



**OHIO TURNPIKE AND
INFRASTRUCTURE COMMISSION**

ADDENDUM NO. 2
ISSUED APRIL 28, 2022

to

RFP NO. 8-2022
SOLAR ENERGY DEVELOPMENT PROJECT

PROPOSAL DUE DATE: 5:00 P.M. (EASTERN TIME), ~~MAY 6~~ MAY 13, 2022

ATTENTION OF RESPONDENTS IS DIRECTED TO:

ANSWERS TO QUESTIONS RECEIVED THROUGH 10:00 AM ON APRIL 28, 2022

AND

PROPOSAL DUE DATE EXTENDED TO 5:00 P.M. (EASTERN TIME), MAY 13, 2022

Issued by the Ohio Turnpike and Infrastructure Commission through Aimee W. Lane, Esq, Director of Contracts Administration.

Aimee W. Lane

Aimee W. Lane, Esq.,
Director of Contracts Administration

April 28, 2022
Date

ANSWERS TO QUESTIONS RECEIVED THROUGH 10:00 A.M. ON APRIL 28, 2022:

Q#1 The anti-circumvention probe is halting a lot of projects right now as 80% of the panels used in the U.S. come from those SE Asia countries that are at issue for subverting limitations on Chinese panels. Consequently, there is a very limited supply of panels not sourced from an at risk location.

Does the OTC have a position on the type of panels to use? If we use an at risk panel and that supply is shut down, will that be an accepted defense for a delayed start of construction?

A#1 Made in USA is mandatory for panels and inverters. The construction schedule may be adjusted on case-by-case basis when supply issues arise.

Q#2 May I request the CAD files that Osborn Engineering used for the five site layouts that the arrays are based off of? We would like to propose our own layouts in the areas provided, and for consistency, would like to base our proposal off the same CAD drawing sets.

A#2 The Commission's CAD files of the service plazas are available but due to their size, will only be provided by FTP link. Respondents interested in obtaining the CAD files may make a request to the Commission at purchasing@ohioturnpike.org, to which the Commission will respond with instructions to download the files from an FTP link. Please be advised that the CAD files are not public records per Section 143.433 of the Ohio Revised Code and shall not be copied or distributed. The CAD files are for OTIC authorized purposes only.

Q#3 On page 11 of Appendix A it says.

- PPA billing rate will be negotiated at the time of PPA execution. The Commission is requiring that the PPA billing rate for any given year of the agreement be no higher than the current electricity utility rate in 2022 dollars, reduced by 5%, with rate changes occurring no more frequently than annually.

Could you please provide the electric rates currently in effect for each location?

A#3 OTIC currently has a 3rd party supplier contract with a negotiated rate of \$34.00/MWh with MP2 Energy. This contract is a 36 month contract that began in May of 2021 and runs through April of 2024 with this rate and is effective at all of the locations under review for the solar project.

Q#4 Would it be possible to create an addendum to RFP No. 8-2022 (Solar Energy Development Project) to address the following question prior to responding to the other anticipated questions which are due April 22nd?

Our concern is that it is of critical importance to share the current electricity utility rate at this time. Most respondents have the experience to understand the current electric utility rate that will make this project viable. By sharing the current electric rate now you will be helping all respondents determine a Go /No-Go decision on this opportunity. For those who can make the project viable they will dedicate the appropriate resources resulting in a more thorough and competitive proposal.

I am referring to page 2 of the RFP, Part IV: “PPA billing rate will be negotiated at the time of PPA execution. The Commission is requiring that the PPA billing rate for any given year of the agreement be no higher than the current electricity utility rate in 2022 dollars, reduced by 5%, with rate changes occurring no more frequently than annually.”

A#4 See answer to Q#3.

Q#5 What is the current electric utility rate?

A#5 See answer to Q#3.

Q#6 In Appendix A, page 3, the RFP states that the installer may use post-mounted solar panels (nicknamed "solar sunflowers"). "Solar Sunflowers" are a specific type of post-mounted solution. Please confirm if the installer must use a "Solar Sunflower" or if the shape of the post-mounted solar design can be at the installers choosing?

A#6 Post mounted PV panels is required in areas where “solar sunflowers” are suggested, with bottom of panel no closer than 6-ft from the ground. Fenced in ground-based array is not recommended in these locations due to the minimum 25-foot setback from nearest panel to the fence to avoid shading. How the panels are mounted on the post and in what configuration is flexible. See also response to Q#8.

Q#7 If the post-mounted solution must be in the shape of a “Solar Sunflower” please confirm if you are specifying the “SmartFlower” or just an array designed to look like a Sunflower?

A#7 See response to Q#6.

Q#8 Please confirm if, when specifying a “Solar Sunflower” you are specifying a posted mounted tracking system or if a stationary post-mounted solution is acceptable? If tracking, please confirm if you are specifying a double-axis tracking solution or if Single Axis tracking is acceptable?

A#8 Motorized tracking systems are not allowed, due to the risk of mechanical failure due to corrosion, especially given the seasonal salting of roadway surfaces in cold weather. A stationary post-mounted solution is acceptable.

Q#9 In Appendix A, page 3, the RFP states that the installer "may" use post-mounted solar panels (nicknamed "solar sunflowers"). Please confirm that no points will be deducted if the installer chooses not to install post-mounted solar?

A#9 Points will be awarded based on meeting or exceeding criteria in the RFP, not specifically whether solar sunflowers are used.

Q#10 First Solar is shown on the list of acceptable modules, but there is also a module efficiency minimum stated on page 131 of 18.9%. First Solar modules do not meet this spec - - the highest efficiency module is the Series 6 plus which is listed at 18.7%. Please confirm if there is a minimum efficiency requirement for the modules?

A#10 No, but there is a specific target energy production requirement for the PV arrays as a whole, based on the available site area: 2,243MWh annual energy production for all sites added together.

Q#11 If a solar module is proposed in the design that does not meet the minimum efficiency requirements how many points will be deducted in the evaluation of the proposals?

A#11 See response to Q#10.

Q#12 On page 3 of Appendix A, there is a chart showing the (A) Minimum PV Array Size (kWdc) and (B) Minimum kWh per kWdc (the yield) for each site. Is it acceptable to propose a larger system size with a lower yield that arrives at the same annual production for each site? Similarly, is it acceptable to propose a smaller system size with a higher yield that arrives at the same annual production for each site?

A#12 Yes to both questions. Technical proposals will be scored higher if the total yield for all five sites added together is higher than in the other proposals, using the areas shown as allowable on each of the five site plans. See response to Q#31 for conditions on this.

Q#13 Will points be deducted from the Technical Proposal if the Annual Energy Production Targets are reached, but the system (at a particular site) is sized below the Minimum Size - or if the energy yield (kWh per kWdc) is below the minimum - that is listed in the table on page 3 of Appendix A?

A#13 Answer to these questions is “no”. See response to Q#12.

Q#14 On page 3 of Appendix A, the yield for Indian Meadow is 1420 and Tiffin River is 1340? Are these numbers accuract, or should both of these be 1320 to match the other sites?

A#14 The productivity yield ratios of kWh per kWdc is based on climate data and shading relative to the areas available on each site for PV production. These are given as rough minimum targets for each site, but are not absolute requirements. Again, total energy production per year for all five sites added together is key.

Q#15 Can you share the report from the software that predicted the 1420 yield at Indian Meadow and the 1340 yield at Tiffin River as listed in the table on page 3 of Appendix A?

A#15 These are approximate calculations from using PVWATTS, an online tool from NREL, and are rough calculations.

Q#16 Can area's other than what is identified in the RFP drawings be proposed as an alternate site layout?

A#16 No.

Q#17 Keynote #2 on the line diagrams for each of the 5 sites calls for a “Rapid Shutdown System” to be installed in accordance to NEC 690.12 A-D. NEC 690.12 states that “Rapid Shutdown Systems” are not required for ground mount systems. Please confirm that this RFP is not asking for a more stringent design that is what is required by NEC 690.12 and that module level Rapid Shutdown is not a requirement for the ground-mount sites?

A#17 Not confirmed. OTIC wants to keep the rapid shutdown system as an enhanced safety feature in case of a ground-based fire that carries into the location of the ground-based PV array.

Q#18 General note #2 on the Electrical Site Plan for each of the 5 sites says to reference the existing Civil Engineering drawings and other documents to coordinate existing utilities. General note #4 on the Electrical Site Plan for each of the 5 sites says to reference the existing E-500’s for typical direct buried section. Are these drawings and document part of the RFP package?

A#18 The civil engineering drawings are available but due to their size, will only be provided by FTP link. Respondents interested in obtaining the civil engineering drawings may make a request to the Commission at purchasing@ohioturnpike.org, to which the Commission will respond with instructions to download the files from an FTP link. Please be advised that the civil engineering

drawings are not public records per Section 143.433 of the Ohio Revised Code and shall not be copied or distributed. The civil engineering drawings are for OTIC authorized purposes only.

Q#19 In Appendix A, page 4, the RFP states that "each campus has a primary utility meter upstream of the medium voltage transformer". Is it acceptable to interconnect the system between the meter and the transformer if we can justify in our technical proposal how this interconnection point can be done just as securely as what is discussed in the RFP?

A#19 It is acceptable to propose this idea, so long as the projected downtime to the Service Plaza is thoroughly detailed in the proposal for where this idea is used.

Q#20 Does First Energy require reclosers for all of these projects or only the project above 300kWac?

A#20 This specific conversation with First Energy has not occurred yet. This utility coordination shall be included in each proposal in response to this RFP.

Q#21 In Appendix A, page 4, and on page 136 of the RFP the connections from the inverters to the building is listed as fiber optic. Is it acceptable to use cellular technology instead of fiber?

A#21 No.

Q#22 Is there any consideration in the technical proposal scoring if Ohio based manufacturing of Modules and/or Racking is specified?

A#22 There is a made-in-US requirement. However, there is not a specific requirement for Ohio based manufacturing.

Q#23 On page 132 of the RFP pdf document the basis of design for Inverters is the SMA Core1 62.5kWac. Please confirm that string inverters rated for 1500Volts are an acceptable inverter substitute?

A#23 Yes, this is acceptable, on condition that installer meets the performance requirements of RFP.

Q#24 Is it acceptable to consider the roof as a potential area to install solar?

A#24 No.

Q#25 Has a roof study been performed?

A#25 See response to Q#24.

Q#26 There is a small section of land at Glacier Hills - to the South of the Truck parking - that has some shading but is otherwise suitable for solar. The area is likely too small to be a consideration for truck parking expansion. Can a solar array be proposed in this area as an alternative location?

A#26 No.

Q#27 At Indian Meadow there is space to the east of the proposed layout. Can we expand our layout ~30ft to the east? Can we expand 200ft to the east? Can we utilize the entire space to propose a larger system? Or, does the system need to fit exactly as shown in the drawing?

A#27 The PV system needs to fit within the available space as shown on the site plan in the RFP.

Q#28 At Mahoning Valley, the area to the North of the truck parking does not appear to be large enough to be useful for future truck parking. Can this area be utilized for an alternative site location?

A#28 The PV system needs to fit within the available space as shown on the site plan in the RFP.

Q#29 Is there a maximum annual energy production for any of the sites? That is, can we design a system that will offset 100% of the current annual energy needs?

A#29 The allowed maximum for annual energy production per site by the solar array is no more than the annual electrical energy consumption for that site. OTIC would like to approach that 100% electrical energy offset as much as possible. Please note that the PV array system for each site must fit within the allowable areas shown on the site plans.

Q#30 Is the RFP requesting financial documents from the EPC team or the project Owner (ie financing partner that will hold the PPA)? Or, from both the EPC firm and the Owner's financial documents?

A#30 From both.

Q#31 Is it acceptable to meet the annual energy production for the five sites as a whole rather than for each site individually? This would allow the installer to optimize the system sizes at each site, meet the annual energy purchasing goals of the turnpike commission, and provide the lowest possible PPA price.

A#31 It is acceptable under two conditions: (a) the annual energy production at any one site does not exceed the annual energy consumption for that site, in keeping with Ohio net metering rules, and (b) the site areas used for any site does not include areas outside of those approved for use in the RFP site plan drawings.

Q#32 The RFP states that the “First Project Site needs to be operational by 10/30/2023”. When do all 5 sites need to be operational?

A#32 Installer is only required to do at least one site, with an option to do up to all five. For the sites on which they bid after the first one, OTIC is requesting a completion date of 10/30/2024.

Q#33 Is it mandatory to provide a proposal for all the five locations identified? Can proposals be provided for a subset of the locations identified?

A#33 No to the first question. Yes to the second question.

Q#34 Will the Commission be open to considering an EPC instead of a PPA?

A#34 No.

Any respondent that takes exception to the form PPA should submit those exceptions in writing with its proposal as explained in the RFP. If the top ranked respondent submitted written exceptions to the form PPA, the Commission will attempt to negotiate those terms to the satisfaction of the parties. If those negotiations fail, the Commission reserves the right to enter into contract negotiations with the next ranked respondent.

Q#35 Is the Commission open to considering changes to system size/design to optimize the PPA?

A#35 Yes, depending on what is suggested. Bid the project as shown, and then provide a separate alternate for this suggestion.

Q#36 Can the current electric rates for all sites be provided?

A#36 See answer to Q#3.

Q#37 On page 16/204 it is mentioned that ground clearance must be at a minimum 36in. This requirement will result in higher construction costs due to the high price of the added steel to meet this requirement. Why such a large ground clearance other than the growth of plants underneath the array, as stated in the RFP?

A#37 The 36-inch height was given to allow the broadest array of pollinator plants to be allowed on this project. Consideration will be given for a lower mounting height as long as the proposal clearly articulates how plants will be managed to avoid them growing tall enough to shade the panels.

Q#38 On page 16/204 it is mentioned that setback for fencing should be at a minimum 25ft from the PV array. This seems excessive as the typical setback would be 15ft for a fence height of 6ft and 8 inches. This will result in insufficient land use leading to smaller PV system sizes. Is there a reason for this 25ft setback requirement?

A#38 The 25-ft setback was given to ensure that a 6-to-7 foot high fence would minimal shade the panels. If the proposal explains how shading will be minimized with a lesser setback without shortening the fence height, then consideration will be given to that proposal.

Q#39 On page 14/204 it is mentioned that the PV system at each location will connect to a central inverter, but the inverters for the basis of design are string inverters. For the PV system sizes proposed at each location in the RFP, string inverters make sense both from a design and a financial perspective.

A#39 Use string inverters as described in spec section 263300 for the photovoltaic system.

Q#40 Are there any restrictions on the inverter manufacturer similar to the PV panel manufacturer (manufactured in the United States)? Are the inverter vendors on the inverter manufacturers list the only vendors we can use? (Page 132/204)

A#40 See answer to Q#1.

Q#41 After completing some preliminary designs, the majority of the locations have higher yield numbers in the RFP than our initial analysis. Specifically: Glacier Hills 1135 kWh/kWp instead of 1320 kWh/kWp, Indian Meadow 1312 kWh/kWp instead of 1420 kWh/kWp, Mahoning Valley 1156 kWh/kWp instead of 1320 kWh/kWp, and Tiffin River 1314 kWh/kWp instead of 1320 kWh/kWp. The only location which the yield matches the expected yield is Wyandot 1328 kWh/kWp compared to 1320 kWh/kWp. We believe the difference in yield (kWh/kWp) might be to not including accurate snow soiling in the weather model for these sites or using different weather files. The RFP requests a minimum kWh/kWp to be met for each location. Has analysis been performed to verify these yields can be met? If yes, could such analysis be shared?

A#41 Analysis was based on solar data from PVWATTS website, and assumed that panels will be routinely cleared off of fresh snowfall. See responses to Q#10 and Q#31.

Q#42 Please clarify: Part IX states that [5] points will be awarded for “Completion and submission of all items required under this RFP, and any exceptions or requested deviations”, but the subsequent Proposal Evaluation Scoring Table lists [5] points for “Respondent’s intended use of small, minority or disadvantaged businesses.”

A#42 In evaluating the proposals, the five points will be used for scoring “Respondent’s intended use of small, minority or disadvantaged businesses.”

Q#43 Is there a specific Goal for utilization of small, minority or disadvantaged businesses for this opportunity?

A#43 As mentioned in response to Q#42, up to five points will be given based on “Respondent’s intended use of small, minority or disadvantaged businesses. There is no specific, absolute goal. However, number of points awarded will be scaled based on the largest percentage used in all of the proposals, with five points rated on that respondent’s proposal, and other respondents receiving equal or lesser points depending on the percentage cited in their proposals.

Q#44 The scale at Indian Meadow and Tiffin River Service Plaza drawings appear to be incorrect. Please clarify the correct scale to use for these drawings.

A#44 The scale shown is in error. The correct scale for both service plaza drawings is 1-inch to 50-feet.

Q#45 Are any 3' man gates required within the fencing?

A#45 See "Fencing" section of "Auxiliary Construction: Structural and Fencing" in RFQ.

Q#46 Are there permitted Laydown areas at the project sites that can be used for storage of modules and other material?

A#46 This will be coordinated with OTIC Service Plaza operations and facility maintenance staff prior to start of construction. There will be a permitted area on site, but where exactly that is on site will be determined after the project is awarded.

Q#47 What is the basis of building and electrical permitting for this project? Are they based on the Ohio Commerce building permit schedule regarding a cost per square foot? Please clarify if the Square Foot is to be the modules or overall fenced site?

A#47 This is the responsibility of the bidder to determine the answers to these questions in assembling their bid.

Q#48 Site level electricity consumption information: Is there any site level consumption information (monthly bills or interval data) that can provide more granularity for the energy use profile?

a. How were the minimum PV array sizes determined?

A#48 See response to Q#3.

Q#49 It states First Energy is the electric utility for these sites. Which First Energy division is each (Toledo Edison, Ohio Edison, Illuminating Company)?

A#49 Refer to First Energy website for information on which division applies to each site.

Q#50 From a pricing perspective, the deployment timelines (into 2023) introduce uncertainty in terms pricing. The Russian Ukraine war is causing increases in steel pricing. The Department of Commerce (DOC) investigation against solar cell and module manufacturers in Malaysia, Thailand, Cambodia and Vietnam is affecting module availability/pricing across the solar PV industry as well. Are you looking for a "best price" based on today's design and commodity pricing, with provisions for potential sharing of the cost increases / decreases as construction timelines are firmer?

A#50 Bids should be based on material and labor prices known at the time of the bid.

Q#51 Are there any wage requirements (prevailing, union labor, etc.)?

A#51 Prevailing wage applies. See Sections 4.2e and 4.2f in the Sample PPA that is part of the RFP.

Q#52 Is the plan to award all 5 sites to one contractor or splitting them up?

a. Are we required to provide bids for each of the 5 sites?

Q#52 RFP is requiring one response, which may include from one to five sites. The respondent has discretion to choose which sites are included in their response. However, the Commission only intends to agree to one PPA in response to this RFP.

Q#53 Some of the areas identified are shaped in a way that makes it difficult to reach the minimum PV array sized proposed. What would be your recommendation for this?

a. Will you be valuing proposals that are able to maximize capacity in their designs for the response?

A#53 See response to Q#31.

Q#54 Will these be sales tax exempt?

A#54 No.

Q#55 Will alternate financing be considered if the Owner can demonstrate the increased financial value to the Turnpike Commission?

A#55 No.

Q#56 The Scope of Work Summary states that cloud-based web monitoring shall be provided including on-site weather conditions. What weather conditions are required to be monitored and reported?

A#56 Provide a minimum of solar irradiance, temperature, precipitation.

Q#57 Cloud-based web monitoring is a subscription-based service. How many years of this service should be included in our proposal?

A#57 For the entire term of the contract while the PV system is operational.

Q#58 The Scope of Work Summary states that public friendly graphical display of energy production at location is required. What is the required size of these displays?

A#58 Display (flat screen monitor in public lobby) power and internet connectivity will be supplied by OTIC, but respondent is required to provide a web-based display of information as described in the RFP.

Q#59 Spec Section 26 24 16, 2.3.C.10.b of the RFP states “*Communication Capability: Communication module with functions and features compatible with power monitoring and control system specified in Division 26 Section “Electrical Power Monitoring and Control”.*” This section is missing in the RFP. Please provide the section.

A#59 The section being referenced here is Specification Section 262713, Electricity Metering. Please apply this section wherever reference is made to “Electrical Power Monitoring and Control”.

END OF ADDENDUM NO. 2