



U.S. DEPARTMENT OF ENERGY

American-Made Solar Prize Round 7

Ready! Contest Technical Assistance Request



Automated Net Meter Interconnections

NetMeterGO.com needs technical assistance from the American-Made Network to research the commercial viability of three additional use cases for its functionality and data set. The first version of the software meets its original goals, but during the development process, the team noted that the software could also support

- Interconnections for electric vehicles (EVs) which are like interconnections for solar panels,
- Interconnection-as-a-service, with an engineering partner, that allows utilities to outsource the inspection and interconnection tasks to a third party, but use NetMeterGO.com for strong oversight into each end-user customer's interconnection,
- Recycling request from a customer with data sharing to a solar recycler.

Research is needed to determine which is the highest priority in the market, and to rapidly develop and test a proof of concept to add to NetMeterGO.com's market offering.

A Power Connector could accelerate NetMeterGO.com's initial research into each use case, as research methods are outside of the team's expertise. The NetMeterGO.com team needs guidance to develop an effective survey plan to assess the pain points of utility staff in customer service, the meter shop, and renewables in each use case. Ideally, the team would like to interview a dozen or more utility team members, and potentially hold a focus group at an industry event or tradeshow. Other stakeholders in the process, such as installers, retailers, and manufacturers, could be interviewed to understand their pain points. A static version of the new functionality might be shared at this time. A written survey, likely sent via email, could be developed after the initial interviews to solicit wider input, and the team would like guidance on developing the survey instrument as well as identifying potential recipients. Solid guidance from a seasoned researcher, with experience in the energy sector, would improve the quality of NetMeterGO.com's research and contribute to a more commercially viable product.

The Power Connector could also assist with review of the requirements for the new use case, and a laboratory computing environment will be needed to simulate utility systems for testing. The utility database would mimic the connectivity between NetMeterGO.com and a utility as well as the specific request and response mechanism that sends data to support the customer journey. Connectivity



between additional systems, such as between the Solar Energy Industries Association's (SEIO) Solar Automated Permit Processing (SolarAPP) and NetMeterGO.com could also be developed and tested in a lab setting.

The NetMeterGO.com team would develop the initial test cases and collaborate with lab or Power Connector staff to improve the validity and the veracity of the testing. The test cases will also be updated for testing scenarios for actual utilities during an implementation of NetMeterGO.com. It is expected that every utility's version of the test cases will need some customization, but that the initial test cases will allow for quick development of a very effective testing plan.

A high-level plan to deliver a proof of concept for one of the potential use cases is shown below.

ID	Task	Start	Finish
1	Create research plan	12/11/23	2/8/24
1.1	Review existing data on potential use cases, including data from interconnection groups	12/11/23	1/16/24
1.2	Determine the stakeholders best suited to provide insight	12/18/23	12/22/23
1.3	Identify specific people to approach to participate in research	1/2/24	1/25/24
1.4	Develop focus group/interview questions on pain points in each use case	1/8/24	1/25/24
1.5	Draft written survey instrument for a larger group	1/29/24	2/8/24
2	Conduct research	1/25/24	3/6/24
2.1	Plan interviews with individuals	1/25/24	2/6/24
2.2	Plan focus group, including identifying events where the stakeholders will already be present	1/29/24	2/8/24
2.3	Interview stakeholders on pain points in each use case	2/12/24	2/16/24
2.3.1	Analyze responses with researcher		
1.6	Finalize written survey	2/16/24	2/20/24
2.4	Send written survey to wider group of stakeholders	2/21/24	3/1/24
2.4.1	Analyze responses to written survey with researcher	3/4/24	3/4/24
2.5	Develop recommendations based on research	3/5/23	3/6/24
3	Create proof of concept	2/16/24	3/27/24
3.1	Document requirements based on research and UI/UX	2/16/24	3/6/24
3.2	Create user stories for development	3/6/24	3/8/24
3.3	Update/create test cases for each user story	3/8/24	3/11/24
3.4	Sequence development of user stories	3/11/24	3/11/24
2.6	Set up test Utility in lab	2/5/24	2/23/24
3.5	Test NetMeterGO.com user stories	3/11/24	3/23/24
3.5.1	Update code as needed	3/14/24	3/27/24
3.5.2	Update test cases if needed	3/11/24	3/27/24
3.6	Release new functionality in PRD	3/27/24	3/27/24
3.6.1	Monitor new functionality	3/27/24	4/25/24
4	Prepare for Set! Demo Day	3/23/24	4/1/24
4.1	Demo new NetMeterGO.com use case	4/2/2024	4/2/2024

Figure 1:
Proof of Concept Schedule