SDG&E 2014 All Source RFO

Questions & Answers / FAQs

Evaluation Related Questions

1. **How does the LCBF / NMV analysis work?**
SDG&E evaluates and ranks offers based on 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 cash flow components for 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. 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 Net Market Value (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 economic evaluation normalizes the MW size differences of offers by finding the most attractive NMV per MW of capacity ("Least Cost").

2. **How will SDG&E be considering 'qualitative' factors?**
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:

   1) 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. For energy storage only, 'commercially available' technology may be procured in accordance with P.U. Code section 2835 and following sections.

   2) SUPPLIER DIVERSITY
   SDG&E encourages Diverse Business Enterprises ("DBEs"), "Women-Owned Businesses" or "Minority-Owned Businesses" or "Disabled Veteran Business Enterprises" as defined in G.O. 156[1], to participate in this RFO. Furthermore, SDG&E 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:

[1] See http://www.thesupplierclearinghouse.com/eligibility/default.asp for the definition of a DBE.

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

Like other qualitative factors, in the event of a tie between two Offers, SDG&E will consider a Respondents status as a DBE and or a Respondent's plan to utilize the services of DBEs during project development. 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.

3) LOADING ORDER RANKING
SDG&E seeks resources in accordance with the loading order described in the Energy Action Plan. SDG&E will give preference to higher loading order ranked resources.

3. **How will SDG&E balance the loading order with the LCBF / NMV results?**
   SDG&E will rank conforming offers based on the outcome of the LCBF / NMV modeling. SDG&E may use these factors to determine advancement onto the short list or evaluate tie-breakers, if any.

4. **What discount rate is SDG&E using for the bids?**
   7.79%.

5. **What forward energy and capacity prices is SDG&E using?**
   This information is proprietary.

6. **Where would you add a rendering (visual)?**
   This information is requested in several sections of the project description form for each resource (for example, sections P and Q in the conventional project description form).

7. **Are submittals limited to SDG&E forms only?**
   Yes, SDG&E will not be able to pull data via our automated process from other forms. If a bidder would like to provide additional information, this can be added to the available open fields. If that is insufficient please email the RFO inbox.

8. **Please explain the energy benefit calculation.**
   The energy benefit is equal to the market value of the expected generation profile for the resource/program. For example, a profile of 100 MWh and a corresponding market price of $50/MWh would provide an energy benefit of $5,000.

9. **Does the valuation start at 2017, or at COD? Will a project with COD in 2017 be evaluated differently than on with COD in 2019?**
   The valuation will start at COD, and the results of the valuation depend on the project attributes and forward price curves applicable over the term of the proposed contract.

10. **Is there a preference for projects starting prior to 2022?**
    SDG&E does not have a preference. All projects will be modeled according to the proposed term, and discounted to a 2017 base year for comparison purposes.

11. **Won't discounting like that result in preferential value for projects with a later start date?**
Projects whose Net Market Value (Benefits minus Costs) is positive will be of greater value to our ratepayers with an earlier start date. Projects whose NMV is negative will be of greater value to our ratepayers with a later start date.

Net Market Value Cash-flow Comparison								
	Project 1	*Project 2*	*Project 3*	*Project 4*	*Project 5*	*Project 6*	*Project 7*	*Project 8*
Discount Rate	*7.79%*	*7.79%*	*7.79%*	*7.79%*	*7.79%*	*7.79%*	*7.79%*	*7.79%*
NPV (2017 Base Year)	*$372.47*	*$297.41*	*($372.47)*	*($297.41)*	*$318.79*	*($318.79)*	*$430.34*	*($430.34)*
2017	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
2018	*$100.00*	*$0.00*	*($100.00)*	*$0.00*	*$0.00*	*$0.00*	*$500.00*	*($500.00)*
2019	*$100.00*	*$0.00*	*($100.00)*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
2020	*$100.00*	*$0.00*	*($100.00)*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
2021	*$100.00*	*$100.00*	*($100.00)*	*($100.00)*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
2022	*$100.00*	*$100.00*	*($100.00)*	*($100.00)*	*$500.00*	*($500.00)*	*$0.00*	*$0.00*
2023	*$0.00*	*$100.00*	*$0.00*	*($100.00)*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
2024	*$0.00*	*$100.00*	*$0.00*	*($100.00)*	*$0.00*	*$0.00*	*$0.00*	*$0.00*
2025	*$0.00*	*$100.00*	*$0.00*	*($100.00)*	*$0.00*	*$0.00*	*$0.00*	*$0.00*

Project 1 vs. Project 2:
Both 5-year terms with the same NMV positive cash flows over their term, Project 1 starts in 2018, Project 2 starts in 2021. Project 1, with the earlier start date has a higher NPV, resulting in a higher Quantitative ranking.

Project 3 vs. Project 4:
Both 5-year terms with the same NMV negative cash flows over their term, Project 3 starts in 2018, Project 4 starts in 2021. Project 4, with the later start date has a higher NPV, resulting in a higher Quantitative ranking.

Project 5 vs. Project 6 vs. Project 7 vs. Project 8:
All 1-year terms (2022 or 2018). Project 7, with the earliest start date AND positive NPV results in the highest Quantitative ranking. Project 5, with a later start date, but still positive NPV will be ranked next. Project 6 would come next, followed by Project 8.

All Projects:

Quantitative Ranking		
1	Project 7	$430.34
2	Project 1	$372.47
3	Project 5	$318.79
4	Project 2	$297.41

5	Project 4	($297.41)
6	Project 6	($318.79)
7	Project 3	($372.47)
8	Project 8	($430.34)

12. Is locational value part of the quantitative or qualitative value?
SDG&E's quantitative analysis does not include locational value. If SDG&E identifies a project that provides added value because of its location, it may consider this as part of its qualitative analysis.

13. Can a developer propose additional quantitative characteristics?
If there are additional factors not captured in the bid forms that you think SDG&E should consider, please describe them in the open bid form fields or email the RFO inbox.

14. A suggestion for normalization of NMV metrics:
As stated by SDG&E "The economic evaluation normalizes the MW size differences of offers by finding the most attractive NMV per MW of capacity ("Least Cost")."
Two additional normalizations are MW range and MWH capability. MW range is the sum of the MW discharge and MW charge capability of a storage project. MWH storage capability is the number of MWH a storage project can discharge from the max to the min storage MWH capability. In comparing storage to non-storage alternatives, the MW range normalization better characterizes the capability of storage to absorb energy as well-as produce energy, a capability that most conventional resources do not provide. In comparing storage alternatives, the MWH capability better considers that storage costs and benefits tend to be proportional to MWH (except for very short-duration storage). To the extent that storage projects with negative net market value are being compared, a larger storage project may have a lower NMV per MW, but a higher NNM per MWH with different ranking among storage projects. SDG&E can easily calculate all three of these normalization metrics and then take all three into account in its quantitative and qualitative rankings.
Will SDG&E consider these additional metrics in its project rankings?
SDG&E considered a variety of quantitative metrics prior to issuing the All-source RFO. The metric that most appropriately matches the need identified in our procurement authorization (incremental local capacity), and evaluates that consistently across all resource types is NMV per MW of capacity.

15. How will Ancillary Service (AS) value be included especially if capacity has greater value than RA value?
Ancillary services value will be modeled and included to the degree it is appropriate for a particular resource type and offer.

16. **For ancillary service valuation… Are historical prices used to determine the value?**
Yes, SDG&E will utilize the ratio of historical AS prices to historical energy prices over a two to three year period to determine the AS valuation.

17. **What is SDG&E preference in terms of contract duration or delivery term? Will the time value of money be considered?**
Contract term preferences are as indicated in the below table, and yes the time value of money will be considered.

Participation and Resource Criteria	Resource Type				
	Renewable	CHP	Energy Storage	Conventional	DG
Preferred **Contract Term (Years)**	12 years or less	Up to 7 for Repowered and up to 12 for New and Expanded	3 to 20 years	20 years or less	20 years or less

	Resource Type	
	EE	DR
Preferred **Contract Term (Years)**	6 years or less	None stated

18. **Will the ability to provide effective flexible capacity (EFC) help a storage (or other resource type) bid in the evaluation process?**
Because EFC cannot be disaggregated from local or system capacity, and since the valuation of EFC does not have a long history, EFC is not being valued as a separate component in SDG&E's evaluation. However, if a resource provides such flexibility, SDG&E's modeling will likely show that resource being dispatched more often and it will likely provide capacity in the hours when it is most highly valued and thereby resources that have significant flexibility will show significant benefits in the evaluation.

19. **Please provide the methodology and values used to determine Resource Adequacy as it effects the ongoing collateral obligation**
The collateral obligation associated with the contracts SDG&E will execute associated with its 2014 All Source RFO is based on SDG&E's exposure. Upon approval of the filing or application requesting approval of the contracts associated with this RFO, the counterparties will be required to satisfy the initial collateral requirement based on the amount of SDG&E's exposure to counterparties' default or non-performance. The initial collateral requirement will be held during the lifetime of the contract (until contract expiration). In addition, there is an ongoing collateral requirement that will be due at the start of the delivery term. The ongoing collateral requirement is the amount the counterparty needs to post in order to satisfy mark-to-market exposure. The frequency of ongoing collateral requirement depends on the market changes and the counterparties' risk profiles.

SDG&E's exposure will be related to all of the aspects of the product being purchased – RA (or capacity), energy, renewable attributes, etc… The specifics will depend on the details of each agreement.

20. **Can you please provide forward pricing curves so that bidders can appropriately structure bids? If not, please explain how bidders can structure their bids to provide maximum ratepayer value in the absence of this type of information.**
    Forward price curves are proprietary information and cannot be shared with RFO respondents. Resources with the least amount of operational restrictions coupled with the lowest cost will provide the greatest value to ratepayers.

21. **Can you please provide the exact methodology, including discount rates, used in bid evaluation, so that bidders can structure their projects to provide the maximum value to ratepayers.**
    See questions #4 and #20.