Responses to Questions

Integration of Existing Energy Management System with Distributed Energy Resources at MCAS Miramar

Issue Date : Feb 11 2022

1. For the listed equipment with designated MODBUS interface, are they currently connected to existing equipment? (e.g. SCADA?)
    a. No. At present, None of the listed equipment are connected to the IPEM (SCADA) over Modbus protocol.
2. If a piece of listed equipment is currently connected to a SCADA system, can an additional connection be made or can access be obtained through the existing connected system?
    a. The DER Integration vendor is expected to make integration with equipment that are not connected to the existing IPEM system.
3. Would you clarify the statement "*The DER Integration Vendor will need to coordinate with the EWOC the appropriate sample frequency for data acquisition, which should be no more than 5-10 seconds/message.*"? Does the timeframe refer to the time-to-send the message, the interval between samples, or other?
    a. This refers to the interval between samples of data being sent from DER to the Server over the Verizon network.
4. Has the Phase I of this project, that was awarded to Raytheon, been completed?
    a. Prior to the commencement of this Phase 2 of the Program, Raytheon will restore this EMS as Phase 1 of the Program
5. Will the Phase II of the project be using the Phase I Intelligent Power and Energy Management ("IPEM") EMS system as the computer and HMI interface to the remote generators and Solar PV / battery energy storage systems (BESS)?
    a. The DER integration vendor will be responsible for the development of the HMI (Operational Interface & Informational Interface). The Vendor shall utilize one of the two HPE ProLiant DL20 servers listed in table 6, which is part of the IPEM EMS System. There is also a Display unit already available that shall be used to visually present the informational interface.
6. Can you provide a point of contact for Raytheon to answer questions on the IPEM system and its architecture?
    a. We cannot provide this information at this point in time. We will provide the same upon deciding the finalists.
7. Can Raytheon provide the software manuals and integration guidelines for the IPEM system to allow "contractors" to write the necessary drivers, create the database interface between the communications, database and HMI and develop HMI screens within the IPEM system.

    a. There are no software manuals or interaction guidelines available. If the DER vendor provides the data in a standardized format, Raytheon will be able to ingest the data onto the IPEM.
8. Does the Raytheon already have an HMI screen (s) for either or both Backup Generators and Solar PV/ BESS systems? If this is the case, do you want the contractor to “hook up” the backup generators / Solar PV systems to existing HMI screens within the IPEM with new data from the new generator / Solar locations?
    a. The display for the informational interface is installed and operational. The DER Integration Vendor is responsible for providing a monitor for the operational interface.
    b. Raytheon will be able to provide some existing government-furnished wireframes (design diagrams) and source code from prior projects working on the EMS, but these do not include interfaces capable of directly ‘hooking up’ to the DER data sources without redesign. With that in mind, the DER Integration vendor will be required to coordinate the design of the new interfaces with the EWOC through a design workshop or similar meeting.
9. Will Raytheon provide integration support or documentation to build off of what they have already completed to make the system consistent for current operations and maintenance staff using the system?
    a. As part of the Phase 1 award, Raytheon will be available remotely and in-person to support the integration of DER on the EMS end as funding allows.
10. Is there a Windows OS with IIS (internet information services) system running and available on the same network to support SCADA software that is Windows OS compliant?
    a. Both of the servers listed as parts of the EMS are running Windows OS. However, the EMS is not anticipated to support access to the internet. The DER Server is expected to support IIS and provide a single, secure point of presence to the EMS servers.
11. Will the Verizon 5G network be delayed due to possible interference of the 5G with aviation flight operations?
    a. No, this has been confirmed not to be an issue given the spectrum band the Verizon 5G network operates in.
12. Can you provide a point of contact at Verizon to discuss the 5G modems they will make available to the project.
    a. We cannot provide this information at this point in time. We will provide the same upon deciding the finalists.
13. Will the pilot project undergo DOD RMF accreditation?
    a. As a research project the solutions demonstrated during this pilot will not need to undergo ATO/RMF authorization during the Project, but proposed solutions should be capable of undergoing such authorization in order to be scaled beyond the research microgrid in the future.
14. Is there an EMASS opened for the Miramar microgrid and will the pilot project undergo DOD RMF accreditation?
    a. There is not.

15. Is the pilot project Verizon cellular communication and all equipment designed to meet DOD RMF requirements?
    a. Verizon's 4G LTE and 5G Ultra Wideband commercial networks at Miramar do not meet DOD RMF requirements. Verizon's commercial cellular networks are widely used across the DOD today. Verizon's representations and certifications are available electronically at www.sam.gov.
16. All communication equipment will be provided by Verizon including SIM cards?
    a. The contractor may include the SIM cards and their associated cost in their proposal, to be included as a separate line item not counted against the $300,000 price ceiling. The contractor may also request the customer supply the SIM cards, in which case US Ignite and Verizon would procure them subject to requirements of the vendor's solution.
17. Can we utilize current production Verizon 4G M-to-M modems already in production and integrated into our field RTU hardware?
    a. As long as it's a VZW Certified device, that would be acceptable.
18. If the EMS does not run on a Windows OS, then what OS is it using? Linux make, build, version?
    a. Clarification: by saying that it will run on Linux, we suggest it is capable of running on Linux if beneficial. It currently runs on Windows OS.
19. Will the IPEM EMS support a Microsoft Sql Server database? The existing Raytheon system uses www.influxdata.com.
    a. The IPEM EMS will support a Microsoft SQL Server database, if it is necessary to switch from the existing Influx database.
20. Is the influxdata database ODBC compliant?
    a. There are ODBC drivers available for the influx database. Please refer to influx documentation for additional information.
21. The existing IPEM including HMI is written in C++, with Qt as the cross platform framework.
    a. This is correct.
22. Do you want the contractor to perform the installation of the system at each location?
    a. This is correct.
23. Do you want installation manuals, software user guides, etc. documentation of the system?
    a. This is correct.
24. Is the cellular network private, public, or hybrid?
    a. The cellular network is a public, commercial network.
25. Is the customer supplying the wireless modems?
    a. The contractor may include the modems and their associated cost in their proposal, to be included as a separate line item not counted against the $300,000 price ceiling. The contractor may also request the customer supply the modems, in which case US Ignite and Verizon would procure them subject to requirements of the vendor's solution.