

Frequently Asked Questions
Environmental Mitigation Projects
September 2015
Clean/Renewable Energy Projects
Waste Heat Recovery (WHR)/Combined Heat and Power (CHP)

BACKGROUND

Q: What is the WHR or CHP Project and what are the objectives for the project?

A: In April 2011, TVA entered into clean air agreements with the Environmental Protection Agency (EPA), four states and three environmental groups (“EPA Agreements”). These Agreements provide for the implementation of environmental mitigation projects that support cleaner air across the region.

The WHR or CHP project is one of the selected projects. Specific objectives include:

- ∞ Increasing TVA’s industrial customers’ access to clean energy.
- ∞ Providing highly leveraged funding opportunities for new clean energy in the Valley.
- ∞ Providing a model for future innovative and cost-effective clean energy technologies.

Q: What is TVA’s role in this project?

A: TVA will provide general technical oversight and financial assistance with the project’s capital funding by issuing progress-based payments during the design, construction and commissioning period. TVA will also conduct appropriate measurement and verification activities to determine the emissions reductions benefits of the WHR or CHP installation.

Q: How can I learn more information about the project?

A: TVA has information about the project on its website at:

http://www.tva.gov/environment/epa_mitigation/waste_heat_recovery.htm. In addition, those who are interested in having specific questions answered or want to receive information may e-mail industrialwasteheatutilization@tva.com with questions.

RFP PROCESS

Q: When will TVA issue the Request for Proposal (RFP) and who will receive it?

A: TVA issued an RFP on August 3, 2015. It was sent to all TVA’s industrial customers as well as the local power companies to help identify possible candidates in their service areas who would be able to participate. The RFP has been posted on TVA’s website at:

http://www.tva.gov/environment/epa_mitigation/waste_heat_recovery.htm

Q: How will TVA ensure a fair bidding process for the project(s)?

A: All eligible parties will be given the same information to help them create their proposals. In evaluation of the proposals, TVA will use a common, numeric scoring system so that each project is evaluated on the same criteria and a total score will be computed for each proposal. Using these scores, TVA will establish a competitive range. TVA may, in its discretion, request clarifications or conduct discussions with any or all Offerors, or only those Offerors in the competitive range. Specific elements for evaluation are found within the RFP.

Q: What is scoring criteria / evaluation factors (in entirety) for awarding incentives per this RFP?

A: The evaluation factors listed on page 16 of the RFP are intertwined and all will play a role in determining an award. The “ability to meet stated emissions reductions” is based upon the approximate 5 MW system size. The determination of emissions related to any WHR or CHP project is based solely on the electricity generated by the system and the number of kWh or MWh accurately estimated as a result of the WHR or CHP system operation and is a prime determinant for any award.

Q: On Pg. 16 TVA outlines its evaluation factors; are these factors listed in order of priority and/or are they weighted in some way, and the second factor is listed as "Ability to meet stated emissions reductions"; is this intended to reflect the Offerors ability to deliver what is promised or has TVA established a project related emissions reduction target (either rate of mass) that should be met?

A: The potential evaluation factors are all interdependent and all will play a role in determining an award; weighting factors have not yet been established. The "ability to meet stated emissions reductions" is one of the most important evaluation factors. It is based upon the approximate 5 MW system size and the actual amount of electricity generated from the system (based on the number of hours of run time per year and the capacity factor of the system). The greater the run time of the system and the greater the capacity factor will result in greater emissions reduction from the TVA generating fleet, i.e. electricity that TVA does not have to generate.

Q: On Pg. 12, TVA states-- "TVA reserves the right to make multiple or no awards and to award all or a portion of the work scope set forth in this solicitation". What are the criteria that will be used to determine if an award will be granted to one Offeror or if awards will be allocated across multiple Offerors?

A: TVA intends to select the Project or Projects that generate the optimum amount of electricity resulting in the greatest potential to reduce emissions from TVA's generating fleet. TVA's preference is to award to a single project, but that determination cannot be made until after the evaluation of all the proposals.

Q: Is the award process an offer / counteroffer process and is there a maximum number of iterations in the process? Will the best and final offer be clearly communicated?

A: TVA has committed up to \$7 Million to incentivize this project. That amount is the "best and final" and only the selected project owner name and project technology will be communicated.

Q: Is a draft contract available that outlines the terms associated with an award through this program?

A: TVA will provide a draft contract for review upon award.

Q: Can subcontractors to the end users receive the RFP information and answers to questions directly?

A: All responses to the RFP should come from the primary project owner. Any information from subcontractors should be summarized and included in the single response.

Q: Are specific awards / incentives to be included in the proposal?

A: If "in the proposal" refers to the Response to the RFP, TVA will evaluate the cost share between TVA funds (up to \$7 million) and the funds the project owner leverages to fund the remaining cost of the project. Projects that have a payback of less than three years, without the TVA funds are not eligible for funding.

Q: Will the list of interested parties (i.e. companies that have submitted an Intent to Bid form), or the number thereof, be made publically available?

A: No, the list of companies intending to bid is confidential to TVA as is the list of those entities responding to the RFP. All those submitting Intent to Bid forms (provided in the RFP) will receive the responses to all submitted questions as well as any updates to the RFP.

TECHNICAL INFORMATION

Q: Will energy generated from the WHR or CHP project have to be consumed onsite?

A: It is preferred, but not required that the generated energy be consumed on site. Responses that include total consumption of all energy will be evaluated as having an advantage over responses that have excess generation not consumed on site. If any energy is not consumed by the host, a separate Dispersed Power Production agreement between TVA and the host site would need to be negotiated as a separate, stand-alone agreement not related to this solicitation.

Q: Is this available to all industrial customers, whether distributor or direct-serve?

A: Yes, all direct served industrial and LPC-served industrial customers five MW or greater are eligible as well as other customers that have a sufficient waste heat stream to meet the requirements of the RFP.

Q: The RFP states that it is intended for 5 MW or greater industrial customers. Does it specifically have to be an industrial type of customer that is a manufacturer only, or, is a 5 MW or greater institutional or commercial type of customer eligible power?

A: Proposals from commercial or institutional customers with a load of 5 MW or greater are eligible and will be considered along with industrial customer proposals.

Q: Are directly-served customers eligible to receive an assessment to identify opportunity for WHR or CHP projects, similar to other process assessments TVA provides?

A: No. Customers choosing to participate in the EPA Revised WHR or CHP Project will not receive an initial engineering assessment.

Q: Can customers participating in the Project also qualify for participation in the Energy Right Solutions for Industry >5MW (ERSI >5MW) and be offered assessments to identify potential savings?

A: Qualified industrial customers participating in the EPA Revised Waste Heat Recovery Project can also participate in the ERSI >5MW program for potential energy saving projects outside of the Project, but cannot use the ERSI funds to assess their participation in this Revised Waste Heat Recovery Project.

Q: Will the EPA Revised WHR or CHP Project incentives be in addition to ERSI >5MW incentives? If yes, can they receive both or will it be limited to an overall cap of 70 percent?

A: This Project is a standalone project separate from the ERSI >5MW program; therefore, all project funding, resources, and benefits are accounted for under the EPA Mitigation Project.

Q: Will the generated energy be purchased by TVA, and if so, at what rate?

A: Only if not consumed by the host and exported to a third party (see question above). The rate will be determined by Dispersed Power Production Agreement negotiations.

Q: The fact sheet states TVA is looking for 5 MW and is budgeting \$7 million over five years. Does that mean an incentive of $7 / 5 = \$1.4$ million per MW incentive?

A: The \$7,000,000 committed to the project is to cover aspects or portions of the project requirements such as engineering design, equipment purchase, installation, and commissioning. The five MW is identified an approximate target goal for the total of Project (s); if the project or projects selected exceed the five MW goal then the funds will be used in the most cost-effective approach to reach the goal.

Q: Will there be any exceptions for industrial customers that do not meet the 5MW demand threshold? We have a few customers that are interested in CHP however they have a lower overall demand.

A: The 5 MW size is not an absolute threshold but instead was determined as a size in which sufficient waste heat streams were created that could sufficiently be used to generate megawatt hours which in turn could be used to calculate reduced emissions. One issue to keep in mind is that evaluations will be heavily weighed on the total megawatt hours that can be generated, so smaller firms may be at a disadvantage.

Q: Will there be any exceptions for larger customers that are not considered industrial to participate in this RFP?

A: Industrial customers are not the only potential candidates. Wastewater treatment plants that have a methane output are also eligible as are other large facilities. Eligibility is really based upon having a reliable and sufficient waste heat stream or input to run a turbine to generate electricity.

Q: Does the total load of 5 megawatts refer to metered demand or contract demand?

A: Contract demand.

Q: How many customers or how many projects will receive an incentive award?

A: The selection of the project or projects will be determined during the evaluation process; the project is not set by the number of customers or projects. The project could be a single five MW project and consume the full amount of \$7,000,000 or it could be multiple projects of varying size with the share of \$7,000,000 as necessary by the project host to develop and complete the project.

Q: Is it okay for a project to reach completion prior to the five year deadline?

A: Yes. The April 2020 date is the latest date that the project must be completed and in operation – earlier completion is acceptable and encouraged. Projects will have an EUL of at least twelve years. Measurement, evaluation and reporting may go beyond the April 2020 date for TVA to file a final report with EPA.

Q: Will Direct Serve Industrial selected be required to enter into any contracts or agreements?

A: Yes, a contract will be required between the customer and TVA before any funds can be allocated. Also, if all the electricity is not consumed onsite and excess electricity is sold back to TVA or the Local Power Company, the industrial customer must agree to a Dispersed Power Production Agreement and an Interconnection Agreement. Potential also exists for a Standby Rate contract depending upon the size of the project and the impact on TVA. Information on the agreements will be included within.

Q: Is TVA opposed to a bidder filling out an application using actual data on a facility in one state and assumptions based on our extensive studies conducted on a facility in another state?

A: TVA is not opposed to using experience from the customer's other locations in order to estimate the potential electricity generation from a CHP system. It is recommended that any Proposer using data from another region or location reference that location in the proposal and then estimate if any variance would occur siting the system in the Tennessee Valley.

Q: Will the WHR and CHP be treated with equal preference; and, does TVA hold any intent to award a WHR and a CHP project, even if one out performs the other by a wide margin, all else equal?

A: The award will be based upon many factors including the project's capability to reduce emissions, i.e. generate electricity. The primary goal of this project is to offset electric generation from TVA's generating fleet and the more electricity that can be offset, the greater the emissions reduction. TVA is ambivalent to the selection of a WHR or a CHP system.

Q: Could digester rehabilitation be eligible for grant funds or will only energy production be eligible?

A: The evaluation of the response will be focused on the total project costs against the funds being sought from TVA, i.e. what is the percent of TVA funds versus the leveraged funds being brought by the Responder. Only those costs relative to the inclusion of a CHP system can be offered as representative leveraged funds. It is recommended that all costs associated with the total project be included as costs associated with the development of the increase in methane production may qualify as project costs. TVA would ask that those costs be broken out separately from the CHP system costs.

TVA uses the EPA definition of a CHP system: "A CHP consist of a prime mover (heat engine), generator, heat recovery, and electrical interconnection – configured into an integrated whole". However we recommend that you submit a proposal for your proposed CHP system.

Q: Can proposed projects/assets be owned by entities other than the industrial customer that will be using the combined heat and power?

A: Yes, asset ownership is not restricted to an industrial customer.

Q: Will projects that are fuelled with biogas receive additional credit because of increased environmental benefit?

A: Environmental benefits are one of the primary components of the evaluation.

Q: Suppose an initial design would result in zero export, what are the ramifications should the on-site demand change such that there is an excess for export within the 12 year window?

A: Should the project owner determine that excess power is generated suitable for export, the project owner must execute a Dispersed Power Production agreement (DPP) with TVA if a direct served customer or with the local power company serving the project site and TVA if served by a local power company. More information regarding DDP and interconnection can be found in the Appendix of the RFP.

Q: There are numerous references to a 12 year minimum operating span.

- a) **Is there a penalty assessed if this span is not met?**
- b) **What is the basis of any penalty? Prorating of the incentive award (i.e. would 50% of the total award have to be repaid to TVA should the installation run for 6 years)?**
- c) **Are there scenarios where the 12 year operating span could not be met and any penalty not assessed (i.e. operations ceased / plant closed)?**

A: A requirement of the RFP is for the system to be designed to operate no less than twelve years. If after a term less than twelve years the system experiences a catastrophic failure resulting in the system being unable to be repaired and brought back online, TVA and the project owner will determine the cause of the failure and whether/if any penalty is warranted. Actions that could warrant a penalty (Clawback of funds) could include but not limited to: failure of operator to properly maintain the system; improper operation of the system based upon manufacturer instructions and similar actions.

Q: Contractual performance requirements:

- a) **Is there a minimum asset availability required (i.e. does the generating equipment need to run a minimum percentage of operating days)?**

A: Asset availability needs to be identified in the Response to the RFP and becomes a determinant of kWh generated and emissions reduced.

- b) **How is availability determined?**

A: That is a data point that the Responder will determine based upon hours of operation of the equipment that generates the heat stream.

- c) **Does the availability need to be higher during periods of high grid load (i.e. does maintenance work / overhaul have to be done outside of winter and summer)?**

A: There is no requirement for availability during peak periods. Any higher period generation would only benefit the TVA system if the excess power was being exported to the grid. When a project owner exports power and when maintenance occurs should be based upon the DPP pricing and whether the facility has time differentiated metering.

- d) **Is there a minimum output requirement per year or over term?**

A: This is a key evaluation point, the higher the generation, the high the emission reduction and the higher the evaluation for that project.

- e) **Is the 12 year span based on a set generating rate? If so, suppose the unit exceeded design/nominal generation, would the requirement be less than 12 years)?**

A: No, the 12 year time period is the estimated useful life of the system. If a proposal is received that indicates less than a 12 year EUL but provides generation that exceeds other proposals proposed generation, an exception to the EUL could be made and will be determined at the time of evaluation.