer must be uploaded to the PowerAdvocate® website in accordance with this RFO Protocol no later than 1:00 PM Pacific Prevailing Time (“PPT”), on July 1, 2016 (details can be found in section 5, below).

The RFO Schedule is subject to change at SDG&E’s sole discretion at any time. All changes to the RFO Schedule will be posted to SDG&E’s RFO website. The RFO Schedule may be affected by (but not limited to) issues such as: discussions with shortlisted bidders, proceedings before the CPUC, and efforts to obtain regulatory approval. SDG&E intends to notify bidders of any schedule change, but will not be liable for any change in schedule or for failing to provide notice of any change.

Once bidders have accepted their shortlisted position with SDG&E and remitted the Shortlist Acceptance Fee², further contract negotiations may commence and continue until mutual agreement has been achieved and a contract has been executed. Being short listed does not guarantee that an Agreement will be negotiated or signed with the bidder.

SDG&E will seek CPUC approval of all executed agreements resulting from this RFO. SDG&E reserves the right to execute agreements with individual bidders at any time after short

¹ The Track 4 Decision authorizes SDG&E to procure up to 800 MW, at least 200 MW of which must come from preferred resources. Of this 200 MW of preferred resources, at least 25 MW must come from energy storage leaving up to 175 MW for other preferred resource types. In this solicitation, SDG&E is targeting up to 140 MW in aggregate from all product types.

² See section 3.D.i. of this RFO for further details

listing and to seek CPUC approval for individual agreements in order to expedite the approval process.

2.0 PROCUREMENT PROCESS

Respondents to this solicitation shall comply with the requirements described in this RFO document.

All offers shall meet the minimum eligibility requirements as set forth in Section 3.0 Eligibility Requirements. All conforming offers will be evaluated in accordance with the Evaluation Criteria described in Section 4.0 of the RFO. SDG&E will initially select a shortlist in pursuit of cost effective DR resources for this RFO by selecting offers that are evaluated as most attractive via the quantitative and qualitative methodology described in Section 4.0. While the Track 4 Decision does not specify a target for a certain quantity or amount of DR resources, SDG&E is seeking up to 140 MW of demand response resources via this RFO if evaluated as more attractive than the other resources that SDG&E is soliciting in this RFO³.

SDG&E intends for resources / programs selected from this RFO to count towards SDG&E's local Resource Adequacy ("RA") obligations. Respondents pursuing an Agreement must follow the appropriate process so that the resource can become eligible for RA, if not already eligible. Agreements resulting from this RFO will require Respondents to perform all activities necessary to facilitate local RA recognition for the resources. The Respondents pursuing an Agreement shall be responsible for all costs to facilitate local RA recognition.

³ Five product types are included in SDG&E's 2016 Preferred Resources LCR RFO: 1) Energy Efficiency, 2) Demand Response, 3) Renewables, 4) Energy Storage, and 5) Distributed Generation. SDG&E is seeking up to 140 MW in aggregate from these product types.

3.0 ELIGIBILITY REQUIREMENTS

Respondents to this solicitation shall comply with the requirements herein. SDG&E, at its sole discretion, may change the terms, requirements and schedule of the solicitation. Respondents should monitor the RFO Website for announcements regarding any change.

A. PARTICIPATION CRITERIA

Terms of participation are listed below. Respondents not meeting all minimum participation criteria may be deemed ineligible / nonconforming and their offers may not be considered.

1. Customers to be enrolled in the DR programs and/or who will provide proposed DR resource (s) must be located within SDG&E's service territory.
2. SDG&E prefers start dates as early as 2018, but will consider later start dates. Some portion of the program's delivery term must include the entire calendar year of 2022.
3. Respondents pursuing a Demand Response resource must demonstrate how their project will meet the requirements of the current RA counting rules⁴.

Note: The CAISO created Proposed Revision Request (PRR) 854 to the Reliability Requirements Business Practice Manual (BPM) that resulted in a requirement that local capacity resources are subject to a 20 minute response time / 20 minute dispatch requirement. In the program description form, respondents are required to state whether their program can meet a 20 minute response time and, if so, how that requirement can be met by their program. This requirement is under appeal, but if it is fully approved and implemented by the CAISO prior to SDG&E shortlisting, resources that are not able to meet the 20 minute response time requirement may be found to be nonconforming.

4. The Demand Response resource must be demonstrably incremental to the assumptions used in the California ISO studies⁵. Sellers are required to explain and/or show how their proposed Demand Response resource is incremental. Sellers are encouraged to reference 1) SDG&E's current DR program portfolio⁶; (2) SDG&E's proposed 2017 DR program portfolio⁷; and / or (3) 2014 Integrated Energy Policy

⁴ See the following CPUC decisions for guidance: D.10-06-036, D.11-06-022, D.12-06-025 and D.13-06-024 among others. Additionally, see the CAISO's "Flexible Resource Adequacy Criteria and Must-Offer Obligation", Market and Infrastructure Policy Revised Draft Final Proposal of March 7, 2014. To summarize, currently the requirement for energy limited resources is availability of the resource for three consecutive days for four hours per day.

⁵ See D.14-03-004, ordering paragraph 6. This refers to D.13-02-015, ordering paragraph 4. Subparagraph b states "the resource must be demonstrably incremental to the assumptions used in the California ISO studies, to ensure that a given resource is not double counted."

⁶ See <http://www.sdge.com/business/demand-response-overview> for information about SDG&E's current DR program portfolio for businesses, and <http://www.sdge.com/save-money/summer-saver-program> and <http://www.sdge.com/residential/reduce-your-use/reduce-your-use-rewards> for information about current residential programs.

⁷ See <http://www.sdge.com/regulatory-filing/10486/oir-enhance-role-dr-meeting-state-resource-planning-ops-reqmt> for information about SDG&E's proposed 2017 DR program portfolio.

Report (“IEPR”) Update for DR forecast⁸. Incremental resources that are similar to existing Demand Response resources must demonstrate, to the satisfaction of both SDG&E and the IE, that the resource is “incremental”, for example, by being innovative or by targeting previously hard to reach markets that have not been addressed to date.

5. The Respondent must state any affiliate relationship with Sempra Energy, if one exists.
6. The Demand Response resource must meet all applicable CAISO wholesale product tariff requirements.

B. RESOURCE CRITERIA

Pursuant to the newly adopted Cost Effectiveness Protocols⁹ which determined that the event-based Load Modifying Resource DR has no capacity value, only supply resources, as defined by the Commission¹⁰, will be considered. There are no technology restrictions on the demand response resource.

1. Minimum resource capacity must be 500 kW¹¹ in aggregate.
2. The DR resource must be a supply side resource¹².
3. Permanent load shifting based on technology or behavior change will not be considered.¹³
4. Bids that are supported by resources that are already being subsidized under another CPUC-regulated program or rate schedule shall not be considered.
5. Load reduction of the resource must be consistent with the CPUC requirements regarding the use of back-up generation for DR. Fossil-fuel emergency back-up generation resources will not qualify as a Demand Response Resource in this RFO based on the Commission’s policy statement that fossil-fuel emergency back-up generation resources should not be allowed as part of a demand response program for RA purposes, subject to rules adopted in future RA proceedings.¹⁴
6. Resources must be dispatchable, either by CAISO or SDG&E.

⁸ See : http://www.energy.ca.gov/2014_energypolicy/

⁹ See D. 14-06-050

¹⁰ See D.14-03-026

¹¹ Note that SDG&E will consider the administrative burden/feasibility of negotiating a high volume of agreements when selecting its shortlist.

¹² See D.14-03-026

¹³ SDG&E currently has a Permanent Load Shifting (PLS) demand response program (see: <http://www.sdge.com/business/demand-response/permanent-load-shifting>) but to the degree a respondent can show that their behind-the-meter thermal energy program is different than the existing program, is dispatchable and is incremental perhaps by capturing a different customer segment and the program meets the other conformance requirements, then SDG&E will consider such a program.

¹⁴ See D.11-10-003.

SDG&E is aware that the RA counting rules change frequently. If the capabilities of the system, facility or program that the Respondent is describing in its offer are currently non-conforming specifically with regard to the RA requirement, but the Respondent believes that the RA counting rules may change prior to SDG&E short-listing, the Respondent is instructed to submit their offer and note that it is currently non-conforming due to current RA rules. If and when the RA rules change resulting in the offer conforming to the new RA rules, the Respondent should notify SDG&E (via the RFO e-mail address - PrefResourcesRFO@semprautilities.com) and the IE (jon.jacobs@paconsulting.com and Barbara.Sands@PAConsulting.com)

C. DEMAND RESPONSE PRO FORMA AGREEMENT

Bidders may modify the Pro Forma Agreement submitted as part of their offer package to the extent such modifications add value to the offer. However, SDG&E discourages extensive modification to the general terms and conditions of the Agreement and will consider materiality of such changes on a qualitative basis as it evaluates the offers received.

D. CREDIT TERMS AND CONDITIONS

SDG&E has the right to evaluate and determine the credit-worthiness of the respondent relative to this RFO. The respondent is required to complete, execute and submit the RFO credit application as part of its offer. The application requests financial and other relevant information needed to demonstrate creditworthiness. Respondents may download the application from the RFO Website. Winning bidders will be required to comply with the credit and collateral requirements set forth in the Demand Response resources Pro Forma Agreement. The amount of such requirements will be determined by SDG&E at the time of shortlisting and will be based on product, deliveries, price, and term, among other variables. For clarity, bidders should **not** include credit costs within their bid price (note: respondents are required to provide information regarding the added cost of collateral per \$100,000 increment to satisfy the initial collateral requirement if SDG&E decides not to extend unsecured credit - this information will be provided in the credit application. These costs will be considered as discussed in the quantitative evaluation section within this document).

1) SHORTLIST ACCEPTANCE FEE.

The Shortlist Acceptance Fee is the greater of \$100,000 or \$2 per kW of project nameplate / aggregate program capacity and shall be required to be paid to SDG&E within ten (10) business days of notification by SDG&E that the offer has been shortlisted. The Shortlist Acceptance Fee shall be refunded (with interest for cash deposits) to Respondent if Respondent and SDG&E fail to reach an agreement and such failure is not due to Respondent's withdrawal of its offer or a material misrepresentation of pricing or non-pricing information provided by Respondent. For questions regarding credit terms, please contact Ms. Judy Delgadillo at (213) 244-4343. Project-specific questions and answers will not be disclosed to other Respondents.

E. ASC 810 (FIN46(R), CONSOLIDATION OF VARIABLE INTEREST ENTITIES) REQUIREMENTS

Generally Accepted Accounting Principles and SEC rules require SDG&E to evaluate whether or not SDG&E must consolidate a Seller's financial information. SDG&E will require access to financial records and personnel to determine if consolidated financial reporting is required.

If SDG&E determines at any time that consolidation is required, SDG&E shall require the following during every calendar quarter for the term of any resultant agreement:

- a) Unaudited financial statements with footnotes, within 15 calendar days of the end of each quarter;
- b) Audited financial statements with footnotes within 90 calendar days of the end of the year,
- c) Financial schedules underlying the financial statements, within 15 calendar days of the end of each quarter;
- d) Access to records and personnel, so that SDG&E's internal or independent auditor can conduct financial audits (in accordance with generally accepted auditing standards) and internal control audits (in accordance with Section 404 of the Sarbanes-Oxley Act of 2002)) and SDG&E can meet its SEC filing requirements. The rights and obligations under the agreement shall survive the termination of this agreement for a period of two years;
- e) Certifications by duly authorized representatives as may be reasonably requested by SDG&E; and
- f) Such other information as reasonably requested by SDG&E.
- g) If consolidation is required and considered material by the buyer to buyer's financial statements or its parent company's financial statements and buyer reasonably determines seller's internal controls over financial reporting are considered to be significantly deficient or a material weakness, then seller is to remediate within 30 calendar days;
- h) Seller to provide to buyer any SEC Form 8K disclosures, two calendar days after the occurrence of the SEC Form 8K event; and
- i) Seller to notify buyer at any time during the term of the agreement of any consulting (non-independent) services proposed to be provided to seller by the buyer's independent auditor.

Any information provided to SDG&E shall be treated as confidential, except that it may be disclosed for financial statement purposes. Full details of SDG&E's requirements in connection with consolidation are set forth in the Model PPA.

4.0 EVALUATION CRITERIA

All offers will be assessed for conformance. Respondents should conform to minimum participation and resource criteria in order to be considered.

SDG&E will utilize all the information provided in the required forms and narratives to evaluate all offers. Respondents are responsible for the accuracy of all discussions, figures and calculations. Errors discovered during evaluation may impact a respondent's potential short-list status.

As required by the Track 4 Decision, SDG&E is soliciting a broad range of resources including energy efficiency, demand response, renewables and energy storage. SDG&E has provided a separate RFO document outlining instructions and requirements for each resource type. SDG&E's valuation and selection approach is intended to evaluate the different resource (and contract) types on as equal a footing as possible. Initially, all offers will go through a conformance check to ensure that the project meets the requirements outlined in the RFO document for that particular resource type. Conforming offers will then go through the Least Cost Benefit Fit "LCBF" / Net Market Value "NMV" analysis described below to rank the offers.

QUANTITATIVE EVALUATION

SDG&E evaluates and ranks offers based on Least-Cost/Best-Fit ("LCBF") principles. The LCBF analysis evaluates both quantitative and qualitative aspects of each offer to estimate its value to SDG&E's customers and its relative value in comparison to other offers. The valuation of an offer takes into account both benefits and costs. The primary quantitative metric used in SDG&E's LCBF process is a 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 Green House Gas ("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 intends for projects selected from this RFO Program to count towards SDG&E's Resource Adequacy ("RA") obligations. Respondents must meet the appropriate requirements to count for RA¹⁵. Agreements resulting from this RFO will require Respondents to perform all activities necessary to facilitate RA recognition for the projects. The Respondent shall be responsible for all costs to facilitate RA recognition.

¹⁵ See the following CPUC decisions for guidance: D.10-06-036, D.11-06-022, D.12-06-025 and D.13-06-024 among others. Additionally, see the CAISO's "Flexible Resource Adequacy Criteria and Must-Offer Obligation", Market and Infrastructure Policy Revised Draft Final Proposal of March 7, 2014. To summarize, currently the least binding requirement is availability of the resource for three consecutive days for four hours per day.

A. NET CAPACITY BENEFITS

Capacity benefits are calculated by comparing the capacity costs in the offer to the capacity value to SDG&E. Each offer is assigned capacity benefits, if applicable based on SDG&E's forecast of capacity value and RA (defined in the CAISO Tariff). Each bidder's RA capacity value is based on monthly forecasts determined by SDG&E, which are then aggregated into annual capacity benefits. Projects in the SDG&E service area will receive added local capacity benefit (note that in this RFO, customers associated with demand response resources bid must be located within San Diego County).

B. RESOURCE SPECIFIC BENEFITS AND COSTS

Any quantifiable benefits or costs that are unique to a particular resource type, will be added to the NMV calculation. For example, renewable resources that offer Renewable Energy Credits will have the value of those credits added as a benefit to the NMV.

QUALITATIVE EVALUATION

Qualitative factors and benefits will be used to determine projects that are the "Best Fit" for SDG&E's portfolio. SDG&E may use these factors to determine advancement onto the short list or evaluate tie-breakers, if any. Qualitative factors may include, but are not limited to:

A. PROJECT / RESOURCE / PROGRAM VIABILITY

SDG&E is seeking experienced companies and development teams to develop and operate DR resources that are innovative, effective and reliable. Another aspect of project viability will include the program's ability to contribute to meeting the Local Capacity Requirement. SDG&E works with the CAISO in modeling resource and program portfolios to ensure SDG&E's LCR is met.

B. SUPPLIER DIVERSITY

SDG&E strongly encourages Diverse Business Enterprises ("DBEs"), "Women-Owned Businesses" or "Minority-Owned Businesses" or "Disabled Veteran Business Enterprises" as defined in G.O. 156¹⁶, to participate in this RFO. Furthermore, SDG&E strongly encourages developers to utilize DBEs during various stages of project development and construction. As a part of G.O. 156, SDG&E will require developers to identify, verify and report their DBE contractors/subcontractor spending if any. Additional information on SDG&E's DBE program can be found at:

<http://www.sempra.com/about/supplier-diversity/>
<http://www.cpuc.ca.gov/puc/supplierdiversity/>

¹⁶ See <http://www.thesupplierclearinghouse.com/eligibility/default.asp> for the definition of a DBE.

SDG&E's DBE Program representatives will provide a presentation during the pre-bid conference. DBEs can request additional information by contacting SDG&E at vendorrelations@semprautilities.com.

C. LOADING ORDER RANKING

SDG&E seeks resources in accordance with the loading order described in the Energy Action Plan (see footnote # 1, above). SDG&E will give preference to higher loading order ranked resources.

D. SAFETY

SDG&E will gather information regarding respondents' safety plans in the project or program description form and will evaluate, on a qualitative basis, proposed projects from a safety perspective based on this information. The safety of our customers, our employees and the individuals that work on projects or programs under contract with SDG&E is of paramount concern to SDG&E and a viable and robust safety plan associated with each program or project is a must.

E. CATEGORY 1 FLEXIBLE RA CAPABILITIES

SDG&E will give preference to resources that are able to meet the CAISO's prevailing Flexible Resources Availability Criteria and Must Offer Obligations ("FRAC-MOO")¹⁷ and obtain an Effective Flexible Capacity ("EFC") greater than zero. In addition, SDG&E will differentiate flexible attributes based on their Flexible Resource Categories, with Base Ramping (Category 1 Flex) providing the greatest benefit. More information on EFC and current resource category requirements can be found in section 10 of the CAISO Business Practice Manual for Reliability Requirements located here:

<https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Reliability%20Requirements>.

Respondents providing Flexible RA value will be presented with contracts reflecting those requirements and this value.

BID CONFORMANCE EVALUATION

In addition to the elements described above, SDG&E may also reject an offer if:

1. SDG&E uncovers evidence of market manipulation in the bid preparation and offer process;
2. the respondent does not provide adequate evidence that it meets minimum participation criteria;
3. there is a question as to whether or not the projects meet minimum resource criteria;
4. the respondent is unable to comply with RFO timing or other solicitation requirements.

¹⁷ A must-offer obligation, or MOO, is a commitment to be available for dispatch by the CAISO. The MOO is distinct from the four hour capability requirement for continuous operation upon dispatch. System and Local RA resources, whether DR or storage, may either bid into the CAISO markets or self-schedule. The proposed MOO for Flexible RA resources (FRAC-MOO) aims to ensure that flexible resources will be available to contribute to the times of greatest system ramping. The proposed FRAC-MOO requirements can be found at <https://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleResourceAdequacyCriteria-MustOfferObligations.aspx>

SDG&E WILL NOT REIMBURSE RESPONDENTS FOR THEIR EXPENSES UNDER ANY CIRCUMSTANCES, REGARDLESS OF WHETHER THE RFO PROCESS PROCEEDS TO A SUCCESSFUL CONCLUSION OR IS ABANDONED BY SDG&E IN ITS SOLE DISCRETION.

A. TIME OF USE PERIOD CONTINGENCY FOR ENERGY STORAGE BASED DR

SDG&E will consider any Demand Response offers that are based on energy storage technology that may be shortlisted to be contingent upon the adoption by the CPUC of SDG&E's proposed new Time of Use ("TOU") periods as set forth in SDG&E's application number A.15-04-012 filed on February 9, 2016¹⁸. If the CPUC does not adopt SDG&E's proposed changes to the TOU periods included in this application, then any energy storage based Demand Response offers that may be shortlisted from this solicitation may be considered non-conforming in accordance with the eligibility requirement included above in section 3.B.4. (subsidization).

¹⁸ A. 15-04-012, second amended application, available here: <http://www.sdge.com/sdge-2016-GRC-Phase-2> .For a summary of the TOU period change request, see Chapter 1 - Testimony of Cynthia Fang, Table 2, pages CF-20 & CF-21.

5.0 RFO SCHEDULE

The following schedule and deadlines apply to this RFO. SDG&E reserves the right to revise this schedule at any time and in SDG&E's sole discretion. Respondents are responsible for monitoring the RFO Website for updated schedules and possible amendments to the RFO or the solicitation process.

NO.	ITEM	DATE
1.	RFO Issued	February 26, 2016
2.	Pre-Bid Conference / Bidder Outreach Event	April 13, 2016
3.	DEADLINE TO SUBMIT QUESTIONS Question submittal cut-off date. Answers to all questions will be posted on the website no later than June 24, 2016	June 17, 2016
4.	DEADLINE TO REGISTER for PowerAdvocate® access / to download RFO forms and documents	June 24, 2016
5.	CLOSING DATE: Offers must be uploaded to and received on PowerAdvocate® no later than 1:00 PM Pacific Prevailing Time on July 1, 2016	July 1, 2016
6.	SDG&E Begins Bid Evaluation Process	July 2, 2016
7.	Shortlist determination	October 24, 2016
8.	SHORTLIST NOTIFICATION SDG&E notifies Shortlisted Bidders	October 28, 2016
9.	SHORTLISTED BIDDERS ACCEPTANCE/WITHDRAWAL Letter due from Shortlisted Bidders indicating: a. Withdrawal from SDG&E's solicitation; OR b. Acceptance of shortlisted standing and including Shortlist Acceptance Fee	+10 Days after Shortlist Notification
10.	SDG&E issues appreciation notices to unsuccessful Respondents	+3 week after Shortlisted Bidders accept/withdraw
11.	SDG&E commences with contract negotiations	+11 Days after Shortlist Notification
12.	Target date to complete negotiations	End of Q1, 2017
13.	SDG&E Submits agreements to CPUC for approval	Q2 2017
	* Negotiation time will vary depending on proposal specifics including proposed contract modifications.	

PRE-BID CONFERENCE/ BIDDER OUTREACH EVENT

SDG&E will host one bidder outreach event. The event is scheduled for April 13, 2016 and will be an in-person event for all resource types (with dial-in / webinar available for those that cannot attend in-person). Participation in this event is NOT mandatory in order to submit an offer.

Please monitor the RFO Website for further details (such as conference presentation materials and final arrangements for the event (time and location)). SDG&E will make efforts to notify bidders of outreach event details via e-mail as well as provide this information via the RFO Website.

Any party interested in attending these events should email the following information to PrefResourcesRFO@semprautilities.com

- Company name, and
- Attendees' names, titles and contact information

6.0 RFO WEBSITE AND COMMUNICATION

The RFO and all subsequent revisions and documents are available for download from the RFO Website (<http://www.sdge.com/2016PrefResourcesLCRRFO>) and the 2016 DEMAND RESPONSE (DR) RFO event on the PowerAdvocate® website. Potential Respondents are responsible for monitoring the RFO Website and PowerAdvocate® for subsequent updates, notices and postings.

The 2016 DEMAND RESPONSE (DR) RFO event on the PowerAdvocate® website contains the following: required RFO forms, documents, and schedule. Respondents intending to bid but who do not yet have an existing account with PowerAdvocate® must first register to create a username/password in order to receive access to the event. See below log in instructions:

Logging In

You access the PowerAdvocate platform via a web browser.

To log in

1. Open a web browser and go to www.poweradvocate.com.

PowerAdvocate functions in most web browsers; however, using browsers other than Internet Explorer (IE) version 6 or higher may cause certain functionality to work unexpectedly. Should you encounter problems, PowerAdvocate support may be unable to provide assistance until the issue has been replicated in a supported version of Internet Explorer.

2. Click **Login**.

The Login page appears; you may wish to bookmark it for quick access.

3. Enter your account **User Name** and **Password**.

Both are case-sensitive.

If you do not have an account, go to poweradvocate.com and click the **Registration** link at the top of the page. If you have an account but do not remember your user information, click **Forgot User Name** or **Forgot Password** and they will be emailed to you.

4. Click **Login**.

First-time users must register as a Supplier using the instructions above and the Referral information below to access the RFO event:

Referral Information

Are you registering for a specific Event: * Yes
 No, I would simply like to register.

Who referred you to this Event: *

Name of that individual's company: *

Name or description of the Event: *

* Required Field

Users with an existing PowerAdvocate® account may request access to the event using the link below:

<https://www.poweradvocate.com/pR.do?okey=56972&pubEvent=true>

The RFO website contains RFO forms and documents, the RFO Schedule, and a Question and Answer forum. All questions or other communications regarding this RFO must be submitted via email to PrefResourcesRFO@semprautilities.com by the DEADLINE TO SUBMIT QUESTIONS as specified in Section 5.0 RFO Schedule. SDG&E will not accept questions or comments in any other form, except during scheduled bidders conference.

7.0 RFO RESPONSE INSTRUCTIONS

Respondents are required to submit the below files / forms / documents in response to this solicitation. Forms are available on the RFO Website / through the PowerAdvocate® site. The failure to provide the listed information, including failure to provide it in the required format, may result in the proposal being deemed non-conforming and may disqualify the proposal from further consideration.

Limit on Number of Bids

A MAXIMUM OF SIX (6) OFFERS PER RESPONDENT PER PROJECT OR PROGRAM WILL BE ACCEPTED.

Defining what a separate project entails: Variation of significant project details, including the following, will constitute a separate 'project' or 'program':

- Differing commercial operation dates or delivery start dates
- Differing delivery terms
- Differing energy deliveries or dispatchable configurations
- Differing maximum capacity
- Differing points of interconnection
- Differing operational constraints
- Differing equipment suppliers

Fill out separate offer forms for each offer. Only one Project Description Form is required per Respondent (per project) to the extent that all bids can be adequately summarized in the space provided.

If the respondent has questions or concerns regarding bid limits, please contact SDG&E at: PrefResourcesRFO@semprautilities.com

Required Participation Forms:

- 1) **Demand Response Offer Form** – Bidders must include in their offer form proposed pricing.
- 2) **Project Description Form**
- 3) **Redline Pro Forma Agreement** - Respondents may provide a mark-up of SDG&E's DR pro forma agreement as part of the offer package.

NOTE: SDG&E has not posted its Demand Response pro forma agreement to the RFO website as of the date of issuance (2/26/2016), but will make it available to respondents as soon as possible. Please monitor the RFO website for updates.

- 4) **Diverse Business Enterprise Subcontracting Commitment and Reporting Requirements (DBE) Form** - Provide a copy of certification documents received from the California Public Utilities Commission. An application can be made before submission of the offer and referenced in the offer.

- 5) **Credit Application** –A credit application will be required under all PRO FORMAs. Changes to terms and conditions will render the offer non-conforming and disqualify the project from further consideration.

The Project Description Form, Redlines to the Pro-Forma Agreement or load reduction only and Credit Application for All Source RFO must be in Word or Word-compatible format (not in PDF). The Demand Response offer form must be in Excel or Excel-compatible format (not in PDF). The Diverse Business Enterprise Subcontracting Commitment and Reporting Requirements (DBE) Form must be in PDF format.

Submissions containing unsolicited materials or submissions of individual bid documents in file formats other than the formats of the original bid forms may be rejected. This RFO is an electronic only Solicitation; Respondents need not submit paper documents, nor e-binders.

Any party interested in submitting an offer must register to receive access to the 2016 DEMAND RESPONSE (DR) RFOevent on PowerAdvocate® in order to submit an offer. To register, Respondents must follow the instructions outlined in Section 6, RFO Website and Communications. All offers must be uploaded to the PowerAdvocate® no later than **1:00 p.m.**, Pacific Prevailing Time, on the CLOSING DATE (see RFO Schedule). If Respondents encounter technical difficulties with the uploading process, they should provide evidence of such difficulties (e.g. a screen shot of the error message) and email the bid to:

The RFO mailbox: PrefResourcesRFO@semprautilities.com
Carbon Copy (CC) to: Jon.Jacobs@PAConsulting.com and
Barbara.Sands@PAConsulting.com

Emails shall be received by 1 p.m., Pacific Prevailing Time, on the Closing Date.

All offer materials submitted in accordance with the above Response Instructions shall be subject to the confidentiality provisions of Section 9 Confidentiality of this RFO.

SDG&E will review and may utilize all information, if any, submitted by a Respondent that is not specifically requested as a part of any forms. During all stages of the RFO process, SDG&E reserves the right to request additional information from individual Respondents or to request any Respondent to submit supplemental materials in fulfillment of the content requirements of this RFO or to meet additional information needs. SDG&E also reserves the unilateral right to waive any technical or format requirements contained in the RFO.

8.0 REJECTION OF OFFERS

SDG&E SHALL TREAT ALL RESPONDENTS FAIRLY AND EQUALLY AND SHALL EVALUATE ALL OFFERS IN GOOD FAITH. WHILE SDG&E IS MINDFUL OF THE BENEFITS OF DEMAND RESPONSE AND IS VIGOROUSLY PURSUING THE GOALS OF THE TRACK 4 DECISION, IT MAKES NO GUARANTEE THAT A CONTRACT AWARD SHALL RESULT FROM THIS RFO, EVEN AFTER AN OFFER HAS BEEN SHORTLISTED. SDG&E RESERVES THE RIGHT AT ANY TIME, AT ITS SOLE DISCRETION, TO ABANDON THIS RFO PROCESS, TO CHANGE THE BASIS FOR EVALUATION OF OFFERS, TO TERMINATE FURTHER PARTICIPATION IN THIS PROCESS BY ANY PARTY, TO ACCEPT ANY OFFER OR TO ENTER INTO ANY DEFINITIVE AGREEMENT, TO EVALUATE THE QUALIFICATIONS OF ANY RESPONDENT OR THE TERMS AND CONDITIONS OF ANY OFFER, OR TO REJECT ANY OR ALL OFFERS, ALL WITHOUT NOTICE AND WITHOUT ASSIGNING ANY REASONS AND WITHOUT LIABILITY OF SEMPra ENERGY, SDG&E, OR ANY OF THEIR SUBSIDIARIES, AFFILIATES, OR REPRESENTATIVES TO ANY RESPONDENT. SDG&E SHALL HAVE NO OBLIGATION TO CONSIDER ANY OFFER.

9.0 CONFIDENTIALITY

EXCEPT WITH THE PRIOR WRITTEN CONSENT OF SDG&E, RESPONDENTS MAY NOT DISCLOSE (OTHER THAN BY ATTENDANCE ALONE AT ANY MEETING TO WHICH MORE THAN ONE RESPONDENT IS INVITED BY SDG&E) TO ANY OTHER RESPONDENT OR POTENTIAL RESPONDENT THEIR PARTICIPATION IN THIS RFO, AND RESPONDENTS MAY NOT DISCLOSE, COLLABORATE ON, OR DISCUSS WITH ANY OTHER RESPONDENT, OFFER STRATEGIES OR THE SUBSTANCE OF OFFERS, INCLUDING WITHOUT LIMITATION THE PRICE OR ANY OTHER TERMS OR CONDITIONS OF ANY INDICATIVE OR FINAL OFFER.

SDG&E WILL USE THE HIGHER OF THE SAME STANDARD OF CARE IT USES WITH RESPECT TO ITS OWN PROPRIETARY OR CONFIDENTIAL INFORMATION OR A REASONABLE STANDARD OF CARE TO PREVENT DISCLOSURE OR UNAUTHORIZED USE OF RESPONDENT'S CONFIDENTIAL AND PROPRIETARY INFORMATION THAT IS LABELED AS "PROPRIETARY AND CONFIDENTIAL" ON THE OFFER PAGE ON WHICH THE PROPRIETARY INFORMATION APPEARS ("CONFIDENTIAL INFORMATION"). RESPONDENT SHALL SUMMARIZE ELEMENTS OF THE OFFER(S) IT DEEMS CONFIDENTIAL. THE SUMMARY MUST CLEARLY IDENTIFY WHETHER OR NOT PRICE, PROJECT NAME, LOCATION, SIZE, TERM OF DELIVERY AND TECHNOLOGY TYPE (EITHER COLLECTIVELY OR INDIVIDUALLY) ARE TO BE CONSIDERED CONFIDENTIAL INFORMATION. CONFIDENTIAL INFORMATION MAY BE MADE AVAILABLE ON A "NEED TO KNOW" BASIS TO SDG&E'S DIRECTORS, OFFICERS, EMPLOYEES, CONTRACTORS, CONSULTANTS, THE INDEPENDENT EVALUATOR, AGENTS AND ADVISORS ("REPRESENTATIVES") FOR THE PURPOSE OF EVALUATING RESPONDENT'S OFFER, BUT SUCH REPRESENTATIVES SHALL BE REQUIRED TO OBSERVE THE SAME CARE WITH RESPECT TO DISCLOSURE AS SDG&E.

NOTWITHSTANDING THE FOREGOING, SDG&E MAY DISCLOSE ANY OF THE CONFIDENTIAL INFORMATION TO COMPLY WITH ANY LAW, RULE, OR REGULATION OR ANY ORDER, DECREE, SUBPOENA OR RULING OR OTHER SIMILAR PROCESS OF ANY COURT, SECURITIES EXCHANGE, CONTROL AREA OPERATOR, GOVERNMENTAL AGENCY OR GOVERNMENTAL OR REGULATORY AUTHORITY AT ANY TIME EVEN IN THE ABSENCE OF A PROTECTIVE ORDER, CONFIDENTIALITY AGREEMENT OR NON-DISCLOSURE AGREEMENT, AS THE CASE MAY BE, WITHOUT NOTIFICATION TO THE RESPONDENT AND WITHOUT LIABILITY OR ANY RESPONSIBILITY OF SDG&E TO THE RESPONDENT.

IT IS EXPRESSLY CONTEMPLATED THAT MATERIALS SUBMITTED BY A RESPONDENT IN CONNECTION WITH THIS RFO WILL BE PROVIDED TO THE CPUC, ITS STAFF, THE CEC, ITS STAFF, SDG&E'S INDEPENDENT EVALUATOR, SDG&E'S PRG, AND THE COST ALLOCATION METHODOLOGY ("CAM") GROUP. ADDITIONALLY, SDG&E MAY PROVIDE LIMITED INFORMATION SUCH AS (BUT NOT LIMITED TO) ON-LINE DATE, INTERCONNECTION POINT, TECHNOLOGY AND OTHER OPERATIONAL CHARACTERISTICS TO THE CAISO FOR MODELING

PURPOSES. SDG&E WILL SEEK CONFIDENTIAL TREATMENT PURSUANT TO PUBLIC UTILITIES CODE SECTION 583 AND GENERAL ORDER 66-C OF THE CPUC, WITH RESPECT TO ANY RESPONDENT CONFIDENTIAL INFORMATION SUBMITTED BY SDG&E TO THE CPUC FOR THE PURPOSES OF OBTAINING REGULATORY APPROVAL. SDG&E WILL ALSO SEEK CONFIDENTIALITY PROTECTION FROM THE CALIFORNIA ENERGY COMMISSION (“CEC”) FOR RESPONDENT’S CONFIDENTIAL INFORMATION AND WILL SEEK CONFIDENTIALITY AND/OR NON-DISCLOSURE AGREEMENTS WITH THE PROCUREMENT REVIEW GROUP (“PRG”). SDG&E CANNOT, HOWEVER, ENSURE THAT THE CPUC OR CEC WILL AFFORD CONFIDENTIAL TREATMENT TO A RESPONDENT’S CONFIDENTIAL INFORMATION OR THAT CONFIDENTIALITY AGREEMENTS OR ORDERS WILL BE OBTAINED FROM AND/OR HONORED BY THE PRG, CEC, OR CPUC.

SDG&E, ITS REPRESENTATIVES, SEMPRA ENERGY, AND ANY OF THEIR SUBSIDIARIES DISCLAIM ANY AND ALL LIABILITY TO A RESPONDENT FOR DAMAGES OF ANY KIND RESULTING FROM DISCLOSURE OF ANY OF RESPONDENT’S INFORMATION.

10.0 ROLE OF THE PRG AND ROLE OF THE INDEPENDENT EVALUATOR

PROCUREMENT REVIEW GROUP

The Procurement Review Group (PRG) and Cost Allocation Mechanism (CAM) PRG are CPUC-endorsed entities and are composed of non-market participants such as ratepayers' advocacy groups, state energy and water commissions, power authorities, utility-related labor unions and other non-commercial, energy-related special interest groups. Each IOU has its own PRG and CAM PRG. The PRG and CAM PRG are charged with overseeing the IOU's procurement process, reviewing procedural fairness, examining overall procurement prudence and providing feedback during all stages. From RFO language development to offer evaluation to contract negotiation, IOU's brief the PRG and/ or the CAM PRG on a periodic basis during the entire process.

Respondents are hereby notified that revealing confidential offer information to the PRG and/or CAM PRG is required during briefings in accordance with Section 11 ("Confidentiality"). Each Respondent must clearly identify, as part of its offer, what type of information it considers to be confidential.

INDEPENDENT EVALUATOR

The CPUC requires each IOU to use an Independent Evaluator ("IE") to evaluate and report on the IOU's entire solicitation, evaluation, and selection process. The IE will review SDG&E's implementation of the RFO process and final selections. The IE also makes periodic presentations regarding its findings to the IOU and the IOU's PRG, including the CPUC Energy Division staff. The intent of these IE presentations is to preserve the independence of the IE by ensuring free and unfettered communication between the IE and the CPUC, as well as an open, fair, and transparent process that the IE can affirm.

SDG&E is committed to ensuring an open and transparent solicitation, and to providing a fair, reasonable and competitive process.

The IE for this solicitation is PA Consulting.

11.0 SDG&E BACKGROUND

SDG&E provides electric service to approximately 1.3 million customers in San Diego County and the southern portion of Orange County. SDG&E also provides natural gas service to approximately 775,000 gas customers. The electric customer base comprises 89% residential and 11% commercial and industrial customers.

SDG&E's electric transmission network is comprised of 130 substations with 884 miles of 69-kV, 265 miles of 138-kV, 349 miles of 230-kV, and 215 miles of 500-kV transmission lines. Local ("on system") generating resources include the Encina plant (connected into SDG&E's grid at 138 kV and 230 kV), the Palomar Energy Center (connected at 230kV) and a number of combustion turbine facilities located around the service area (connected at 69 kV). Imported resources are received via the Miguel Substation as the delivery point for power flow on the Southwest Power Link, which is SDG&E's 500-kV transmission line that runs from Arizona to San Diego along the U.S./Mexico border as well as the Sunrise Power Link – a second 500kV transmission line that runs from the Imperial Valley substation and ending in San Diego's north county.

The figure below shows a simplified diagram of existing SDG&E's service area, which encompasses an area of 4,100 square-miles and spans 2 counties and 25 communities.



For a map of California IOU service territories please visit:
http://www.energy.ca.gov/maps/serviceareas/electric_service_areas.html