



Department of Public Lands and Buildings

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Request for Proposal - ADDENDUM No. 3

DATE: 16/09/22

METHOD OF DELIVERY: WEBPAGE

PROJECT NAME & NO.: Government Solar Development Project SPVPP04

RE: Q&A Round#2 / New and Amended Documents

TO: Proponents

The following information supplements and/or supersedes the RFP documents dated July 18th 2022

This RFP Addendum forms part of the contract documents and is to be read, interpreted, and coordinated with all other parts. The following revisions supersede the information contained in the original documentation issued for the above-named project to the extent referenced and shall become part thereof. Acknowledge receipt of this RFP Addendum by inserting its number and date on the RFP Form. Failure to do so may subject the Proponent to disqualification.

Round #2 Questions and Answers

DEFERRED FROM ROUND#1

Q29. What is the definition of "Fee" as it pertains to the performance bond that is required to be outstanding until 1-year post-construction?

A29. "Fee" represents the contract sum or the total amount payable by the Government of Bermuda for performance of work.

Q33. Will building load data be shared to measure net metering?

A33. Building load data is not available. Note that this information is not required for a lease arrangement. However, please find the electricity consumption data in **Annex N** Consumption Data for all the sites for reference.

NEW QUESTIONS ROUND#2

Q49. I understood at the project presentation meeting that there will be no site visits. Instead, you will publish the details of what is required at each location. If this is so, when would we have access to this information?

A49. A site visit will be arranged for the three preferred bidders who make it to Round #2 of the RFP selection process. **Annex B –1 Site Locations - Amended** outlines all of the sites in detail.

Q50. Given the global impact both due to covid pandemic and the on-going war, there are delays that will be encountered with formulation of the proposal after receiving and synthesizing the needed clarifications that were published on September 2nd, can we request a 21-day extension to October 28th?

A50. We agree to an extension to the **RFP close/bid due date** to Friday October 21st 2022. See the amended **Important Dates** timeline below.

Q51. Given the local labor restrictions on island, would imported, trained labor be considered favorably to meet the schedule set out (outside of the required 45% local labor requirement)?

A51. Proponents will not be penalized for using non-local labour if they comply with the 45% local labour requirement. Additional points will not be awarded outside of the criteria outlined in the SPVPP01 Bermuda Government Solar Development Project – Part 2 Evaluation, Negotiation and Award.

Q52. Is a proponent allowed to submit more than one RFP response package on the deadline date?

A52. No.

Q53. Is the cost of interconnection, including all applications and legal fees associated with executed interconnection agreements, fall under the “permitting” scope and should not be considered for our bid response?

A53. Interconnection costs must be included. Please see [Annex D - BELCO Solar PV Technical Requirements](#) and Standard Contract Template: Renewable Energy Interconnection Agreement pursuant to sections 12 and 13(z) of the RAA and section 14 of the Electricity Act 2016 (the “EA”) that sets the template for the Standard Contract in accordance with section 49(2)(b)(i) of the EA.

Q54. Why are A’s #15, 33, 36, 41 relevant for an equipment lease concept?

A54. They are not relevant. A few prospective proponents expressed interest in this information. It was provided for additional transparency insight.

Q55. Annex J does not seem to be updated to reflect changes in Annex B, in line with Q&A #12?

A55. **Annex J - Plant Performance Information - Amended** has been edited accordingly. The amended document can be found in the Related Documents Section at the bottom of the [RFP website](#).

Q56. Based on Q&A #28 will the requirement outlined in “Joint Venture Submissions” be updated to reflect the new timeline for SPV incorporation?

A56. A Special Purpose Vehicle or Bermuda incorporation is not required for round 1 submissions. However, note the requirements for Joint Venture proposals outlined in **SPVPP04 Bermuda Government Solar Development Project Document Amended - Appendix D - Section B9** which can be found in the Related Documents Section at the bottom of the [RFP website](#).

Q57. Should our response account for roof preparation costs like painting and crack repairs (minor works) ahead of the solar installation?

A57. No.

Q58. Will the government be providing storage locations/assistance for the arrival of equipment on island or is this a cost to be borne by the Lessor entirely?

A58. The Proponent will be responsible for all of the logistics of shipping, receiving and storing of equipment. The Government will try and assist by providing advice and information related to these processes but all costs associated with them will be borne by the Lessor.

Q59. In order to better size the PV systems (as opposed to just the estimated capacities in Annex B), we are asking that the graph and consumption summary of the bill associated with each meter for each site be provided as part of the information for bidders.

A59. Proponents should prepare their independent solar design tool and submit proposals based upon the estimated capacity for each site. Layouts should be designed to maximize solar production on the specified areas with appropriate setbacks for the completion of roof works and access. See [Annex B –1 Site Locations - Amended](#). Load data is not available. See Annex N for consumption data.

Q60. Hybrid inverters are made to couple PV Solar, and Battery Systems, which translates into more expensive equipment – there is no indication from the proposal documents that you intend to install any Battery Systems in the near future. Further, most Battery Systems come with their own inverters. Requesting hybrid inverters now will limit solar inverter options and make the proposals much more expensive. What is the intent of this requirement?

A60. An answer to this question will be provided in Round#3 of the Q&A’s.

Q61. Can you please clarify what is meant by the following in the Specification sheet: “10 years for failures due to material defects and workmanship”. Can you please describe what this warranty is required to cover? There are some brands that cover the labor costs of removing the defective panels, shipping, and re-installation of the module, and they do differentiate between product warranty (defects on the product) and workmanship warranty (replacement costs).

A61. PV modules shall be warranted for failures due to material or manufacturer’s defects for at least 10 years. The warranty for material defects includes the repair of all product defects that may arise during the warranty period. Repairs are to be free of charge to Government (inclusive of labor).

Workmanship shall be warranted for at least 1 year. The workmanship warranty should include labor-related defects due to incomplete installation, installation errors, or poor workmanship during installation.

Please review **Annex C - Government’s Master Specifications Amended** document which has been edited to include: Inverters/power conditioning units shall have a warranty for failures due to material defects and workmanship for at least 10 years.

Q62. Do each of the buildings in question have lot plans available per the Bermuda law that lot plans are required ahead of any changes/updates/upgrades for the buildings? Do we need to consider this cost in our responses or does it fall under the “Permitting” section of costs that we are to ignore at this stage?

A62. Yes, we will provide ‘lot plans’ for each of the sites. No, you do not need to consider this as a cost.

Q63. Specified Business is an undefined term. Please provide the definition.

A63. A “Specified business” means a Bermudian-owned and owner-operated business enterprise with such characteristics as the Bermuda Economic Development Corporation may determine and:

- (A) gross annual sales of less than one million dollars, or an annual payroll of less than five hundred thousand dollars; or
- (B) at least three of the following attributes:
 - (i) gross annual revenue of between \$1,000,000 and \$5,000,000;
 - (ii) net assets of less than \$2,500,000;
 - (iii) an annual payroll of between \$500,000 and \$2,500,000;
 - (iv) between a minimum of 11 and a maximum of 50 employees; and
 - (v) been in operation for a minimum of 10 years.

See Specified Business Legislation Amendment Act [2011](#) and [2012](#)

Q64. "The Fee" is an undefined term. Please provide the definition as it serves as the basis for the bonding calculation.

A64. See A29.

Q65. Please clarify whether the Facilities are to be designed to connect behind the buildings' meter or if the facilities are to be designed to connect directly with BELCO's distribution grid. Will BELCO provide a price for the interconnection infrastructure?

A65. All equipment will be connected behind the buildings electrical meter. Proponents should design and include all necessary equipment and costs to facilitate a behind the meter connection including any upgrades needed. The Government will work closely with BELCO over the next few months to coordinate and plan the interconnection requirements. However, the Government will only be the signatory on applications, permits, and utility agreements where necessary and at its sole discretion.

Q66. Please clarify whether the 1 MW facility is to connect to a single meter or multiple meters. Per local regulation, any Facility over 500kW must apply for an independent power producer license.

A66. Based on the design and the size of the system installed and the inverter technology used no site should exceed the 500kWac distributed generation licensing threshold. Please reference [Government Solar Development Project - Addendum 2.pdf](#) and [Annex B –1 Site Locations - Amended](#).

Q67. BELCO seems to have unlimited ability to curtail the plant. Generally there is a limited amount of curtailment allowed before the generator is compensated for lost generation. Please advise if this is the case, or what protections are in place for the generator/consumer should there be an extended outage not attributable to the facility or force majeure.

A67. Given this is a equipment lease arrangement, BELCO outages or curtailment would not impact the Lessor other than those caused by the Lessor. Please review the Annex D – BELCO’s Solar PV Technical Requirements and BELCO’s Service Rules documents.

Q68. Is there available storage on the sites for the equipment and construction materials?

A68. See A58.

Q69. Can the government provide centralized storage for construction materials?

A69. See A58.

Q70. What analysis has been done on the roofs to ensure suitability for solar installations? (i.e. load studies, production analysis, roof age and material analysis, etc.?)

A70. We do not believe that there will be additional roof work required. If there is, we will have a mechanism in the tender to either skip that site, have the work completed by Government or execute a change order based on the requirements to strengthen the roof. We are also asking for your 5MW and 6MW lease price per Annex A Pricing Form Amended and Annex J - Plant Performance Information - Amended.

Q71. Discounts due to economies of scale are important in the project. What mechanism is in place to adjust pricing should roofs be found to be unsuitable?

A71. See A70.

Q72. Can you provide detail on roof surveys conducted on the roofs? Were any evaluations done of additional load or forces on the roofs?

A72. Neither a detailed roof survey or comprehensive load analysis were completed. Annex B –1 Site Locations – Amended for further information on the condition of the roofs.

Q73. Please provide detail on electrical hookups of the host buildings if the plan is to have the solar connect through the building service.

A73. A complete engineering assessment and design was not carried out for any of the sites. It is expected that these assessments shall be done by the selected Proponents as part of Round # 2 of the procurement process including any upgrades necessary for compliance with NEC 690 as amended by Bermuda Building Code 2014.

Q74. Has any analysis been done of demand at host sites been analyzed to ensure they can take the power?

A74. See A33.

Q75. what are the communication infrastructure on-site available to the projects?

A75. Costs for an independent telephone and/or broadband connection should be included in the proposal for each site.

Q76. Are the host sites responsible for interconnection or is the Lessor?

A76. The Lessor. See A65.

Q77. Water faucet requirement should be excluded.

A77. Please provide further reasoning as to why it should be excluded.

Q78. Please clarify the requirement for load segregation.

A78. Where a building or facility is supplied by multiple meters, the proponent will be responsible for allocating the supply across various meters to balance electricity loads and maximize the benefits of the installation.

Q79. Are all sites up to code related to grounding and storm resistance?

A79. An answer to this question will be provided in Round#3 of the Q&A’s.

Q80. Are notes in Annex B related to additional work requirements of the RFP, or suggestions for extra work? E.g. Pg 6. "THE ELECTRICAL EQUIPMENT SHOWED SIGNS OF AGE RELATED DETERIORATION AND REFRESH OF THE EQUIPMENT SHOULD BE CONSIDERED. 4. THERE WAS INSUFFICIENT CLEARANCE IN FRONT OF THE ELECTRICAL EQUIPMENT AND THIS SHOULD BE CLEARED TO MAINTAIN CODE COMPLIANCE."

A80. An answer to this question will be provided in Round#3 of the Q&A's.

Q81. Does the Government have a threshold lease rate for the evaluation of proposals?

A81. The Government is seeking the most competitive proposal. See Section F – Rated Criteria of in SPVPP04 Bermuda Government Solar Development Project Document Amended.

Q82. There is a significant time between the Best and Final Offer and award date. Will there be an indexing mechanism for project cost during that time?

A82. Government will consider reducing the period between submissions and contract. However, Proponents are expected to manage this risk as needed.

Q83. Are there any restrictions on electrical connections between roofs that are not adjacent? In any areas inside or outside or easements where electrical conduits or equipment can not be installed, If so please provide for each site.

A83. Proponents can use GIS tools and plans available at Annex B-1 Site Locations Amended to determine any necessary undergrounding and/or wiring segments and routes.

Q84. Confirm that any structural work to bring roofs up to suitable condition to install solar will either be completed by others or can be proposed as an additional cost.

A84. See A71.

Q85. Provide one line drawings of each site's proposed interconnection point including the equipment currently installed.

A85. Please see example at **Annex O. One-Line Electrical Drawing Example** located on the Procurement website under the Related Documents section at the bottom of the webpage. Each site will vary and will need to be inspected to determine existing infrastructure conditions and preferred interconnection point.

Q86. Confirm that any future work to repair or replace roofs will be completed by others and any costs to remove and reinstall the solar components shall be compensated for if bidder is operating the facility.

A86. See A71.

Q87. Is there any requirement for central monitoring of the facilities by the government/utility?

A87. Yes, the ability to centrally monitor all the sites by both the Government and Lessor is required.

Q88. Confirm that each site is currently fully in compliance with all codes. If they are not, and remedial work needs to be completed to install the solar facility, confirm that this work will be completed by others.

A88. If there is a requirement to do remedial work at a site we will have a mechanism in the tender to either skip that site or execute a change order based on those requirements.

Q89. Since many of the sites have roofs that are not contiguous, can the proposal be bifurcated to include a lower cost first phase and a higher cost second phase for the capacity non-contiguous roofs?

A89. No

Q90. How will proposals be evaluated that are different capacities?

A90. Proponents should submit a proposal based upon the capacities listed for each site. However, bids will be evaluated on the net production and proposed lease rate over the term of the lease.

Q91. Please clarify the requirement for any co-installed batteries. Are these primarily for grid stability? What is the requested size?

A91. There is no requirement to submit designs for battery installations. Should a decision be taken to include batteries at a given site, it will be primarily for grid stability or to maximize site resiliency or efficiency.

Q92. Each commercial building will require the design plans to be ‘stamped’ by Bermuda Fire & Rescue Services (BFRS) as a prerequisite to the submission of the 2nd phase of the DAP1 application – Building Permit. Will the government guarantee that every building will be in possession of a ‘current’ Fire Certificate, and if so, will there be a guaranteed turn around time for the BFRS stamping process?

A92. The Project Team will work with the Department of Planning to try and streamline this process. Additional information will be provided in Round #3 of the Q&A’s.

Q93. In Round 1 Q&A, it is stated in Q8/A8 that “The Government Project Team will support the developer through the planning application process” Each application will require a DAP1 permit and in our experience the Planning Application phase takes around 12 weeks, the BFRS Stamping another 2-3 weeks and finally, the Building Permit Phase another 4-6 weeks. Please elucidate on the “support” that will be provided and how it will affect the timelines and procedures for the process?

A93. See A92.

Q94. Once a commercial DAP1 solar project is completed, following the ‘Final Electrical’ & ‘Final Building’ Inspections, the ‘Certificate of Occupancy’ (C of O) is applied for. This certificate is a prerequisite for the application to BELCO for the completed Interconnection Agreement and the installation of what is commonly called the NET Meter, after which the system can be energised. The average time delay for Planning to issue the C of O after the final project inspections is 4-5 weeks, but on occasion can be significantly longer when key staff are either on vacation or off sick. What mechanisms will be provided to ensure the completion of these tasks in a guaranteed timeframe and what will those timeframes be?

A94. See A92.

Q95. In approximately June of 2020, BELCO notified PV installers of their requirement to have additional oversight and involvement in all solar PY projects of 100+ kW before completion of an interconnection agreement. This additional oversight included extensive on-site testing of the completed system and detailed review of the robustness of the localised grid interconnection infrastructure. Of the listed sites, 22 are ≥ 100 kW. Have all of these sites been given ‘pre-clearance’ by BELCO such that there will be no requirement for the additional oversight?

A95. The Project Team will work with BELCO to coordinate pre-liminary reviews of all sites. However, Proponents will be responsible for appropriate system designs that meet the BELCO interconnection requirements, as well as applying for and executing the interconnection agreements. See A67.

Q96. Assuming the total of all the buildings cumulate to say 5 MW - Is government looking for a single \$ per-Watt lease cost, per annum for the entire 5 MW project? Or is government looking for 30 individual \$ per-Watt lease costs (1 per building)? Our assumption is that the lease cost will be based on the economy of scale of procuring the entire 5 MW of equipment at once and while the installation profit margin will vary for the lessor across the 30 buildings the lessee amount remains proportional for government to the size of each installation. The exception to this would be ground mount systems, which would require a separate \$/Watt lease cost.

A96. The lease cost should reflect a single annual equipment lease providing for the associated economies of scale savings. However a breakdown of all the costs and performance information should also be provided in Annex A - Pricing Form Amended and Annex J Plant Performance Information Amended, for each site.

Q97. The shipment of 40’ containers is prohibited for items that can be broken down and packed into 20’ units. Will government be waiving the restriction on the importation of the solar equipment by 40’ container? There are significant Permit Fee’s associated with importing 40’ containers – will government be waiving these fees for the purpose of this project?

A97. An answer to this question will be provided in Round#3 of the Q&A’s.

Q98. Q14/A14 Round 1 – Given that the Lessor is required to carry independent Insurance for the equipment mounted on the buildings and the equipment must meet Cat 5 hurricane ratings. How will the government indemnify the lessor for damage or destruction of the equipment as a result of structural failure of any part of the building to which the equipment is mounted?

A98. An answer to this question will be provided in Round#3 of the Q&A’s.

Q99. As per Annex B-1, with regard to the site locations estimated KW production, are bidders allowed to propose higher KW production?

A99. Capacities were determined based upon availability, roof condition and other factors. Proponents should use their expertise and knowledge of panel sizing and access requirements to better determine the use of the designated areas only and keeping the maximum site to export 500kWac to the grid at all times.

Q100. What size (in watts) solar panel was the estimated production based upon?

A100. Estimated production is based on 18 watt per square foot and derated with coefficients based on effective area (shape of the roof and the number of panels able to fit within this shape). Proponents should use their expertise and knowledge of panel sizing and access requirements to best determine these effective areas.

Q101. Once site visits are allowed for proposed bidders can design be altered along with pricing? (wording to be worked on).

A101. Yes

Q102. The small roofs are likely not cost effective and will drive the lease rate up significantly. Can we propose a smaller and better value system than 5MW?

A102. We understand that some roofs may yield greater value than others. However, all sites are cost effective and achieve the goal of the aggregated procurement.

Q103. C201 Co Educational Facility Prison has 400kW in the list but 140kW on the drawing. Please confirm the 140kW in the drawing is correct.

A103. The 140kW listed on the drawing is the correct amount. See [Annex B-1 - Site Locations Amended](#).

Q104. Many of the roofs are small and use variable Effective Area coefficients to determine power output. Sometime the effective area is as high as 85% which does not leave much margin for roof guttering, access for emergency services or maintenance. Have more in depth studies been carried out to confirm these effective area percentages? If so, can any of these details be shared?

A104. The effective area coefficients are to be used as a general guideline based on our assessment of the roof shape, orientation etc. Some will have staggered arrays on hips, some may be more rectangular and thus a higher coverage allowable. Proponents should use their expertise and knowledge of panel sizing and access requirements to better determine these effective areas. Roof guttering / glides were not able to be determined for all roofs during these surveys.

Q105. If roof membrane (TPO or similar) penetrations are required to mount the solar panels, will the Government repair these under their existing warranty? Or should the reseal/repair cost be included in the contract price (or would this be handled as a change order)?

A105. An answer to this question will be provided in Round#3 of the Q&A's.

Q106. Will structural drawings be provided for the roof of each building?

A106. No.

Q107. In the event that panels must be removed to accommodate roof painting or other repairs, would the Tenderer (the "Lessor") be responsible party for performing this work? Should these costs be included in the Contract Price (or would this handled as a Change Order, or at the Government's expense)?

A107. See A71.

Q108. After completion of lease term what happens in the event that the Government of Bermuda (the "Lessee") does not elect to purchase the system? Is the Tenderer (the "Lessor") responsible for the decommissioning of the system and any necessary roof repairs? Should these costs be included in the Contract Price (or would this handled as a change order)?

A108. An answer to this question will be provided in Round#3 of the Q&A's.

Q109. For the revised C202 – Quarry depot – from 1.5 MW (struck out in the addendum) and 1.0 MW (in the original annex B) to the revised 500 kW at the end of the addendum #2, given that there are 5 meters for the site, could each of the 5 meters obtain the licence <500 kW rather than limiting the whole site to the 500 kW PV?

A109. A decision has been taken to limit the capacity to 500 kWac for each site.

New and Amended Documents

See full documents published to [procurement webpage](#) under the Related Documents Section.

SPVPP04 Bermuda Government Solar Development Project Amended

1.4 RFP Timetable

1.4.1 Key Dates

1.	Issue Date of RFP	08 July 2022
2.	Deadline to Register for Pre-Bid Clarification Meeting (1600 AST)	17 August 2022
3.	Pre-Bid Clarification Meeting	18 August 2022
4.	Publish Responses to Clarification Meeting & Q&A	09 September 2022
5.	Publish Bi-weekly Q&A Responses	16 September 2022
6.	Deadline for Questions (1600 AST)	23 September 2022
7.	Publish Bi-weekly Q&A Responses & Addenda	30 September 2022
8.	Deadline to Request a Dropbox Folder/Register Interest in Proposing (1600 AST)	05 19 October 2022
9.	Submission Deadline (1600 AST)	07 21 October 2022

Annex C - Government's Master Specifications Amended

#	Component	Description
1.	Solar PV Modules/Panels	<p>1.1 Individual Solar PV Module should have a minimum declared output of 400 Wp (under standard test conditions) for monocrystalline SPV modules.</p> <p>1.2 PV modules must comply with the latest IEC type tests (see list of IEC type tests below).</p> <p>1.3 PV modules shall be warranted for at least 10 years for failures due to material defects and workmanship.</p> <p>1.4 Workmanship shall be warranted for at least 1 year.</p> <p>1.5 PV modules must be warranted for output wattage, which should not be less than 90% at the end of the 10 years and 80% at the end of 25 years.</p> <p>1.6 PV modules maximum power loss at the end of the first year of operation should not be more than 2% of the power at the start of the solar power plant.</p> <p>1.7 PV modules should have a linear degradation of power not more than 0.7% per year till the 25th year.</p> <p>1.8 The front surface of the module shall consist of impact resistant, low iron and high transmission toughened glass.</p> <p>1.9 PV module frame shall be made of corrosion resistant material, which shall be electrically compatible with the structure material selected for the power plant.</p>
2.	Inverter/ Power Conditioning Units	<p>The proposed inverter shall be of hybrid type and have:</p> <p>2.1 a warranty for failures due to material defects for at least 10 years</p> <p>2.2 a workmanship warranty for at least 1 year.</p>

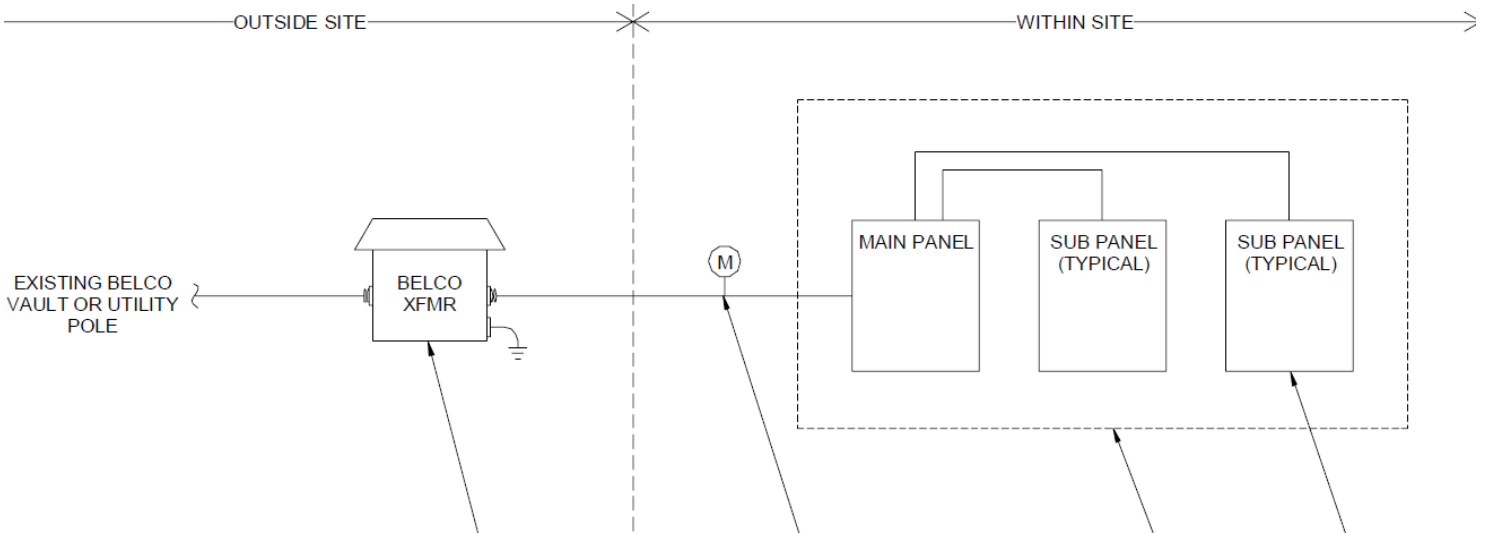
Annex J - Plant Performance Information – Amended

ANNEX J - PLANT PERFORMANCE INFORMATION - ~~7~~ 6MW

Annex N - Consumption Data

ANNEX N: Monthly Consumption [kWh]												
TOTAL	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
483,515	35,930	36,360	32,890	34,410	33,407	43,699	46,424	54,485	46,790	45,050	38,880	35,190
873,351	72,345	72,548	72,677	72,876	73,020	73,194	73,393	73,678	73,895	71,667	71,929	72,132
54,577	3,683	3,399	3,610	3,284	3,545	3,480	7,056	6,025	7,176	5,427	5,524	2,368
891,730	65,290	57,025	66,960	64,940	73,020	86,205	94,680	97,100	92,140	73,100	57,650	63,620
180,610	12,680	10,370	10,370	11,960	10,390	26,160	22,490	28,080	15,300	12,940	11,010	8,860
1,012,187	74,157	71,043	66,280	71,421	76,397	90,171	95,846	106,089	107,234	99,183	83,507	70,859
1,613,290	95,206	99,400	107,299	115,669	124,624	134,762	144,455	154,155	168,565	181,489	142,443	145,224
3,020,414	178,245	186,097	200,886	216,556	233,322	252,303	270,449	288,610	315,589	339,785	266,683	271,889
306,800	20,400	23,400	21,700	16,600	14,800	32,900	29,700	31,600	30,700	33,300	26,800	24,900
247,621	11,646	17,334	18,575	15,402	15,920	27,019	24,896	22,519	27,374	16,470	23,140	27,326
103,820	19,520	7,940	2,970	6,650	5,600	7,280	7,040	7,570	12,140	10,240	11,030	5,840
133,440	8,620	9,180	8,870	9,090	7,860	12,670	15,420	16,100	14,310	11,620	11,190	8,510

Annex O - One Line Electrical Drawing



End of RFP Addendum #3

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