**BRIAN SANDOVAL**
*Governor*

**STATE OF NEVADA**

**ANGELA DYKEMA**
*Director*

755 North Roop Street, Suite 202
Carson City, NV 89701
Office: (775) 687-1850
Fax: (775) 687-1869

## GOVERNOR'S OFFICE OF ENERGY

2018
NEVADA ENERGY STORAGE STUDY
REQUEST FOR PROPOSALS

**Questions & Responses**

**February 20, 2018**

1. **Question:**
   Is there any preference for the production cost model used?

   **Response:**
   There is no preference as long as the consultant can demonstrate that the model used is appropriate for doing the cost/benefit analysis

**February 22, 2018**

2. **Question:**
   Based on the following language, does GOE want an assessment of the specific locations on the distribution system that are the best candidates for storage deployment? If so, would the NV utilities be providing distribution-level capacity, load, and cost data for the analysis? *"Consider, via completion of a hosting study or use of other analytical tools, the interconnection of energy storage systems at each point of the electric grid, including, without limitation, in the transmission and distribution of electricity and at the site of the customers."*

   By "cost data" we mean the cost of the distribution system upgrade that could otherwise potentially be avoided through the installation of distributed energy storage.

   By "load data" we mean the hourly load profile on each portion of the distribution system where there is expected to be a need for a capacity upgrade. This data would give us a sense of the degree to which storage could be used to defer the upgrade. For instance, a battery would be better equipped to address distribution system constraints in locations with a peaky load profile with short-duration load spikes, due to limitations on the battery's capacity.

**Response:**
The hosting study and other analysis will be used to identify the best locations for energy storage deployment. Once this step is completed, a cost/benefit analysis will need to be conducted to determine if storage deployment at any of the identified locations makes economic sense.

NV Energy will provide the cost data for the avoided distribution system upgrade. NV Energy will not provide cost data for energy storage projects.

NV Energy will provide all available existing and projected load data for its distribution and transmission system subject to acceptable Non-Disclosure Agreements. "Projected load data" means a "distribution load forecast" where available.

3. **Question:**
Additionally, we noted in the RFP that NV Energy would be publishing a storage cost-effectiveness study on Feb 7, to be discussed at a Feb 21 PUCN workshop. Is that study now available? And what will be the relationship between that study and the one that you are initiating with this RFP?

**Response:**
NV Energy clarified at the February 21, 2018, PUCN Workshop that it provided a document regarding energy storage to stakeholders at an informal meeting. NV Energy committed to file that document in Docket No. 17-07014 by the close of business on February 23, 2018.

**February 22, 2018**

4. **Question:**
Does the GOE expect the electric utilities in Nevada to share more detailed information, especially on the transmission and distribution assets within Nevada, to ensure that the selected consultant accurately represent the grid system? If so, what is the process of such information sharing?

**Response:**
NV Energy has agreed to provide the data used in its connectivity model. Such information will be shared subject to execution of a Non-Disclosure Agreement between the selected consultant and NV Energy.

5. **Question:**
The RFP specifies that the selected consultant should use the same assumptions and inputs as NV Energy's integrated resource planning filings; however, key information such as fuel price forecasts and detailed load forecasts was redacted from the public version of the filing. Does the GOE expect NV Energy to share such information with the selected consultant?

**Response:**
NV Energy has agreed to provide resource planning data and assumptions subject to execution of a Non-Disclosure Agreement with the selected consultant. The resource planning data and assumptions will be from the last PUCN-approved integrated resource plan filings (Docket Nos. 16-07001 and 16-08027).

6. **Question:**
The RFP asks the consultant to quantify the benefits of energy storage to electric utilities within the Nevada grid system and quantify the amount of energy storage that can be cost-effectively deployed in NV Energy's system. Can you clarify whether the focus should be solely on NV Energy's system or should the study try to include the other utilities as well?

**Response:**
The scope of the study should be limited to NV Energy's system.

**February 23, 2018**

7. **Question:**
For proposal submissions shall the technical and budget proposals be submitted separately- separate documents as well as in separate emails?

**Response:**
Proposals should be submitted as a package in one e-mail.

8. **Question:**
Please provide the POC name and address the proposals should be addressed to in order to complete the proposal signature page provided.

**Response:**
The proposal signature page provided is to contain applicant information only. If applicants wish to add a cover letter with the application package, you may address the cover letter to the Governor's Office of Energy, c/o Grants & Fiscal Manager, 755 N. Roop Street Suite 202, Carson City NV 89701. Please note that a cover letter is not required and will not be used as part of the application package review.

9. **Question:**
The RFP states that the "Study Complete" date is to be August 15, 2018. Does this date apply to the draft or the final study?

**Response:**
August 15, 2018 is the final study completion date.

10. **Question:**
Will additional distribution system data be made available to support the analysis of distribution system benefits of storage (e.g. technical, budgetary, operational, etc.)? If

so, at what type and level of granularity of data will be provided (e.g. distribution substation, feeder, etc.)?

**Response:**
See. Responses to Questions 2, 4, and 5 above.

**February 23, 2018**

11. **Question:**
Does the study preclude any company from working with utilities to install and deliver storage and related equipment?

**Response:**
If the selected consultant for the energy storage study were to work with the utilities to install and deliver energy storage while the energy storage study is being conducted, that would likely be viewed as a conflict of interest.

12. **Question:**
Can the proposed effort include additional benefit streams not identified in the scope of work?

**Response:**
Yes. However, the benefit stream should add value to Nevada, should be clearly identified, and should be clearly reflected in the cost-benefit analysis.

13. **Question:**
Can the responder use software that is proprietary and not part of deliverables?

**Response:**
Yes. However, the results and analysis of the study are intended to be transparent. The study's transparency should not be limited by proprietary software issues.

14. **Question:**
Are there any additional restrictions for subcontractors (other than $25,000 budget)?

**Response:**
Please refer to the Section A. Flow Down Requirements under Special Terms and Conditions on page 3 of Attachment 4 within Appendix A, which states that all assurances apply to the subgrantee's subrecipients/subcontractors.

15. **Question:**
In Section 2 (Background and goals) of the RFP, it is mentioned that "NV Energy also committed to conduct its own cost/benefit study". What would be the role of NV Energy in this GOE-funded study? Also, what is GOE's plan if some results of the GOE-funded study contradict NV Energy's findings?

**Response:**
NV Energy's role is limited to sharing electric system and resource planning data to support the independent study (See. Responses to Questions 2, 4, and 5 above). If there is a contradiction in findings between study results, the PUCN will evaluate the reasons for the contradictions based upon input from interested persons via publicly filed comments in Docket No. 17-07014. Regarding NV Energy's study, refer to the response to Question 3 above.

**February 23, 2018**

16. **Question:**
Would the Governor's office consider extending the due date for the proposals, in order to allow review of the responses to these and other questions?

**Response:**
No.

17. **Question:**
Which "economic accounting perspective" is expected to be used: retail customers of NV Energy? Do "measurable benefits" include environmental benefits and avoided costs? If environmental benefits are included, what assumptions should be made (*e.g.*, GHG emissions costs at $___/metric ton)?

**Response:**
The economic and accounting perspective refers to the Retail and Distribution Only customers in Nevada. Measureable benefits include environmental benefits and avoided cost. NV Energy has agreed to provide resource planning assumptions regarding externality values. These assumptions will be from the last IRP/IRP Amendments approved by the PUCN. (See. Response to Question 5 above.) NV Energy typically provides a range of CO2 prices in its resource plans. GHG emission benefits can be provided for a range of emission cost values.

18. **Question:**
How does the Governor's Office of Energy (GOE) define and differentiate "cost-effective" and "cost/benefit" in this context?

**Response:**
The cost/benefit analysis provided by the consultant shall evaluate whether a storage resource is a cost-effective solution compared to other resource alternatives.

19. **Question:**
Per Section 5.E, the RFP would like the study to "Quantify how much energy storage could likely be cost-effectively deployed on NV Energy's system over the next six years." Should the study yield a specific procurement target or range? Or should the response and the study assume specific procurement target levels, for the purpose of the cost-benefit analysis? Is six years the time frame for the entire study?

**Response:**
The study recommendations could include specific procurement targets or ranges as supported by the cost/benefit analysis. Six years is the period over which the cost/benefit analysis will be conducted. Forecast information for the system, load, and T&D upgrade cost will be provided by NV Energy where available for this time period. (See. Responses to Questions 2 and 4 above.) The consultant is expected to provide cost data for energy storage equipment over this six year period.

**20. Question:**
What information from the responses to NV Energy's "2018 RE RFP" regarding energy storage, due on February 2, 2018, will be made available during the study? Will an NDA be sufficient to gain access to specific data provided in proposals?

**Response:**
Information from NV Energy's "2018 RE RFP" will not be made available.

**21. Question:**
Was NV Energy's cost/benefit study filed on February 7, 2017? Can a copy be posted or made available before the deadline for responses to this RFP?

**Response:**
See. Response to Question 3 above.

**22. Question:**
Can the specific assumptions used by NV Energy in its storage analysis be made available to the selected consultant?

**Response:**
The selected consultant is expected to provide cost estimates for energy storage equipment. NV Energy will not provide this information.

**23. Question:**
In Section 5d, there is a reference to a "hosting study". In what context is this hosting analysis expected to be completed? Is it at distribution sub-station level, transmission level, or feeder level?

**Response:**
The hosting study analysis is expected to be completed at distribution sub-station level, transmission level, and feeder level.

**24. Question:**
What reliability data will be made available regarding NV Energy's transmission and distribution systems? Ideally we would like the reliability data in as much detail as available so we can relate it to cause and circuit/feeder if the data is available.

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**Response:**
NV Energy will provide reliability data by feeder subject to a Non-Disclosure Agreement. NV Energy has indicated that granularity of this feeder data will vary by feeder but most feeders have abundant historical data available.

**25. Question:**
What data will be made available on NV Energy's current and projected integration of renewable resources (*e.g.*, hourly meter data)?

**Response:**
NV Energy projections for utility scale renewable resources will be included in the resource planning data made available to the consultant from NV Energy. (See. Response to Question 5 above.) Known renewable resources on the distribution system should be included in the forecast data provided by NV Energy.

**26. Question:**
What data will be made available on NV Energy's hourly generation and loads?

**Response:**
See. Responses to Questions 2, 4, and 5 above.

**27. Question:**
Can NV Energy's planned investments in generation, transmission and distribution be provided? At what level of detail? For what future period?

**Response:**
Yes. NV Energy's planned investments in generation, transmission and distribution will be provided by NV Energy subject to a Non-Disclosure Agreement. NV Energy has committed to providing an "accurate estimate" of the T&D upgrade cost for the study period. (See. Response to Question 2 above.)

**28. Question:**
Will the consultant have access to NV Energy's distribution system models and if so using which software? For the purpose of power flow studies (distribution and transmission), how much detail is expected in modeling the distribution system, distributed generation and BTM storage?

a. Is a feeder level hosting capacity analysis expected to be completed?
b. If so, would feeder analysis based on representative feeder be accepted? (Clarification provided by the potential bidder: The potential bidder is proposing using multiple representative feeders of NV Energy system to assess the impact of storage. The number of representative feeders would be selected by analysis of NV Energy distribution system and using clustering techniques for example. The representative feeders will be used to assess the cost effectiveness of storage; pending on the response of 29(a))

**Response:**
NV Energy will provide data from its connectivity model and mapping system for use by the consultant to complete the study. The PUCN has not discussed with NV Energy

whether the consultant would have access to NV Energy's distribution model. However, the PUCN assumes the consultant would provide its own model to do the analysis.

a. Yes.

b. The intended scope includes a feeder level analysis to determine the benefits of locating BTM storage along the distribution feeders.

**29. Question:**

On modeling BTM storage:

a. for distribution assessment, please clarify whether the impact of BTM storage should be assessed considering its location along feeders and the benefits of storing excess distributed generation? (Clarification provided by the potential bidder: This question refers to the modeling of storage. In particular we would like to know; Does the intended scope contemplate a feeder level analysis to determine the impacts of location of BTM (and Utility Scale Energy Storage) along distribution feeders? Or, alternatively, does it meet the intended scope of the RFP if the consultant aggregates the BTM Energy Storage and the Utility Scale Energy Storage for analysis on at the distribution substation-level?)

b. for transmission assessment, can the modeling effort assume that BTM storage will be aggregated at the substation level and modeled separately from load/DG?

**Response:**

a. The intended scope includes a feeder level analysis to determine the benefits of locating BTM storage along the distribution feeders as indicated above. With respect to BTM storage: Benefits of storing excess energy from distributed energy resources should be limited to the benefits of storing only excess energy from renewable energy resources for locations with renewable energy DERs plus storage; and for storing grid energy for locations without a combined renewable energy resource plus a storage resource.

b. No.

**30. Question:**

What data is available on NV Energy's current and projected greenhouse gas emissions?

**Response:**

Greenhouse gas emissions data from NV Energy's last approved Integrated Resource Plans/Amendments are available. (See. Response to Question 5 above.)

**31. Question:**

Has NV Energy identified specific sites where storage could be potentially most beneficial, or where reliability concerns currently exist at the distribution (or transmission) level?

**Response:**

The PUCN is aware that NV Energy has in the past identified sites where storage resources are beneficial. This information is somewhat documented in PUCN Docket No. 16-01013. In addition, NV Energy submitted its "Study" in Docket No. 17-07014 which does include limited information regarding NV Energy's storage resource cost benefit analysis. (See Also. Response to Question 3 above.)

**32. Question:**
Is NV Energy considering installation of distributed storage with its own meters, rather than behind the meter?

**Response:**
This issue is not relevant to the scope of this study.

**33. Question:**
Does NV Energy currently use AURORA, GridView or other similar production cost model?

**Response:**
NV Energy uses PROMOD as its production cost model.

**34. Question:**
Does the study require the use of a specific production cost engine?

**Response:**
No.

**35. Question:**
Does the study require the use of a specific power flow engine?
a. For distribution analysis?
b. For transmission analysis?

**Response:**
a. No.
b. No.

**36. Question:**
Can the specific assumptions used by NV Energy in its integrated resource planning filings be made available to the selected consultant?

**Response:**
Yes. See. Response to Question 5 above.

**37. Question:**
How many on-site meetings, workshops, and presentations to the PUCN and/or legislature are anticipated during the study and after the results are delivered, and for what purposes?

**Response:**
Up to three on-site meetings, workshops, or presentations will be expected to provide a summary and analysis of study results, modeling procedures, and methods used in the estimation of energy storage systems benefits and costs.

**38. Question:**
Will exceptions be accepted regarding the terms and conditions?

a. mutual non-consequential
b. force majeure,
c. Indemnity limited to negligent acts
d. liability limits
e. Record destruction not later than ~~(3)~~ 7 years (per our company policy)

**Response:**
Everything under "Special Terms and Conditions" on page 3 of Attachment 4 within Appendix A are federal assurances and non-negotiable with the exception of stricter policies being allowable (i.e, records retention at 7 years versus 3); all other exceptions requested will be considered on a case-by-case basis in accordance with State procedures.

**39. Question:**
Are any Nevada Governor's Office of Energy funds specified to fund this study?

**Response:**
Yes. Funding will come from the U.S. Department of Energy State Energy Program as well as the Governor's Office of Energy.