

AMERICAN SAMOA POWER AUTHORITY Materials Management Office

**REQUEST FOR PROPOSAL (“RFP”) ASPA16.1293.
TA’U HYBRID SYSTEM DIESEL
GENERATOR SETS**

Closing Date and Time February 8, 2016 at 2:00 pm local time

Issuance Date: January 8, 2016

Approved for Issuance: Utu Abe Malae, Executive Director

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NOTICE TO OFFERORS

ISSUANCE DATE: January 8, 2016
RFP NUMBER: ASPA.16.1293 POWER GENERATOR REPLACEMENT
PROJECT NAME: **TA'U HYBRID SYSTEM DIESEL GENERATOR SETS**
CLOSING DATE/TIME: **February 8, 2016 @ 2:00 p.m., American Samoa Time.**

The American Samoa Power Authority (ASPA) issues this Request for Proposals (ōRFPö) for the replacement of existing generator sets at its Faleasao Power Plant on Ta'ū Island, Manua.

Qualified offerors must submit proposals in a sealed envelope, box, or other enclosure addressed to Ioana Uli, ASPA Procurement Manager. The sealed envelope or box must show date and time of proposal opening and be labeled: **ōRFP No. ASPA 16.1293 Ta'u Hybrid System Diesel Generator Setsö**. Late submittals will not be opened or considered and will be determined as non-responsive. Electronic submittals may be made by submitting electronic PDF copies of proposals to bids@aspower.com no later than the date and time as specified. All offerors shall provide sufficient written and verifiable information that responds to the requirements set forth herein.

A complete RFP package may be picked up from the ASPA Materials Management Office located at the Tafuna Power Plant compound (Security Guard at the Gate will direct you to the back where the Materials Management Office is located). You may also view this RFP online at www.aspower.com which is ASPA's Website. For more information about this RFP, please contact the following person(s):

Ioana Uli, Manager
Materials/Procurement Management
Tel. 684.699.3057
Email: bids@aspower.com

The American Samoa Power Authority reserves the right to:

1. Reject all proposals and reissue a new or amended RFP.
2. Request additional information from any submitting a proposal.
3. Select a firm for award based on other than ōleast costö (e.g. capability to complete work in a timely fashion or proven technical capabilities).
4. Negotiate a contract with the firm selected for award.
5. Waive any non-material violations of rules set up in this RFP at its sole discretion.

Utu Abe Malae, Executive Director Date: Jan 8, 2016

PROPOSAL INVITATION

DATED ISSUED: January 8, 2016

PROPOSAL INVITATION NO: RFP NO: ASPA16.1293. TA'U HYBRID SYSTEM DIESEL GENERATOR SETS.

INSTRUCTIONS:

- 1) This REQUEST FOR PROPOSALS (RFP) shall be submitted in a sealed envelope, box, or other enclosure addressed to Ioana Uli, ASPA Materials/Procurement Manager, P.O. Box PPB, Pago Pago, AS 96799. An original, one PDF electronic copy, and five (5) hard copies must be received at **ASPA's Materials Management Office no later than 2:00 pm on February 8, 2016.** The envelopes or boxes must be labeled **"RFP No. ASPA 16.1293 Ta'u Hybrid System Diesel Generator Sets"**. **Late submittals will not be opened or considered and will be determined as non-responsive.** All Offerors shall provide sufficient written and verifiable information that responds to the requirements set forth herein, the Contract Documents, and in the **Scope of Work**.
- 2) **Pre-proposal Questions** ó Any pre-proposal questions and/or clarifications shall be submitted to Ioana S. Uli in writing at bids @aspower.com. Questions and/or clarifications are welcome and should be submitted no later than **2:00 pm on February 8, 2016.**
- 3) ASPA shall issue addenda to address any questions and/or clarifications as necessary on **January 22, 2016.**

NOTE TO OFFERORS:

This Request for Proposal (RFP) is subject to the attached General Terms and Conditions and Scope of Work. The undersigned offers and agrees to furnish within the time specified, the articles and services at the price stated opposite the respective terms listed on the schedule of the cost proposal. In Consideration of the expense to the American Samoa Power Authority in opening, tabulating, and evaluating this and other proposals, and other considerations such as the schedule, the undersigned agrees that this proposal shall remain firm and irrevocable for Ninety (90) calendar days from the proposal closing date to supply any or all of the items which prices are quoted. **Furthermore, all quotes and prices from the successful Offeror must be in United States Dollars (USD).**

Signed: _____

Date: _____

AMERICAN SAMOA POWER AUTHORITY
SPECIAL REMINDERS TO PROSPECTIVE OFFERORS

All Offerors are reminded to read and comply with the Proposal Invitation Instructions and General Terms and Conditions. The Offeror must attach a signed Proposal Transmittal Form and acknowledgement of all Proposal Conditions and Addenda. The Offeror shall ascertain that all of the following requirements of the proposal are submitted in a single proposal envelope or box and delivered prior to the specified date and time for proposal opening.

- a. Proposal Transmittal Form (Attachment A)
- b. Scope of Work (Attachment B)
- c. Proposal Cost Form (Attachment C)
- d. Offeror Qualification Sheet (Attachment D)

All required forms must be signed and returned with the proposal envelope. Failure to comply with these requirements may result in disqualification or rejection of the proposal.

I, _____, the duly authorized representative of _____, acknowledge receipt of the special reminder to prospective Offerors together with Proposal ASPA16.1293.TAØU HYBRID SYSTEM DIESEL GENERATORS as of this date, _____, 2016.

Signature of Offeror's Representative

SIGNIFICANT DATES

The following are the significant dates for the RFP and the anticipated Contract and Scheduling Dates:

January 8, 2016	Request For Proposal Advertisement
January 22, 2016	Deadline for submitting questions/inquiries/clarifications
February 8, 2016	Closing Date (2:00 p.m. American Samoa time)
February 15, 2016	SEB submit recommendations to Procurement Manager
February 22, 2016	Inform Successful Offeror
February 27, 2016	Contract Award and Notice to Proceed
March 1, 2016	Execution and commencement of Contract
May 30, 2016	Delivery of Generator Sets

Dates are subject to change.

GENERAL TERMS AND CONDITIONS

ASP16.1293. TA'U HYBRID SYSTEM DIESEL GENERATOR SETS

I. INTRODUCTION: The American Samoa Power Authority (ASPA) invites qualified firms to submit formal, written proposals for the replacement of existing generator sets at its Faleasao power plant on the island of Ta'ū. The complete description of required services and deliverables is listed in the Scope of Work, which is incorporated herein as if fully set forth.

This invitation is an open and competitive process in which ASPA, hereby invites sealed proposals from qualified firms.

II. BACKGROUND: The American Samoa Power Authority (ASPA) has started work to install a Diesel/ Solar PV Hybrid System on Ta'ū Island, in the Manua group.

The existing 320KW (prime) VOLVO PENTA generator sets at Faleasao Power Plant lack adequate controls and functions for parallel operation with the Solar PV Hybrid System. Solar PV construction work will begin in January 2016 and is expected to be completed by June 2016. New diesels with suitable controls are required for the new Hybrid System to function satisfactorily. Three new diesels rated at 320 KW each (prime rating) will form one leg of the Hybrid system; the other two legs being the PV Array and the Battery Storage System.

The evening peak load on Faleasao is approximately 220KW which is approximately 70% of prime generator ratings. The 320KW prime rated generators allows for future load growth and the unbalance loads on Ta'ū Island.

Three phase primary distribution lines don't extend to the whole island so feeder phase currents are therefore unbalanced. This unbalance load currents give rise to higher than normal negative sequence currents in the alternator, causing the alternator to heat up.

III. AUTHORITY: ASPA generates and distributes electrical power and provides water, wastewater, solid waste services for the islands of American Samoa, a Territory of the United States. ASPA, a semi-autonomous agency of the American Samoa Government (ASG), was formally established through the ASG legislative act on October 1, 1981. Prior to that date, ASPA was operated as a division of ASG's Department of Public Works. The separate, semi-autonomous power authority was established to provide better accountability and operating efficiency.

ASPA is governed by a five-member Board of Directors appointed by the Governor and confirmed by the legislature. The first three members serve four-year staggered terms, and the fourth and fifth members serve four-year concurrent terms. All rates charged by ASPA are developed and promulgated in accordance with ASG Administrative Procedures Act 4.1001 and the Public Utility Regulatory Policies Act (PURPA) for electricity.

IV. SCOPE OF WORK:

The Contractor shall be responsible for the following scope of services and any and all requirements specified in this RFP and the Contract Documents, as that term is defined herein.

1. Supply of 3 x 320KW prime rated diesel generator sets with microprocessor based generator control system.
2. One year supply of recommended spare parts
[assume generator sets will be operated 1,500 hours per year]
3. Freight cost to PagoPago, American Samoa.
4. Timelines for the Ta'u Hybrid project, require that the generators be delivered to PagoPago American Samoa by May 30, 2016.

All generator sets will have local / remote control plus auto synchronizing and load sharing capabilities.

The generator sets must be fitted with microprocessor based generator control system that provides:

1. Voltage regulation,
2. Engine protection ,
3. Alternator protection,
4. Operator interface
5. Isochronous governing.
6. Equipped with s-CAN network connection that allows information and load sharing amongst parallel generators.
7. Equipped with Communications interface – PCCNet and Modbus interface.
8. Power management – Control function provides battery monitoring and testing features and smart starting control system.
9. Advanced control methodology – Three phase sensing, full wave rectified voltage regulation, with a PWM output for stable operation with all load types.
10. Service - PC-based service tool available for detailed diagnostics, setup, data logging and fault simulation.
11. Reliable design – The controlsystem is designed for reliable operation in harsh environments.

The detail Scope of Work is in Attachment B.

V. DATE/TIME/PLACE FOR PROPOSAL SUBMITTAL: Each Offeror must submit their proposals in a sealed envelope addressed to the Materials/Procurement Manager. An original and five (5) copies of the Offeror's proposal must be received at the ASPA Materials Management Office no later than **2:00 p.m. February 8, 2016, American Samoa time**. Late submittals will not be opened or considered and will be determined as non-responsive. All Offeror's shall provide sufficient written and verifiable information that responds to the requirements set forth herein and in the Scope of Work.

The Offerors may submit the proposals through two (2) means.

1. Electronic File Transfer ó The Offeror may submit the proposal using the electronic mail facility. This will enable the Offerors to upload proposal file by email attachment. The proposals must be uploaded by **2:00 PM on February 8, 2016, American Samoa time.**
2. In Person Delivery ó Offerors may deliver the proposal in person at e ASPA Offices at the Tafuna Power Plant compound (Security Guard at the main gate will direct Offerors and/or Representative to the Procurement Office inside the compound) in Tafuna. Proposal must be received by **2:00 PM on February 8, 2016, American Samoa Time.**

VI. PRE-PROPOSAL QUESTIONS: Any pre-proposal questions and/or clarifications shall be submitted in writing to the Procurement Manager Ioana Uli by email at bids@aspower.com . Questions must be received no later than **2:00PM on January 22, 2016.** ASPA will then issue addenda to address any questions and/or clarifications as may be necessary. ASPA reserves the right to issue addenda for any changes to this RFP. Offerors will be requested to send a signed õReceipt of Addendaö to ASPA for each addendum that may be issued

VII. PROPOSAL PREPARATION INSTRUCTIONS

- A. The proposal must contain four (4) parts as follow:
1. Companyø Profile and Portfolio
 2. Technical:
 - a. Offeror must provide as much information as possible regarding the proposed generator sets and controls as related to the Scope of Work.
 - b. Offeror must provide a proposed delivery schedule.
 3. Prior Related Experience/Past Performance:
 - a. A description of the Offerorø related experience must be provided.
 - b. A dossier of personnel qualifications and professional credentials as requested on the Attachment C, The Offeror Qualification Sheet, must be listed.
 - c. Attachment C must include a list of three or more references and a project history to document a minimum of five (5) years of specifically related experience.
 4. Proposed Price:
 - a. The Offerorø price submittal shall be presented in a breakdown format.
 - b. The proposed price breakdown should identify all costs example taxes, travel, road transportation, shipping, spares etc.)
- B. OFFERORS shall prepare their proposals in detail accordingly.

VIII. LEAD TIME: The Contractor shall provide the Lead Time CIF Pago Pago Port.

IX. TYPE OF CONTRACT: The Contractor will provide services to ASPA under a negotiated fixed price agreement. The successful Offeror shall furnish the necessary personnel, materials, insurances, licenses, equipment, ground transportation to and from work areas, required materials or services, and otherwise do all things necessary to perform the work and services specified in the Scope of Work and to the satisfaction of the Executive Director.

If any work must be carried out by the Contractor in American Samoa, the Contractor must at all times comply with all applicable workman's compensation, occupational disease, and occupational health and safety laws, statutes, and regulations to the full extent applicable. ASPA will not be held responsible in any way for claims filed by the successful Offeror or its employees for services performed under the terms of this RFP or the contract.

The Contractor shall be an independent contractor and not an agent or employee of the American Samoa Power Authority. ASPA will not be held responsible in any way for claims filed by the Contractor or its employees for services performed under the terms of this RFP or the contract.

XI. BASIS FOR SELECTION: Proposals will be evaluated by a Source Evaluation Board (SEB). SEB members shall be approved by the Procurement Manager. Submission of a proposal shall constitute a waiver of any challenge or dispute of the SEB members, as well as the choice of methodology set forth on the SEB score sheets. The award will be made by ASPA in accordance with the evaluation criteria set forth herein and with ASPA's Procurement Rules.

A determination shall be made by the SEB of those responsible Offerors whose proposals are susceptible of being selected for award. The determination shall be included in the contract file. Discussions may be conducted by the SEB with those responsible Offerors whose proposals are determined to be responsive and responsible to the RFP. These discussions shall only be conducted for the purpose of obtaining clarification from the Offeror on its proposal to ensure full understanding of and responsiveness to the RFP requirements. Discussions shall be conducted individually with each offeror and care shall be exercised to ensure that no information derived from competing offeror's proposals is disclosed. All Offerors with whom discussions are conducted shall be accorded an opportunity to revise their proposals in response to specific clarifications based on the discussions. Unless the Materials/Procurement Manager determines that satisfactory evidence exists that a "mistake" has been made, as set forth in Procurement Rules §3-114, Offerors will not be permitted to revise their proposals after proposal opening.

The results of the evaluation will be documented, and written recommendation by the SEB will be sent to the Materials/Procurement Manager. Recommendation for award is sent to the Executive Director for approval.

ASPA reserves the right to make the award to the offeror that submits the proposal, which meets the requirements set forth herein and is in the best interests of ASPA after taking into consideration the

aforementioned factors. ASPA also reserves the right to select portions of a proposal, or to reject any and all proposals.

XII. EVALUATION CRITERIA: Proposals will be evaluated and ranked by the Source Evaluation Board (SEB) according to the following point system:

Technical:	0 - 10 points possible
Experience:	0 - 10 points possible
Engine Fuel Efficiency:	0 - 10 points possible
Delivery [within 90 days from notice to proceed]	0- 20 points possible
Contract Price:	0 - 50 points possible
Total Score:	100 points (best possible score)

ASPA reserves the right to make the contract award to the Offeror that submits the proposal which best meets the requirements set forth herein and which is in the best interest of ASPA after taking into consideration the aforementioned factors.

XIII. ATTACHMENTS

- A. Attachment A is the Proposal Transmittal Form
- B. Attachment B is the Scope of Work.
- C. Attachment C is the Proposal Cost Form.
- D. Attachment D is the Offeror's Qualification Form

XIV. QUALIFICATION OF OFFERORS: ASPA may make such investigations as it deems necessary to determine the ability of the Offeror to perform the work and the Offeror shall furnish to ASPA such information and data for this purpose as ASPA may request, or else the Contractor may be deemed non-responsive. The Offeror shall submit at least that information required by the section entitled Attachment C, the Offeror's Qualification Form.

XV. MULTIPLE PROPOSALS – COLLUSION: If more than one Proposal is submitted by any one party or in the name of its clerk, partner or other person, all Proposals submitted by said party may be rejected by ASPA. This shall not prevent a Contractor from submitting alternate Proposals when called for. A party who has quoted prices on materials to a Contractor is not thereby disqualified from quoting prices to other Contractor or from submitting a Proposal directly for the materials or work.

If ASPA believes that collusion exists amongst any OFFERORS, none of the participants in such collusion will be considered. Proposals in which the prices are unreasonable or unrealistic may be rejected at ASPA's sole discretion.

XVI. BUSINESS LICENSE: An Offeror from elsewhere than American Samoa shall be appropriately licensed in accordance with the state and/or country of the OFFERORS origin and shall be skilled and regularly engaged in the general type and size of work called for under this RFP.

XVII. CONTRACT DOCUMENTS: The contract documents (the "Contract Documents") which govern all work set forth by this RFP consist of the following:

1. This RFP;
2. All addenda to this RFP;
3. Any submissions pursuant to any issued addenda;
4. Any clarifications as may result from Proposal evaluations; and
5. The Contract (or the "Agreement").

XVIII. WITHDRAWAL OF PROPOSAL: Any Proposal may be withdrawn prior to the scheduled time for the opening of Proposals by notifying ASPA in a written request. No Proposal may be withdrawn after the time scheduled for opening of Proposals.

XIX. OPENING AND EVALUATION OF PROPOSALS: In accordance with Procurement Rule § 3-110, Proposals will be opened and recorded as part of the record for the Source Evaluation Board on the date and at the time indicated above at the Materials Management Office in Tafuna or in another place designated by the ASPA Procurement Manager in writing.

XX. EXECUTION OF CONTRACT: The Contractor shall, after receiving the Notice of Award, sign and deliver to ASPA the Contract, together with other documents as required by ASPA.

XXI. ASSIGNMENT: The Contractor shall not assign, transfer, convey or otherwise dispose of the Contract, or his right, title or interest therein, or his power to execute such Contract, to any other persons, firm or corporation without previous consent in writing of ASPA.

XXII. TIME IS OF THE ESSENCE: The time is of the essence in completing the work to be performed under the Contract. Delays and extensions of time may be allowed only in writing signed by both parties as in accordance with the provisions of the Agreement.

XXIII. RFP CONDITIONS: This RFP does not commit ASPA to award a contract or to pay any cost incurred in the preparation of a proposal. The American Samoa Power Authority reserves the right

to do the following:

1. Reject any Offeror for being non responsive to the Proposal requirements which are contained in this RFP;
2. Reject all proposals and reissue an amended RFP;
3. Request additional information from any Offeror submitting a proposal;
4. Select an Offeror for award based on other than "least cost" criteria (e. g. capability to complete work in a timely fashion or substantive and relevant work experience);
5. Negotiate a contract with the Offeror selected for award; and
6. Waive any non-material violations of rules contained in this RFP.

ASPA reserves the right to issue any addendum to this RFP. Contractor shall send ASPA a signed form confirming receipt of any addenda, and shall submit supporting/additional information as required by any addenda. In the event that any Contractor fails to acknowledge receipt of any such Addendum in the space provided, his Proposal shall be considered irregular and will be accepted by ASPA only if it is in ASPA's best interest. In the event that Addenda are not received until after the Contractor has submitted his Proposal, a supplementary Proposal may be submitted revising the original Proposal. Such supplementary proposals must be received by ASPA prior to the scheduled time for opening of Proposals.

XXIV. INDEMNITY PROVISION: The Contractor shall indemnify and hold harmless the American Samoa Power Authority and the American Samoa Government from and against any and all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from the performance of this project, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease, death or damage to property of whatsoever nature, including the loss of use resulting therefrom, and whether or not is caused in whole or in part by any negligent act or omission of the Contractor, its subcontractors, or anyone employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by the negligence of ASPA and/or the strict liability of ASPA, its agents and employees.

XXV. OFFEROR'S QUALIFICATION DATA: It is the intention of ASPA to award a Contract only to a Contractor who is able to furnish satisfactory evidence that it has the requisite experience and ability and that it has sufficient capital, facilities and plant to enable it to prosecute the work successfully and promptly and to complete it within the term set forth in the Contract.

The Contractor shall submit as part of the total Proposal package, the following information:

- a. Name of organization;
- b. Address and phone number of home office, principal place of business and locations and contact information for any branch offices;

- c. Type of business structure, e.g., corporation, partnership, joint venture, proprietorship;
- d. Place of organization or state of incorporation;
- e. Name and addresses for all owners for businesses other than corporations;
- f. For corporations, list the names and addresses of directors, officers and stockholders with twenty (20) percent ownership interest or greater;
- g. Places, including individual states and territories of the United States, where registered as a foreign corporation;
- h. List all countries and all states, territories and possessions of the United States in which similar consulting work has been performed in the last three (3) years, including:
 - i. Name of awarding agency or owner for which work was performed;
 - ii. Nature and scope of contract, including total dollar value;
 - iii. Dates of performance;
 - iv. Whether performance was completed within the specified time under the contract and, if not, why not; and
 - v. Whether contract was performed under joint venture, and if so, with whom and under what arrangement.
- i. The Name or names of supervisory personnel employed on the work under this Contract, including the experience record for each that indicates the degree of responsibility and type of work supervised;
- j. The names and addresses of three references.

ATTACHMENT A
PROPOSAL TRANSMITTAL FORM

Date: _____

AMERICAN SAMOA POWER AUTHORITY

American Samoa Government

The undersigned (hereinafter called an Offeror), proposes and agrees to furnish all the necessary information to

“ASPA16.1293 – TA’U HYBRID SYSTEM DIESEL GENERATOR SETS”

in accordance with the Scope of Work, General Terms and Conditions, and other procurement requirements specified in this document for the prices states in the itemized proposal form(s) attached hereto, plus any and all sums to be added and/or deducted resulting from all extra and/or omitted work in accordance with the unit and/or lump sum prices stated in the itemized proposal form attached hereto.

The undersigned has read and understands the proposal requirements, and is familiar with and knowledgeable of the local conditions at the place where the work is to be performed. We have read the RFP Instructions and General Terms and Conditions attached to ascertain that all of the requirements of the proposal are submitted in the proposal envelope at the date and time for proposal opening.

Signed

Seal

Date: _____

ATTACHMENT B

SCOPE OF WORK

RFP NO. ASPA16.1293 – TA’U HYBRID SYSTEM DIESEL GENERATOR SETS

The Contractor shall be responsible for the following scope of services and any and all requirements specified in this RFP and the Contract Documents, as that term is defined herein.

1. Supply of 3 x 275KW prime rated diesel generator sets with microprocessor based generator control system.
2. One year supply of recommended spare parts
[assume generator sets will be operated 1,500 hours per year]
3. Freight cost to PagoPago, American Samoa.
4. Timelines for the Ta’u Hybrid project, require that the generators be delivered to PagoPago American Samoa, on or before May 30, 2016.

All generator sets shall have local and remote control plus auto synchronizing and load sharing capabilities.

A. Generator Set.

1. Three (3) 320 KW Prime Power Diesel Generator Sets.
EPA Tier 3 or 4.
60 Hertz, 480 Volts, 0.8 Power Factor,
Open (no canopy).
2. Engine:
High fuel efficiency
Wet liners
Heavy Duty with 240 V engine coolant heater.
3. Mounting:
Anti -vibration mounts. Rubber mounts between engine and alternator with skid
4. Alternator:
480 Volts, 60 Hertz
Integrated digital electronic voltage regulator
Three phase, 4 wire line to line sensing
240V anti-condensation heater.

5. Exhaust System:
Residential grade silencers
Slip on connections.
Exhaust system accessories including bellows, heat insulation, fixing bolts and nuts
6. Cooling System:
Genset mounted Radiator -50 deg C.
Engine Coolant mixture – antifreeze and water.
7. Primary Electrical Isolation Device
Motorized 3-pole Circuit Breaker
630 Amps, 600V
Short circuit rating > 50kA.
8. Cable Termination Box:
Suitable three phase main supply cable connection.
Contactor or switch for each generator neutral point grounding or earthing
9. Starting Batteries:
Wet Lead Acid
10. Battery Charger:
Stand-alone wall mounted.
240 Volts, 7 Amps.
11. Fuel Tank:
Part of Skid with Spill catchment.
Fuel Tank Accessories
Fuel Tank Alarms high and Low level Alarms/ Warnings
12. Tropical Environment Protection:
Heavy Duty Air Cleaner mounted on engine
Coupon blue treatment supplied on radiator
Marine grade metal protection and painting
13. Spare parts for 2 years of operation.
(each engine expected to be operated to a maximum of 1,500 hour per year)
14. Warranty;
The engines will be operated only 1,500 hours per year.

A two (2) year warranty is requested.

15. Generator Testing:
Standard Factory Test
Certified test reports to be supplied to buyer.
Option for buyer to witness FAT.

B. Generator Control System

The generator sets must be fitted with microprocessor based generator control system that provides:

1. Voltage regulation,
2. Engine protection ,
3. Alternator protection,
4. Operator interface
5. Isochronous governing.
6. Equipped with s-CAN network connection that allows information and load sharing amongst parallel generators.
7. Equipped with Communications interface – PCCNet and Modbus interface.
8. Power management – Control function provides battery monitoring and testing features and smart starting control system.
9. Advanced control methodology – Three phase sensing, full wave rectified voltage regulation, with a PWM output for stable operation with all load types.
10. Service - PC-based service tool available for detailed diagnostics, setup, data logging and fault simulation.
11. Reliable design – The controlsystem is designed for reliable operation in harsh environments.

Offerors may provide generators fitted with Cummins Command 3.3 control systems, or an equivalent or more advanced system.

Typical Operator panel features and protection that are expected with the generator sets are as follows:

Operator panel features

-The operator panel, in addition to the alternator, displays the Utility/AC Bus data.

Operator/display functions

É320 x 240 pixels graphic LED backlight LCD

ÉAuto, manual, start, stop, fault reset and lamp test/panel lamp switches

ÉAlpha-numeric display with pushbuttons

ÉLED lamps indicating generator set running, remote start, not in auto, common shutdown, common warning, manual run mode, auto mode and stop

Paralleling control functions

ÉDigital frequency synchronization and voltage matching

- É Isochronous kW and kVar load sharing controls
- É Droop kW and kVar control
- É Sync check
- É Extended paralleling (Peak Shave/Base Load)
- É Digital power transfer control (AMF) provides load transfer operation in open or closed transition or soft (ramping) transfer mode

Alternator data

- É Line-to-neutral and line-to-line AC volts
- É 3-phase AC current
- É Frequency
- É kW, kVar, power factor, kVA (three phase and total)

Engine data

- É DC voltage
- É Engine speed
- É Lube oil pressure and temperature
- É Coolant temperature
- É Comprehensive FAE data (where applicable)

Other Data

- É Generator Set Model data.
- É Start attempts, starts, running hours, kW hours
- É Load profile (operating hours at % load in 5% increments)
- É Fault history.
- É Data logging and fault simulation

Standard control functions

Digital governing (optional)

- É Integrated digital electronic isochronous governor
- É Temperature dynamic governing

Digital voltage regulation

- É Integrated digital electronic voltage regulator
- É 3-phase, 4-wire line-to-line sensing
- É Configurable torque matching

AC protection

- É Protective relay
- É Over current and short circuit shutdown
- É Over current warning
- É Single and three phase fault regulation
- É Over and under voltage shutdown
- É Over and under frequency shutdown
- É Overload warning with alarm contact
- É Reverse power and reverse Var shutdown

ÉField overload

Engine protection

ÉBattery voltage monitoring, protection and testing

ÉOver speed shutdown

ÉLow oil pressure warning and shutdown

ÉHigh coolant temperature warning and shutdown

ÉLow coolant level warning or shutdown

ÉLow coolant temperature warning

ÉFail to start (over crank) shutdown

ÉFail to crank shutdown

ÉCranking lockout

ÉSensor failure indication

ÉLow fuel level warning or shutdown

ÉFuel-in-rupture-basin warning or shutdown

ÉFull authority electronic engine protection

Control functions

ÉTime delay start and cool down

ÉReal time clock for fault and event time stamping

ÉExerciser clock and time of day start/stop

ÉData logging

ÉCycle cranking

ÉLoad shed

ÉConfigurable inputs and outputs (4)

ÉRemote emergency stop

Load Control and Demand

ÉImproved fuelefficiency of multi-gen systems reduces fleet operation costs

ÉRun-hour equalization feature lowers onsite support costs

ÉSupports large fleet operation up to 16 generator sets

ÉChange system settings from any one display and broadcast to all generator sets

ÉView information about the entire system from any one display

ATTACHMENT C

PROPOSAL COST FORM

ASPA16.1293 – TA’U HYBRID SYSTEM DIESEL GENERATOR SETS

Description

Total Cost

Price shall include labor, transportation,
Supplies/materials, protective gear, tools,
Supervision and commissioning of the project.

Offeror shall propose a total cost as mentioned above.

TOTAL COST

Offeror Name: _____

Phone Number: _____

Fax Number: _____

Email Address: _____

Business License Number: _____

ATTACHMENT D
OFFEROR'S QUALIFICATION SHEET

1. NAME OF ORGANIZATION:

2. ADDRESS:

3. TELEPHONE:

Home: _____ Office: _____

Fax Number: _____

Email Address: _____

4. CONTACT PERSON: _____

5. TYPE OF BUSINESS:

____ Corporation ____ Partnership ____ Proprietorship ____ Joint Venture

Note: For Corporations – Articles of Incorporation Certification must be on record with the Treasurer of American Samoa. Copies of partnership agreements and articles of incorporation must be submitted to the revenue branch with application form and relevant documents. Aliens cannot operate sole ownership enterprises and partnerships with aliens are subject to immigration board review.

Place of Organization or State of Incorporation:

Owner's Names and Addresses (if not a Corporation):

For Corporations: Names and Addresses of Directors, Officers, and Stockholders with 20% or greater interest in the company

Individual States and Territories of the United States where company is registered as a foreign corporation

6. List three projects of a similar nature, which have been completed by the Offeror within the last five (5) years, the total dollar amount of each project and the owner/contract person as a reference.
 - a. Name of Awarding Agency or Owner for which work was performed:

Nature and Scope of Contract:

Name, Address, and Phone Number of Agency Contact Person:

Total Dollar Value: _____

Date Completed _____

If not completed, why?

Was the contract performed under joint venture, if so with whom and under what arrangement?

b. Name of Awarding Agency or Owner for which work was performed:

Nature and Scope of Contract:

Name, Address, and Phone Number of Agency Contact Person:

Total Dollar Value: _____

Date Completed _____

If not completed, why?

Was the contract performed under joint venture, if so with whom and under what arrangement?

c. Name of Awarding Agency or Owner for which work was performed:

Nature and Scope of Contract:

Name, Address, and Phone Number of Agency Contact Person:

Total Dollar Value: _____

Date Completed _____

If not completed, why?

Was the contract performed under joint venture, if so with whom and under what arrangement?

d. Name of Awarding Agency or Owner for which work was performed:

Nature and Scope of Contract:

Name, Address, and Phone Number of Agency Contact Person:

Total Dollar Value: _____

Date Completed _____

If not completed, why?

Was the contract performed under joint venture, if so with whom and under what arrangement?

7. List the name or names of supervisory personnel proposed to be employed on the work under this Contract, including the experience record for each that indicates the degree of responsibility and type of work supervised.

8. List the names and addresses of three (3) references, at least one of which should be a bank or other lending institution, governmental agency, or bonding company.
