



**VIRGIN ISLANDS WATER AND POWER AUTHORITY
(VIWAPA)**

PR-04-20

REQUEST FOR PROPOSAL
VIWAPA Randolph Harley Power Plant Expansion
General Construction
199312.70.0100

Prepared by: Production and Black & Veatch

**RESPONSE TO QUESTIONS
Addendum V
October 8, 2019**

Clarification to Bidder:

Some early-start questions here below:

1. WAPA has assigned 15 points to Leveraged Cost of Electricity/Energy or LCOE and stated that it has been recommended a specific limitation of three 7-10 MW thermal units for dispatch purposes. In order to properly calculate the variable O&M cost component assigned to the LCOE can WAPA please provide:

Clarification: Paragraph 3 of Section 01100.1 of Attachment A, General Construction, indicates VIWAPA is requesting 36-40MW of generating capacity in dispatchable blocks no greater than 10 MW each.

1. Rated delivery pressure of liquified propane gas (for evaporator sizing purposes)
Answer: 350 psi

2. Projected daily Load Curve for each thermal unit
Answer: Baseload
 3. Projected daily Load Curve for the three-unit power block
Answer: Baseload
 4. Projected per-thermal-unit starts per day
Answer: Minimum 2 starts
 5. Projected minimum per unit loading (minimum MW load per each thermal unit)?
Answer: 50 percent
 6. Projected minimum three-unit loading (minimum MW load to be supplied by the three-thermal-unit power block)?
Answer: This will depend on the technology selected and should remain in accordance with the answer to 1.5. above.
 7. Does WAPA expect one or more of the three thermal units to be a redundant backup?
Answer: No
 8. Does WAPA expect one or more of the three thermal units to be in rotating reserve?
Answer: No
 9. What is the expected yearly capacity factor for each of the three thermal units?
Answer: 95 percent
 10. What is the expected yearly capacity factor for the three-thermal-unit power block?
Answer: 95 percent
2. Please state the WAPA-required yearly Capacity Factor guarantee for the three-thermal unit power block.
Answer: For testing purposes, Owner will provide load schedule during performance of the Reliability Run. No Capacity Factor guarantee is set forth in Attachment A.
 3. Please state if WAPA has a specific minimum moment-of-inertia requirement for each of the thermal-units to compensate/aggregate mass to its requested droop/isochronous control requirements?
Answer: No
 4. Please state if WAPA has an installed and functional/operational load-shedding system/scheme installed in St Thomas distribution system?
Answer: Yes
 5. WAPA is requesting a nominal 9 MW/18 MWh BESS
 1. Please specify if this is in AC capacity
Answer: The AC nameplate is of the energy storage modules plus the bi-directional inverter of 9MW/18MWh.
 2. Please specify for how many hours (the 18 MWh) energy requirement shall be
Answer: The system is 9MW/18MWh.
 3. Please state how many projected discharges per day (24-hour cycles) are expected
Answer: Assume 2 complete discharges per 24-hour cycle.
 6. Please state the WAPA-required yearly Capacity Factor guarantee for the BESS energy block
Answer: BESS energy system should be capable of supporting a Capacity Factor of 100 percent.
 7. Please state the maximum and minimum available raw-water stream (daily and monthly) WAPA will avail for the project.
Answer: For Desal/RO: 3.3 MGD with capability to go to 4.4 MGD. For Demin: 550,000 GPD. If condenser cooling water is required for the specific technology, the bidder is responsible for

providing this cooling water system. Do not understand the question of 'minimum available raw-water stream'.

8. Please state if existing WAPA' Randolph Harley Units 25, 26 and 27 are base-load operation units
Answer: Operation of the existing units are not part of this RFP.
9. Please state existing WAPA' Randolph Harley Units 25, 26 and 27 exhaust system stack heights
Answer: Bidder shall assume a stack height for new units and clarify in bid.
10. Please state if existing WAPA' Randolph Harley Units 25, 26 and 27 have a Title V operating permits and PSD's, if so, will WAPA provide copies of these public documents?
Answer: Bidder to provide operational and emission parameters of new unit(s) independent of existing units.
11. WAPA has stated Davis Bacon US Federal compliance is mandatory, is Buy American Act is also required for the project's scope of supply?
Answer: No, the Buy American Act does not apply to the project scope of supply.
12. Will WAPA access or use federal funding to remunerate Contractors for their delivered and/or executed scope of supply?
Answer: Yes, the funds for this project are HUD CBDG-DR funds.
13. If federal funding is used to remunerate Contractors is it the grant format or the matched-funding format?
Answer This is a grant funding format.
14. Can contractors furnish capacity-payment-based pricing offer to operate and maintain its scope of supply?
Answer: Bidder is welcome to offer alternative solutions for consideration by VIWAPA in addition to the required base request from the RFP.
15. Will contractor be in charge of leading and absorbing costs for the Air/Emission/Discharge permitting efforts or will the owner (WAPA) lead and cost said efforts?
Answer: Please refer to Section 01101.2 of Attachment A.
16. Will WAPA accept non-US non-FTA manufactured equipment the project's scope of supply?
Answer: Please refer to answer related to Question 11.
17. Please state or clarify is customary US standards are required by WAPA including IEEE, NEMA, ANSI, ASME, AGMA, AWS and ASTM.
Answer: Yes.
18. Do MV and LV transformers, switchgears and motor control centers need to comply with UL and built to IEEE and NEMA standards?
Answer: Yes.
19. Will WAPA accept MV and LV transformers, switchgears and motor control centers not manufactured or otherwise non-compliant with UL, IEEE and NEMA standards?
Answer: Equipment shall be in compliance with UL, IEEE and NEMA standards.

20. Will WAPA accept non-US standards such as IEC, ATEX, CE for main equipment's supplied the main scope of supply?
Answer: Equipment shall be in compliance with US standards.
21. Please clarify if fixed (or which) structures such as shelters, acoustic enclosures, buildings and structures need to comply with IBC/UBC-2018 Category III Class Building Design for sustained hurricane level winds?
Answer: All buildings, structures, shelters and enclosures shall comply with the latest applicable building code(s).
22. Is there a specific seismic design requirement for buildings and/or principal equipment such as prime mover or main shelters and exhaust stacks?
Answer: Please refer to Sections 01101.1.10 and S100 of Attachment A.
23. How Long (days months?) will the reliability run be?
Answer: Please refer to Section 01610.3.3 Reliability Run of Attachment A.
24. Page 111-120 of the request for proposal shows a typical Wartsilla 3x20V34SG seven-bay engine hall master layout but does not include a plot or parcel plan, will WAPA supply a plot or parcel plan for the project or must Contractor's subscribe to the typical Wartsila 3x20V34SG master layout?
Answer: The Contractors are NOT being asked to subscribe to the Wartsila 3x20V34SG layout. Dimensions of both layout options have been submitted in question 35. Contractors are required to utilize this space for their specific generation technology per the RFP and not attempt to mimic technology already in place.
25. Must the contractor's design its thermal unit scope of supply to fit inside the empty (four) bays shown on the WAPA-provided Wartsila 3x20V34SG master layout?
Answer: Yes, unless opting to use the Option 2 site.
26. Can the contractor's design its balance of plant scope of supply to fit outside the RFP-provided Wartsila 3x20V34SG master layout?
Answer: Yes, unless opting to use the Option 2 site.
27. Is there minimal overhead or traveling crane requirements?
Answer: All clearances shall allow for equipment maintenance and safety of personnel and be consistent with applicable codes.
28. Are there building clearances and walk-way requirements?
Answer: All clearances shall allow for equipment maintenance and safety of personnel and be consistent with applicable codes.
29. Is there a minimal rollup door size and quantity requirements for buildings?
Answer: A single roll up door of with standardized dimensions for acceptance of heavy-duty vehicles shall be included.
30. Will the project need to comply with Federal ADA stipulations?
Answer: No.
31. What will be the price levelling evaluation method for the opportunity given there is already a clear advantage offered to the existing engine supplier Wartsila in order to allow an element of opportunity equity to the bidding process?

Answer: The engine hall is available for use by each bidder, and no generation equipment has been procured for this space. Therefore, each bidder has the same starting point with regard to using this space.

32. The proposed pricing matrixes do not consider engine and equipment performance in the price factor which further provide inequitable advantage to the existing engine supplier. We would like to request consideration to adjustment of the financial evaluation form consider a wider range of financial factors which will have a longer-term financial benefit to USVI-WAPA vs consideration of only lowest purchase price?

Answer: The current RFP provides for Levelized Cost of Electricity (LCOE) which is a function of capital cost, performance and anticipated O&M costs. The RFP asks for each of these so as to be evaluated on more than just lowest capital cost.

33. We would like to request that consideration of the total ISO Conditions plant financial performance using an indicative LPG fuel price per gallon over a 10-year period of time to allow consideration of total financial plant performance, including heat rate consideration and further justification of pricing in combined cycle options and HRSG performances?

Answer: The LCOE accounts for the fuel price, which will be applies similarly for each bidder technology.

34. Could WAPA provide a copy of all the sign in sheets from the compulsory Pre-Bid Meeting?

Answer: Bidders should request from Contracts Services at contractservices@viwapa.vi.

35. Could WAPA please provide site layout documents to scale where we can clearly see the areas that are still available for the installation of other equipment options?

Answer: Engine Hall east to west = 65'-3&1/4"; north to south = 80'-3"; Open area South of the Wartsila Engine Hall = measured at 83' east to west, and 182' north to south= about 15,106 square feet. Southern Option 2 area measured at 173' north to south, and 171' from east to west = about 20,933 square feet.

36. Could WAPA please identify the location of the potable water and substation connection point on the provided drawings?

Answer: For Desal/RO: 3.3 MGD with capability to go to 4.4 MGD. For Demin: 550,000 GPD. If condenser cooling water is required for the specific technology, the bidder is responsible for providing this cooling water system. Do not understand the question of 'minimum available raw-water stream'.

37. Could WAPA please confirm the remaining available vaporizer capacity?

Answer: 5,589 – 60,762 lbs/hr

38. Could WAPA provide associated volumes of available Vaporized LPG that can utilized from the existing vaporizer system?

Answer: 5,589 – 60,762 lbs/hr

39. Could WAPA provide the pressures of the existing Vaporizer systems?

Answer: 220 – 350psi

40. Could WAPA confirm available volumes of both existing Desalination Water Systems and Demineralized Water Systems?
Answer: For Desal/RO: 3.3 MGD with capability to go to 4.4 MGD. For Demin: 550,000 GPD.
41. Could WAPA provide the LPG Gas specifications with all critical composition elements?
Answer: Yes (HD-5)
42. Does WAPA have compaction studies for the existing available plant locations?
Answer: NO compaction studies available for optional site.
43. As built drawings for existing equipment?
Answer: All necessary as-built information will be provided to successful bidder.
44. On Page 32 of the RFP, there is a reference to being able to operate on any mixture of fuel LPG or #2 Diesel (LFO). For the purposes of clarity this was meant to mean either LPG or LFO #2, and not utilizing (Combusting) both fuels at the same time? Contractor equipment must be dual fuel and capable of operating on either fuel?
Answer: Correct. LFO, ULSD and #2 Diesel refer to the same fuel. Each unit must be capable of burning both fuels, with capability to switch between fuels while the engine is running without shutting down. Unit(s) will not combust both fuels at the same time during normal operation.
45. Our definition of "New" is considered as not previously commissioned, with limited run hours (associated with testing), transferrable warrantable product to buyer. Please confirm this is confirmed as acceptable?
Answer: Units not previously commissioned which are considered "new and clean" with complete factory warranty are acceptable.
46. Battery systems for the 9MW / 18MWh can consist of any systems capable of providing this specified capacity?
Answer: Correct.
47. Can WAPA provide the existing Wartsila engine performance data and associated Heat Rates for the units at ISO and site conditions?
Answer: Not relevant to this RFP.
48. Given the stability of the current WAPA system, is there a current short circuit study available for the WAPA system to benchmark current system / network issues that exist today that may be unrelated to future installed plant configurations?
Answer: All necessary information will be provided to successful bidder.
49. Based on the funds being grant related funds and WAPA requiring a Performance Bond, will WAPA and/or HUD provide a full payment guarantee or payment bond and the details of which to be made available to the contractor to ensure the funds based on the final pricing and award will remain available throughout the duration of the project timeline and completion?
Answer: Neither VIWAPA or HUD will be providing a payment guarantee or payment bond for the project duration and completion.

50. Contractor will provide a payment performance schedule with offer; how many sequential business days are expected from completion of each "Phase" or "construction milestone" with both WAPA and HUD have to approve and make payment to the contractor?

Answer:

<u>Payment Review Process by VIWAPA:</u>	5-7 business days
<u>Construction Management Review By VIHFA:</u> (for construction related invoices)	10 business days
Program Staff Review	10 business days
Finance Staff Review	7 business days
Hud normal release turnaround from drawn funds	3 business days
Release of check within	3 business days
	from receipt of funds
Maximum days	33 days

51. Based on all the above information being essential to the bid development we would request an 8-week time extension after receiving all materials to complete the development of the opportunity?

Answer: Four additional weeks from the original due date will be granted for the bid to be delivered as per deadline.

52. Will the project need to comply with Federal ADA stipulations?

Per section 24 of the HUD Rider:

Equal Opportunity for Workers with Disabilities

- A.** The Contractor/Subcontractor will not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Contractor/Subcontractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with disabilities without discrimination based on their physical or mental disability in all employment practices, including the following:
- i. Recruitment, advertising, and job application procedures;
 - ii. Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;
 - iii. Rates of pay or any other form of compensation and changes in compensation;
 - iv. Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
 - v. Leaves of absence, sick leave, or any other leave;
 - vi. Fringe benefits available by virtue of employment, whether or not administered by the Subcontractor;
 - vii. Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

- viii. Activities sponsored by the contractor including social or recreational programs; and
- ix. Any other term, condition, or privilege of employment.

Further please note that VIWAPA's Power Plant is an exempt facility under federal ADA stipulations. Title II of the American with Disability Act requires that programs, services and activities of state and local governments be accessible to people with disabilities. Specifically, 42 U.S.C. §2000a provides (a)All persons shall be entitled to the full and equal enjoyment of the goods, services, facilities, privileges, advantages, and accommodations of any place of public accommodation, as defined in this section, without discrimination on the ground of race, color, religion, or national origin. In the case of the power plant, the plant is a restricted part of VIWAPA's facility and not accessible to the general public. It is therefore not required to be ADA compliant.