

DOCKETED

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Sr. R&D Manager

Additional submitted attachment is included below.

1. (For all groups) Are the proposed funding amounts identified in this Request for Comments (RFC) appropriate for the work requested? Please explain the rationale behind the recommendations, and if applicable, what the appropriate level of funding should be to develop the products identified in this draft solicitation?

Funding level for Group 2 and 4 seem to be lower than necessary:

- For group 2: A good data translation tool shall be able to achieve the following two things: 1) map different data protocols from vendor tools, and 2) Simulation results shall match with acceptable error. To achieve these two goals, it is necessary to have deep insights to the fast evolving vendor software suites and develop a common platform to compare the simulation results. This requires an neutral entity, collaborating with major vendors and delivering into a user-friendly interface. Since multiple entities are inevitably involved, the duration and complexity of efforts will require higher funding support, i.e. \$2-3 million
- For group 4: GridLabD can be applied to a variety of applications, i.e. energy market, building efficiency, demand response etc. Each has different audience and input information. The architecture has to be open and flexible to accommodate this. It also has to be low maintenance and easy to use. It is recommended to raise the funding support to ~\$4-5million to cover the effort.

2. (For all groups) What are specific recommendations you can provide to improve the group descriptions of the solicitation outlined in this RFC that would result in a better evaluation of the impacts of high concentrations of DER? Please explain the rationale behind the recommendations.

It would be more helpful to specify the motivation and objective for each group in a more definitive manner. Here are the examples:

- For group 1: it would be beneficial to define the potential user of the microgrid tool. As we all know that a microgrid can bring benefits at multiple folds, i.e. economical, technical and social. Each of these are deeply coupled. Utilities may evaluate the microgrid design from a completely different aspects than a developer. Then a planning/evaluation tool could be different than a optimization and operation tool. We could certainly target to develop a tool applicable to most of these scenarios. Then the efforts shall be recognized or prioritized.
- For group 2: the level of effort depends on technical depth and width that we would like to drive the tool towards. It would be better to define the scope of work better.
- For group 3: It is unclear whether the task would focus on dynamic or quasi-steady state simulation. Both are time series power flow simulation for the power grid.
- For group 4: A poorly maintained user interface could be a disaster too. It is unclear how to maintain the quality and future upgrades.

3. (For all groups) Are there existing efforts that complement the groups identified in this RFC? Are there specific changes to this proposed solicitation that you would suggest to better leverage these existing efforts? Please explain the rationale behind the recommendations and the expected value of your recommendations.

The following efforts seem to relate to this solicitations:

- High performance computation research in PNNL, Livermore National Lab, ORNL and a few other places
- Major power system software vendors, i.e. GE, Siemens, also have ongoing efforts to speed up their computation cores.

4. (For groups 2,3 and 4) Should it be required that all source code generated as a result of this solicitation be hosted on a public open-source developers site such as GitHub? If not, describe how to ensure distributed version control and source code management functionality while making the open-source code available to the open-source developers' community.

5. (For all groups) Are there suggestions to better complement the needs associated with CPUC proceedings related to Modeling, distributed renewable generation, electric vehicles, the use of Smart Grid Technologies and Distribution Resource Planning? Please provide specific recommendations and rationale.

Among other distribution energy resources, electrical vehicle is highly mobile and difficult to predict. It would be great to see a solicitation addressing this characteristics