Question and Answer List September 20, 2011

Solicitation 6400010810 EV-Charging Station Design-Build Integrating Contractor for Knoxville and Nashville Project

Q1. Is there a way to get a Higher Quality "Eaton One Line" document. As is, the print is too small to read. When you zoom into the document (150%-200%) the writing becomes blurred and cannot be read at all. Please advise. Thank you.
Answer: A higher quality electronic version is attached. The following disclaimer applies to the drawing:
"This document is Copyright (c) 2010 The Electric Power Research Institute, Inc. All Rights Reserved."


209041E-2.pdf

Q2. Could you make available the power point presentation that Norm Durfee did for the pre-proposal meeting on Thursday, August 25, 2011 in the City-County Building Large Assembly Room.
Answer: Included in Amendment No. 01.

Q3. Who arranges for ISP (Part 2- 1.A)?
Answer: Knoxville: City arranges for ISP
UTK: UT arranges for ISP
Nashville: Sports Authority arranges for ISP

Q4. Please identify acceptable low-energy lighting solutions- LED, CFL (Part 2-1.B).
Answer: LED

Q5. Please confirm if thin film (CdTe, CIGS, etc.) modules acceptable as long as they meet the module efficiency requirements (Part 2-1.C) and additional technical requirements (Part 3-1.D).
Answer: Yes

Q6. Please advise if the SCADA system for the battery bank must have "remote communications (capability)" compatible with wireless communications, or hard connection to an EMCS or the LAN/Internet (Part 2- 1.E)?
Answer: Wired communication is preferred but should be integrated with the charger/inverter – see Sunny Island or approved equivalent.

Q7. Connecting security cameras to where (Part 2-1.F)?
Answer: Wireless connection to the internet

Q8. The solar PV, battery system, EV charging stations (and lighting systems) are all grid-connected, (Part 3-1) but none are connected to each other. Is it acceptable for multiple systems, as feasible, to pull power from the same service panel?

Answer: Yes

Q9. Please confirm if there is any penalty for failing to achieve the performance warranty (Part 3- 6).
Answer: Must meet minimum requirements. Any failure would result in the rights of the owner to have the warranty effectively fix any defective condition.

Q10. Please advise if there are compliant micro-inverters which are acceptable or if a BAA-compliance waiver will be entertained should micro-inverters be indicated (Part 4-1).
Answer: Enphase products are UL listed and meet requirements.

Q11. Please advise what data, in addition to AC energy, the monitoring system is to provide (Part 4-3).
Answer: AC energy monitored every 15 minutes and archived.

Q12. Please advise of all data monitoring service requirements- internet accessibility, low production alerts, term of service (Part 4-3).
Answer: Standard data as provided by the models suggested is required.

Q13. Please advise if roof decking for canopies is an acceptable means to conceal bottom of modules (Part 5.2.C)
Answer: Yes.

Q14. Period of performance (F.4) does not seem to be feasible given expected timing for review and comments on multiple design rounds, followed by permitting, followed by procurement timelines, followed by mobilization, construction, and commissioning, and ending with final submittals and training. Please advise if the successful respondent will be able to substantiate and negotiate an extension of this timeline?
Answer: Amendment No. 01 provides a revised proposal due date and a revision to the period of performance.

Q15. What is the expected date delivery of EV charging stations?
Answer: Subcontractor is to arrange delivery directly from Ecotality as required to meet their schedule.

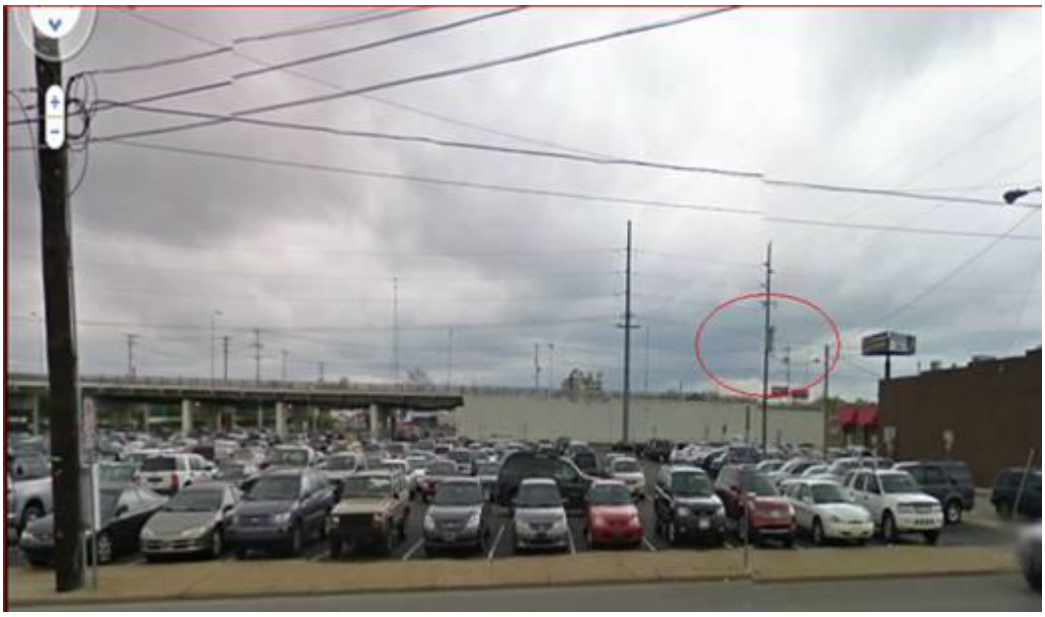
Q16. Please provide narrative on interconnection to the grid at each site; site utility plans and electrical plans and equipment riser for buildings (so that distances of wire and voltage drop can be calculated) should also be provided in order for respondents to insure the systems proposed are feasible.
Answer: Knoxville -Designs should follow standards outlined in KUB's Interconnection Agreement, Interconnection Procedures, and Standard Drawings. All of these documents are available at KUB's website:
www.kub.org/wps/portal/generationpartners.
KUB will work with the selected contractor during design to identify suitable Generation Partners meter locations, if needed. In general, these locations will be at ground level and easily accessible. It is requested that the following example design be followed for Knoxville:

Option 1 Metering.pdf

UTK - All outages will be coordinated through U.T. Facilities Services and will be scheduled according to Campus activities. All other electrical design criteria will be determined by the final concept and must

meet all the requirements included in the Electrical Design and specifications posted on the U.T. Facilities Services Website (hxxp://www.pp.utk.edu/policies/Electrical/index.htm).
The Facilities Services Electrical Superintendent, Electrical Engineer and Utilities Manager will be available upon request to answer more specific questions relating to physical interconnection to utility supply once those needs are determined. Any questions concerning location of existing utilities should be first addressed by requesting a Tennessee One Call through that system to which the University and public Utilities will respond for preliminary marking of those systems.

Nashville - The site plan, location of equipment, wire distances, voltage drop calculations, etc. are the responsibility of the customer. The primary voltage is 13.8 kV at this site, and there is a 75 kVA, three phase, 120/208 V transformer in the lot that can serve the chargers and is circled in the picture below. NES will need to set a pole and bring conductor over to serve the charging stations.



LP Field Site

It is requested that the design example shown below be followed fairly closely for the Nashville design:

Charging Station Drawings.pdf

Q17. Please advise what finishes are acceptable for shade canopies.
Answer: Powder coat.

Q18. Please confirm if underground wiring (wire encased in conduit only) is acceptable.
Answer: Knoxville – see website for requirements.

UTK - Underground wiring will be installed in accordance with the requirements of the National Electric Code. NFPA, and IEEE standards. The final method will be dependent on physical location, Voltage, Ampacity, proximity to other Utilities and other variables that may exist according to design.

Nashville - routinely connect to pad mounted transformers, which require a conduit to enter the transformer secondary.

Q19. Please confirm insurance for vandalism is to extend beyond the construction period.
Answer: Comply with insurance requirements as stated and only for the period of time during construction.

Q20. Please advise if single- or double-post designs are acceptable/requested for PV array canopies.
Answer: Either is acceptable.

Q21. Please advise if internet connectivity is to be provided by successful respondent, or another contractor.
Answer: Successful respondent.

Q22. Please advise if there are any limitations to the lay-down area that will be available at each site- how many spaces at what locations can be used.
Answer: Knoxville – Market Square Grage: Approximately 6 spaces on the top floor can be available; more will need to be discussed. Due to low headroom in the garage, trucks need to be limited to pick-ups and flatbeds.

Coliseum: 6-8 spaces can be made available with more possible upon request.

UTK - Ag Campus will be limited to the space immediately between the site and the greenhouse to the north. Music Building will be limited to grassy area to the immediate west of the site.

Nashville - TBD

Q23. Please advise of appropriate measures to block off pedestrian and vehicle access to work areas
Answer: Knoxville – There can be limited blocking of pedestrian and vehicle access. Specific requests will be reviewed. Any traffic blockage will require city permits.

UTK – Ag Campus sidewalks, driveways, and streets cannot be blocked, except for short periods of time to facilitate construction.
Music Building sidewalk and driveways, streets cannot be blocked, except for short periods of time to facilitate construction. Bidders should be aware of major construction activity to the south.

Nashville – TBD

Q24. Has the insurance been clarified or do we need to allow for the Pollution policy as outlined in section 6 and also the builders risk in section 7.
Answer: Allow for insurance as stated within the requirements.

Q25. Will an alternate location for the solar panel be entertained for the Market Street Parking garage if the cost savings is significant?
Answer: Yes.

Q26. How are the utility accounts to be opened /set up(Name?) or will the contractor be responsible for all charges until project is completed?
Answer: Knoxville: City arranges

UTK: UT arranges

Nashville: Sports Authority arranges

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Q27. There is a requirement for "on-site" safety. How is this defined with multiple locations? Will Nashville require a separate person, and with multiple locations in Knoxville how will this be interpreted??
Answer: A full time SSHO will be required to circulate between sites within each city when working the project sites concurrently.

Q28. How do they intend to connect the items to the grid? The solar panels are typically required to be connected on their own feed and net-metered separately. This will be an issue on the UT sites as there is only campus power, not KUB power available.
Answer: See attached interconnection diagrams for Knoxville and Nashville.

Option 1 Metering.pdf

Charging Station Drawings.pdf

Q29. Do they intend to have a separate power service at all of the locations of add to or subtract from the existing service consumption? If the latter, has this been approved by the owners?
Answer: All service connections have been approved in accordance with the metering arrangements shown in the attachments in Q28.

Q30. Will ORNL provide confirmation from the original Structural Engineer of Record that the Coliseum and Market Square Garage can sustain the additional structural loads for support of the new solar array?
Answer: No.

Q31. If these structures will support the new loads, it will be important that the original structural drawings and details be made available to the Bidders so that the connections and anchorage of the necessary support structures cab be designed and priced.
Answer: Drawings will be made available.

Q32. Will you provide us with geotechnical reports and utility plans/drawings for the two UT campus sites and the LP field parking lot?
Answer: Geotechnical reports are not available. Utility plans when and if available will be provided. They are currently unavailable.

Q33. Can the grassy area in front of the Coliseum garage be an alternative location for the solar aspect of the project?
Answer: No.

Q34. Does the anti-islanding requirement for the “inverters” apply to the inverter/chargers (SI5048) as well?
Answer: Yes.

Q35. Can a deep cycle AGM be used as an alternative to sealed, lead acid batteries if they still perform to the criteria listed?
Answer: Yes.

Q36. Even if rated for outdoor use, may the car chargers be exposed to direct weather, or do they need to be shielded from the weather with an overhanging structure?
Answer: The chargers can be exposed to direct weather.

Q37. In some locations, if panels are secured to a canopy directly over the parking spots designated for the chargers, the panel orientation (azimuth) will be significantly off of south, which will affect system efficiency. As there is a performance requirement of 70% rated power at STC, the deviation from South may prevent the efficiency requirement from being reached without using unsightly tilt systems in the racking design. May additional panels be utilized to offset the inefficiency in order to keep the production within the 2 – 2.5 kw/space goal?
Answer: The performance specification refers to system output relative to the solar energy received. Compliance is demonstrated by measuring the incident solar with a pyranometer or comparable device to achieve a comparison with STC insolation (1000W/m^2). Panels are to be designed to meet the specification requirements.

Q38. Is space for handicap parking spots required for these systems?
Answer: Not in addition to existing ADA spaces.

Q39. Who's responsible for the monthly fee associated with the services needed to access the security cameras and system monitoring equipment remotely?
Answer: System owner.

Q40. Who will make the decision on whether an existing service can be used at each site, or whether a new service will be needed?
Answer: Associated utility – KUB for Knoxville, UTK for UTK, NES for Nashville – based on design request.

Q41. It is critical that electrical plans, single line diagrams, and telecommunications plans are provided for each of the five sites so that the grid tie can be designed. Will these be made available?
Answer: Diagrams will be provided when and if made available.

Q42. Please provide accurate floor plans and/or site plans for each of the five sites so that the overall installations can be designed and priced.
Answer: The current available site drawings have already been provided. There are no additional known site drawings available at this time.

Q43. NABCEP does not certify solar designers, only solar installers, wind installers, and technical sales representatives. Therefore the solar designer cannot demonstrate certification by this organization. We request this requirement be deleted.
Answer: The design is to be in accordance with NABCEP guidelines. See Section 3, Part 3.7 of the RFP documents.

Q44. In Section 3, Part 2 1D of the RFP documents, are the ADA requirements applicable only to parking spaces?
Answer: Yes.

Q45. In Section 3, Part 2 1E of the RFP documents, has KUB, UT, and NES agreed to the utilization of a battery module, and approved the discharge of the battery back to the grid?
Answer: Yes.

Q46. In Section 3, Part 2 1F of the RFP documents, is one camera at each of the five installations sufficient for security monitoring?
Answer: Yes.

Q47. In Section 3, Part 3 1A of the RFP documents, is a "fourth system" required for lighting and miscellaneous power?
Answer: Yes.

Q48. Does 10 CFR 851 apply to this project?
Answer: No. See Solicitation Section H Special Provisions – which states that: **Section 1.31 of the Company's General Terms and Conditions--Construction (CON Mar 2011) is replaced with the following:**

ENVIRONMENT, SAFETY AND HEALTH PROTECTION (04-25-2007)

Q49. Does the project require a full time safety officer or can the Site Superintendent have dual roles as long as he/she has the qualifications that meet the requirements for the safety officer?
Answer: Dual roles as long as requirements of Section 3, Part 6.10.D are met.

Q50. Is the general contractor required to be on the ORNL qualified construction subcontractors listing to bid this project?
Answer: No.

Q51. The published prebid agenda states the last day for questions is Sept 9. Section J (pg 20) states Sept 16 is the last day of questions. Can you please clarify?
Answer: Amendment No. 01 revises the last day for questions date.

Q52. The RFP states the seller is to mobilize and concurrently perform work on multiple sites. Section H, pg (2) states that during period of active construction, Seller shall have designated safety representative present on the construction site. Is it UTB's requirement for seller to have more than one safety representative to ensure a presence at all sites during construction or may the contractor rotate a single representative between the sites maintaining a safe and compliant safety program?
Answer: See answer to Q27. Also see Q58 regarding the issue of "concurrent work".

Q53. Do the multiple certification and related documentation required to be submitted in the proposal count toward the 20 page count? Example required documentation includes an EMR letter, UTB prequel letter,

Bond letter, Insurance documentation, TN contractor's license, and NABCEP Certifications by solar designer & installer. Including this information in the page count will significantly reduce the space available for presenting Criteria 1 documentation.
Answer: No! We are looking for clear and concise proposals addressing the specifics of all the requirements while limiting wordy documents. 20 is an arbitrary number.

Q54. Do the cover page, outline, and tabs count against page limitation?
Answer: No. See Q53 response.

Q55. My we use tabloid size paper to present information related to schedule and organization?
Answer: Yes.

Q56. Section J (page 16) states "A minimum of the most recent two similar projects performed by your proposed team during the past five-year period shall be identified. If you don't have three team projects, provide…." Is the minimum requirement 2 or 3 descriptions?
Answer: Three! However, if you only have two, submit additional but similar complexity type work for review and consideration.

Q57. Section J (pg 16) defines the 8 elements that must be presented when providing examples of past experience. This section also states "…provide similar projects for each organization of the team." If a team were comprised of 3 companies, this requirement could result in 9 past performances to be included in the proposal. Section J (pg 13) states "experience/past Performance" as a "Technical Criteria" to be evaluated. Subsequently it may be inferred that UTB anticipates complete project descriptions to be provided. Our ability to provide adequate documentation will be severely hindered if it is to be included in the 20 page count. Will UTB allow past performance descriptions to not count against the 20 page limitation?
Answer: See answer to Q53 above.

Q58. Attachment 1 – Knoxville Price Proposal & Attachment 2a – LP Nashville Price Proposal each call for a fulltime Project Manager, Superintendent, Safety Professional and Quality Assurance Professional. Work at these sites will be conducted concurrently as directed in the RFP. Is it UTB's intent for the successful contractor to hire two fulltime professionals for each of these positions? If not, completion of these forms as prepared will not add up to the bid price.
Answer: Concurrent work is not mentioned within the RFP. While it may have been mentioned during the Pre-Proposal meeting as the preferred method, the Sellers proposal will contain the methodology of work description which will ensure completion within the period of performance. As for the pricing proposal documents, the Seller is to identify any duplicated positions based on how you propose to manage the work.

Q59. Who will make the decision on whether an existing service can be used at each site, or whether a new service will be needed?
Answer: Assume new service will be required at each site.

Q60. Has the decision been made about whether hard wired or wireless communications will be required for the five sites?
Answer: Each of the selected sites will have the ability to bring a wired internet connection to the overall charging facility. Communications to the individual elements (inverters, EVSEs, etc.) may be wired or

wireless, provided that reliable communications are demonstrated with no compromise in signal strength or line of sight for any wireless communication links.

Q61. Where handicapped parking spaces are covered, or required to be added, can the space used to unload the vehicle adjacent to the HCP space be counted as a parking space if covered by the PV canopy?
Answer: The PV canopy does not have to cover the space for it to be counted as a parking space.

Q62. In Section 3, Part 2 1E, have KUB, UT, and NES agreed to the utilization of a battery module, and approved the discharge of the battery back to the grid? Most utilities will not accept an inverter that "islands", which means that it stays on-line during loss of utility power. Additionally, the Statement of Work, Part 5 - Execution, Item No. 1, Paragraph N, indicates that "...The inverter(s) shall not operate without the line voltage present. The inverter(s) restart shall occur automatically after restoration of line voltage and frequency for at least five (5) minutes." This appears to be in contradiction with the intent of the suggested one-line example drawing. Is the battery to be capable of actually discharging to the grid, or should it be used to discharge to a critical load such as a EVSE unit, which would be a more typical use?
Answer: The battery will only discharge to the grid and will not operate during times of no line voltage. See UL1741.

Q63. Will standard TVA generation partners agreement "separate" metering of the PV array be required? Should the balance of the equipment EVSE, lighting, etc. be on a separate new meter, or placed on the existing building power service meter?
Answer: See Q16 and Q28 answers for metering. Lighting does not require a separate new meter.

Q64. Will a separate canopy be required at the Civic Auditorium for vehicle cover and/or can the solar panel array be located differently as shown?
Answer: A different solar panel location may be considered. A canopy cover separate from the solar is not required.

Q65. Can the utility building parameters be better defined such that all bidders are looking at the same type of structure?
Answer: See Q16 answer.

Q66. The ADA parking space is considerably wider than a normal space;
Part 2 (Scope Requirements) , section 1D states that the stations will be constructed to be compliant with ADA access requirements. Does this mean each space or a designated number per installation (if all, will this not exclude non handicapped persons from parking)?
Answer: Access is not restricted at this time, since there are no clearly established EV ADA requirements. Where charging pedestals are mounted on the parking surface, one 48" high pedestal is to be provided in a given location to serve as a handicap space, and the remainder will be 60" height. Where pedestals are mounted on a surface that is 6" or more in height above the parking surface (e.g., a 6"curb), all pedestals in that given location will be 48" height.

Q67. When will the drawings be posted from amendment 1?
Answer: Amendment No. 01 is posted and all information referenced within should be readily accessible.

Q68. When will site specific structural (received Market Square construction documents) and geotechnical reports and evaluations allowing compatible design packages as they relate to site specific conditions, namely the structural capability of parking structures and sub-surface characteristics be available (Part 1-1. and C.) .

Answer: Access to structural drawings should be available for viewing from the solicitation website. There are no geotechnical reports.

Q69. Will a PV Solar canopy configuration that is self-supporting (without roof or deck panels) and will divert rain water to the required gutter and downspouts, and compliant with all other requirements and codes be acceptable (Part 2-1.C., Part 4-2.)?
Answer: Yes, if it meets all technical requirements. Integrated canopy structures, such as Florian, will be considered.

Q70. Are PV Solar arrays meant to provide cover for cars in all open air applications? Or can PV Solar arrays be remotely located slightly away from the charging stations where shading or other interferences are encountered? If future conflicts are realized, how will alternate locations be decided?
Answer: Where canopies are located over the spaces, they should cover the cars. Slight adjustments can be accommodated as long as spaces are covered, except in the case of the parking garages.

Q71. SOW: ". charging stations will be constructed so that they are compliant with ADA access." Statement seems to indicate that all charging stations (charging stalls.) are ADA accessible; is that the intent (Part 2- 1.D.)? If 'no', then what is the intent?
Answer: See Q66 answer.

Q72. SOW: ". design will include a battery storage enclosure with ventilation and cooling (as required). modular design that is architecturally compatible with and complimentary to." (Part 2-1.E., Part 4-7.B). Prefabricated or modular NEMA 3R enclosures are typically very utilitarian in appearance with little or no consideration for compatible or complimentary features. Please clarify what is expected here.
Answer: The battery enclosure is to be as compatible with the overall appearance of the station as possible and still meet the technical requirements. Choices of size, type and color should be made to be as compatible as possible with the overall facility appearance.

Q73. Can an alternative Battery technology be proposed? If yes, and the battery can support being 100% fully discharged, then what would the required storage capacity be? If alternative battery storage does not require cooling, can the requirement for cooling requirement for the battery enclosure be omitted.
Answer: Yes, as long as it meets the technical requirements. Battery capacity was selected to achieve ~1.2 kWh useful energy per parking space at 50% depth of discharge (i.e. 2.4 kWh of installed capacity per space). Thus if reliable cycling to deeper depth of discharge can be achieved with technologies other than lead acid, the battery capacity may be scaled accordingly (e.g. at 100% depth of discharge, 1.2 kWh of installed capacity per space).

Q74. Will ORNL/UTB participate in any aspect of the reviews and/or coordination between contractor and Jurisdictional/City/UT approvals (Part 2- 2.)
Answer: ORNL's review will be separate from the City's review.

Q75. Will ORNL/UTB participate in the TVA Generation Partners Program? Is so, will ORNL manage/drive that permit process?
Answer: No.

Q76. SOW: "Provide monthly reports to ORNL as directed by ORNL." Will ORNL direct these reports at its discretion or in adherence with a specific format or set of requirements provided to the Contractor (Part 2- 5.)?
Answer: Yes.

77. The SOW does not mention the extents of repair and/or renovation to parking surfaces that may be encountered during the course of the work including new pavement (type and limits), repair to existing pavement/surfaces, striping, wheel stops, etc. Please advise.
Answer: All surfaces, sidewalks and disturbed areas in the construction areas are to be repaired to their current condition.

Q78. The SOW does not identify or require permanent signage for each unique site. Will there be any signage required such as: Job Signs, Site Identifiers (i.e. UT AG Campus), or other permanent security or operational signage?
Answer: A sign that says "EV Only Except for Game Parking" might be required at LP Field.

Q79. Can respondents suggest cost savings and/or added value items in their proposal above and beyond the base requirements of the RFP? If so, how will those items be considered and/or evaluated?
Answer: Yes, as long as you have provided your proposal within the format etc. as requested. Any additional value add alternative suggested by you would be in the form of an alternate for consideration. This alternate would be considered after your original proposal has been evaluated and determined acceptable. I call your attention to review the best value analysis process and the ranking of each etc. and how it is stated within the solicitation document.

Q80. Where is the designated spoil location for each site for soil, rock, asphalt?
Answer: It is the Sellers responsibility to dispose of spoils at a legal disposal site.

Q81. Will the EVSE be procured and/or supplied by ORNL?
Answer: See Q85 answer. ORNL will not supply the EVSE.

Q82. Will any encroachment into the sidewalk at the Nashville location be permitted or will a reduced length parking space be permitted due to the supports for the canopy?
Answer: Revising information related to this location which will be forthcoming.

Q83. Please confirm batteries will not provide back up for any of the systems the contractor is to provide (PV array, EV stations, lights)
Answer: The batteries will be independently connected to the grid and are not to provide backup to any other systems.

Q84. Please confirm the load that the batteries should be engineered to serve and the conditions under which they must be able to serve this load
Answer: See SOW Part 4.7.A.

Q85. Please confirm that EV charging stations are provided by others
Answer: The EV charging stations are provided by Ecotality at no cost. Upon three week notice, seller will pick the stations up at the Ecotality warehouse in Knoxville or Nashville. Location and point of contact will be provided.

Q86. Re: draft RFI response Q16, "NES will need to set a pole and bring conductor over to serve the charging stations". Please confirm if the utilities will provide power at all sites
Answer: Power will be made available at all sites. See Q16 answer.

Q87. Please confirm the physical location (service panel, distribution panel, transformer, etc.) at each site where power is available to feed new service panels for PV arrays, EV stations, lighting, etc.
Answer: Same as Q16.

Q88. Please define the liquidated damages that are applicable should the end date be exceeded.
Answer: We have no monetary damages included. However, we will hold a performance bond for the project.

Q89. It appears that the SMA Sunny Island Inverter suggested in the Statement of Work will not provide the option of remotely operated energy deployment. However, Silent Power OnDemand does provide that capability. Will Silent Power OnDemand be an acceptable alternative to the SMA Sunny Island?
Answer: Yes, as long as it meets the requirements specified.

Q90. Will an integrated canopy structure such as Florian for the solar canopy be acceptable?
Answer: Yes, as long as it meets the requirements specified.