

**GOBIERNO DE PUERTO RICO
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO
NEGOCIADO DE ENERGÍA DE PUERTO RICO**

NEPR

Received:

Nov 16, 2022

8:51 PM

IN RE: ENMIENDAS A CONTRATO DE
COMPRAVENTA DE ENERGÍA:
PROYECTO NO-OPERACIONAL
(XZERTA-TEC SOLAR I, LLC)

CASO NÚM.: NEPR-AP-2021-0002

ASUNTO: Moción para Presentar Informe
de Progreso Mensual Correspondiente a
Octubre de 2022

**MOCIÓN PARA PRESENTAR INFORME DE PROGRESO
MENSUAL CORRESPONDIENTE A OCTUBRE DE 2022**

COMPARECE la Autoridad de Energía Eléctrica de Puerto Rico (la “Autoridad”) a través de la representación legal que suscribe y muy respetuosamente expone y solicita:

1. El 11 de mayo de 2021, el Negociado de Energía de la Junta Reglamentadora de Servicio Público (el “Negociado” o “Negociado de Energía”) notificó *Resolución Final y Orden* (la “Resolución Final”) mediante la cual aprobó, sujeto a algunas condiciones, la *Petición de Aprobación de Enmienda a Contrato de Compraventa de Energía Renovable con Xzerta-Tec Solar I, LLC* (la “Petición”) radicada por la Autoridad el 17 de marzo de 2021 para que el Negociado le impartiera su aprobación al Acuerdo Enmendado¹.

2. La Resolución Final ordena a que, entre otras cosas, la Autoridad y Xzerta Tec Solar I, LLC (“Xzerta”) presenten ante el Negociado de Energía informes de progreso mensual sobre el estatus del Proyecto. Además, el 9 de febrero de 2022, el Negociado emitió una *Resolución y Orden* (“Orden del 9 de febrero”) mediante la cual, en particular, ordenó que la Autoridad y Xzerta

¹ *Amended and Restated Renewable Power Purchase and Operating Agreement between the Puerto Rico Electric Power Authority and Xzerta Tec Solar LLC* con fecha del 4 de junio de 2021 (2013-P00042E) (el “Acuerdo Enmendado”).

debían presentar los informes de progreso mensual firmados por oficiales de cada entidad e incluir en el mismo la fecha de su preparación (“Informe de Progreso”).

3. A partir del 14 de febrero de 2022 la Autoridad ha estado presentando los Informes de Progreso mensualmente y también ha reiterado la necesidad de la comparecencia de LUMA Energy, LLC (“LUMA”) en este proceso mediante Solicitudes de Acumulación².

4. El 10 de noviembre de 2022, el Negociado emitió una *Resolución y Orden* (“Orden del 10 de Noviembre”). Mediante la Orden del 10 de Noviembre, el Negociado ordenó a LUMA a nombrar un representante que comparezca y participe de la certificación de los Informes de Progreso.

5. La Autoridad informa a este Honorable Negociado que previo a la Orden del 10 de Noviembre, la Autoridad y LUMA han discutido algunos asuntos sobre los estudios de interconexión con Xzerta. Por lo cual, en esta ocasión la Autoridad con la anuencia de LUMA presenta el Informe de Progreso mensual, según comentado por LUMA.

6. En cumplimiento con las ordenes de este Honorable Negociado, la Autoridad presenta el Informe de Progreso titulado *Xzerta-Tec Solar I, LLC October 2022 Progress Report* correspondiente a Octubre de 2022, según comentado por LUMA.³ Exhibit A. Además, se

² “Solicitudes de Acumulación” según definido en las siguientes mociones: *Respuesta a Orden para Mostrar Causa y Para Presentar Informes Mensuales de Progreso Correspondientes a Octubre 2021 y Enero 2022* radicada el 14 de febrero de 2022; *Moción para Presentar Informe Mensual de Progreso Mensual Correspondiente a Abril 2022 y Solicitud Para Acumulación de Parte* radicada el 12 de mayo de 2022; *Moción para Presentar Informe Mensual de Progreso Mensual Correspondiente a Mayo 2022 y Solicitud De Remedio* radicada el 14 de junio de 2022; *Moción para Presentar Informe Mensual de Progreso Mensual Correspondiente a Junio 2022 y Reiterando Solicitud De Remedio* radicada el 14 de junio de 2022; *Moción para Presentar Informe Mensual de Progreso Mensual Correspondiente a Julio 2022 y Reiterando Solicitud De Remedio* radicada el 11 de agosto de 2022; *Moción para Presentar Informe Mensual de Progreso Mensual Correspondiente a Agosto 2022 y Reiterando Solicitud De Remedio* radicada el 11 de septiembre de 2022; *Moción para Presentar Informe de Progreso Mensual Correspondiente a Septiembre de 2022 y para Reiterar Solicitud de Acumulación* radicada el 20 de octubre de 2022.

³ El Informe de Progreso se presenta según Xzerta lo prepara y remite a la Autoridad.

presentan comunicaciones y requerimientos de información intercambiados entre Xzerta y LUMA.
Exhibit B.

POR TODO LO CUAL, la Autoridad solicita respetuosamente al Negociado de Energía que tome conocimiento de lo aquí informado, y acepte el Informe de Progreso de Octubre de 2022.

RESPETUOSAMENTE SOMETIDO.

En San Juan, Puerto Rico, este 16 de noviembre de 2022.

f/ Joannely Marrero Cruz
Joannely Marrero Cruz
jmarrero@diazvaz.law
TSPR 20,014

Katiuska Bolaños Lugo
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Exhibit A



**XZERTA-TEC
SOLAR**

**LUMA comments in Red.
F. Lizardi Project Manager
11/15/2022**

November 4, 2022

Mr. Josué Colón
Executive Director
Puerto Rico Electric Power Authority

RE: Xzerta-Tec Solar I, LLC October Progress Report

Dear Executive Director:

Herewith, we are providing our monthly progress and status report made including project activities required for the project completion. In the upcoming months, our team will continue sustaining meetings with both PREPA and LUMA to refine the engineering design and the facility's interconnection to the grid. The following table will be used to identify the project activities, and any other issues with their respective status and progression for the proper implementation of this project.

#	Activity	Description	Status	Comments	LUMA Comments
1	Design				
	A. Power Design - Drawings	After the meeting with LUMA on Sept 27 to discuss their comments on the design package submitted on 08/09/2022, LUMA transmitted their comments of the drawings 10/03/2022. Xzerta responded to the comments by 10/13/2022 and provided a new revision of the drawings and the relay study on 10/28/2022. Transformer and protective relays proposed products used for the interconnection are still pending for approval. Xzerta is still waiting for inter-connection study, necessary for the final integration of the inter connection. Pre-liminary design Transmission line drawings will be released by 11/12/2022. This item is not required for the fulfillment of Article 4.1. Final design, which will include transmission lines design, conduits, racks, grounding and bonding, will be delivered upon receiving the final study and preliminary design of the Hatillo Substation modifications from LUMA.	Submitted	Under LUMA/PREPA review and approval	Protection systems evaluation is subject to completion of Interconnection and Facility Studies. Transformer preliminary evaluation was issued and answered as part of RFI 011(see attached). Transformer final evaluation is dependent upon completion of Interconnection/Facility Studies as per PPOA sections 4.2 (a), (b), and (c): "The Inter-connection Study and Facility Study shall, at a minimum, (a) determine the power capabilities of the major interconnection equipment required to complete the Interconnection Facilities, (b) specify the maximum fault currents necessary to specify short circuit duty and interrupting ratings, (c) approve or disapprove generator step-up (GSU) transformer impedance and transformer tap ranges necessary for proper control of voltage and reactive power flow,..."

Disclosure: This report is provided for informational purposes only. By accepting this information, the recipient agrees that it will, and it will cause its employees, agents, and representatives, to treat the information as such. Any reference made herein to terms or conditions should be subject to the language of the power purchase and operation agreement. The Information supersedes all information contained in any prior report or presentation for this project and is subject to change.

B. Energy Yield Assessment and Relay Study	Relay Study was submitted on Sept 21, 2022, and the Energy Yield Assessment was submitted for approval on Sept 30 th , 2022.	Waiting for approval	Under LUMA / PREPA review and approval	This is also part of the Facility / Interconnection Studies.
C. Products	Proposed products and Models for the interconnection have been submitted to LUMA for approval. Documentation for the inverters, batteries, Transformer, Protective relays and MV switchgear were transmitted for approval, but LUMA stated that they will not approve any Products related to the solar farm but only the interconnection. LUMA stated it will be handled as for information only. LUMA have approved with comments the proposed gas circuit breaker from the manufacturer, Hitachi. Step up Transformer response from LUMA stated that no exception was taken but their response could not be taken as an approval since it is pending on the completion of the interconnection study. Protective relays are still pending for approval.	Waiting for approval of the protective relays	We are waiting for the approval of the protective relays. Step Up 3P Main Transformer was not officially approved like other products pending for the results of the interconnection study. At this point, XZERTA has not commence with the orders of equipment due to the high risk of not having proper approval of products. Lead times can severely affect proposed schedule	See item 1A above.
D. SCADA list	Our team is in receipt of current SCADA list sample shared by LUMA. Based on this sample, our team will develop the preliminary SCADA Point list and will add all available alarms and events based on the final design. The list is pending on the completion of LUMA's analysis and study of our design to determine if additional protections, alarms or other necessary points are required to be included in our design.	In progress	Under development while waiting for LUMA's study results	See item 1A above.
E. Other Design	The geometric and layouts are currently under development. Once all products have been identified then the foundations drawings, racks design, grounding, and conduits design. Preliminary design for the transmission lines will be completed by 11/12/2022.	In Progress		

	F. Dynamic Study	Based on the preliminary design, Energinx has completed the dynamic study, and it was submitted for LUMA's perusal and approval.	Submitted	Waiting for LUMA's review and evaluation	This is also part of the Facility / Interconnection Studies.
	G. Winds Conditions requirement	LUMA/PREPA winds conditions requirement of 160 MPH has become an issue. Several vendors have responded that they will be unable to meet this requirement. Currently, products meet between 120 MPH to 142 MPH. It was requested an exemption	Waiting for Responses from LUMA	Waiting for LUMA's waiver for this particular requirement but the proposed gas breaker meeting the 142 MPH has been approved	No waiver is required from LUMA. 160mph criterium is for PREPA-owned equipment. See RFI 006.
	H. Transmission line design and Easement Usage / Permit	It was requested the usage of a PREPA ROW or Easement near to the lands of the project to minimize the environmental impacts and shorten the path to the Hatillo POI substation via an RFI. LUMA responded that it will be required to be address through their department of Land management and development instead. All documentation has been submitted to the LUMA's Land Department for certification, and endorsement. LUMA responded in a 2 nd letter that it will require a detailed transmission line design in order to approve the usage. Preliminary Transmission line design will be released by 11/12/2022	In Progress	Preliminary Transmission line design will be released by 11/12/2022	
2	Commercial				
	A. Certifications	filed with the Puerto Rico Energy Bureau for Xzerta Tec's Electric Service Company Certification as required under Rule 8701	Completed	Approved	
	B. Loans	Term Sheet was received	In Progress	Modifications received. Discussions are undergoing awaiting new IRS rules regarding ITC's after latest amendments to the inflation reduction Act.	



C. Leases	Executed the extensions on the leases of the properties that required such extensions. Xzerta continue to maintain land control over all the proposed parcels, plus some additional lots have been added and surveyed to guarantee the necessary space for the increased capacity.	Completed		
D. Mars CPA Report	Commissioned a report from our accounting firm Mars CPA regarding the possible incentives available to the project under the Puerto Rico Incentives Code, to review the prior decree granted to the project by the Department of Economic Development and to establish the final structure regarding the tax equity of the project.	Completed		
E. LUMA request for payment for interconnection Study	LUMA transmitted a request for payment letter regarding of the study and evaluation of the project interconnection. Total amount to be paid as per LUMA letter is \$341k	Resolved Completed	After latest meeting with both PREPA and LUMA, PREPA has engaged Sargent and Lundy to conduct the study.	
3 Contracting				
A. Land Survey and Topographic Survey	Geomatic Solutions and Surveying, PSC	Completed		
B. Plant Design	CSA Architects and Engineers, LLP	In progress		
C. Archaeological Study	Fernando Alvarado	In progress		
D. Environmental Site Assessment Phase I-A Phase I-B	Tycroes group	Completed Delivered	Phase B received and under review	
E. Habitat Study	Alejandro Cubiña	Completed		
F. Foundation Design	Carlos Rivera, P.E.	Completed		
G. Anchoring	RBI Solar, Solar Mounts and / or Schletter	In progress		
H. Electrical Design	Miguel Ortiz, P.E. Lisaidyn Perez Enerzinx	Completed		
I. SCADA Systems Design	Lisaidyn Perez	Completed	Modifications under review	
J. Modeling and Simulations	Enerzinx	Completed	Submitted on 07/2022 and	

				waiting for approval	
	K. Relay Study	Enerzinx	Completed	resubmitted to Luma incorporating comments on 10/28/2022 and waiting for approval	See item 1A above.
	L. Transmission Lines	Ing Hector Castillo	In Progress	Contract was released. Preliminary design to be submitted on 11/12/2022	
3	Construction				
	A. Permits	Completed the following: 1. Location 2. Environmental 3. Endorsements by - Highway and Transportation Authority - Puerto Rico Energy Bureau - Cultural Institute - Puerto Rico Telecommunications Bureau - Puerto Rico Aqueduct and Sewer Authority - Department of Agriculture Pending 1. NWP-14 2. NPDES General Permit 3. Permits Management Office (OGPe) - Calculations for construction square footage were completed to finalize permit. Permit will be updated with the new data. 4. PREPA ROW / Easement Permit of usage	In progress	Still waiting for LUMA / PREPA approval for usage of ROW/ Easement	See attached email and letter from Lands & Permits. Request was returned to Xzerta on Sep/08/2022 due to insufficient information.
	B. Land Acquisition		Completed		
	C. Contractors	No major changes, waiting for final drawings with Luma comments to be completed. Preliminary Scope of work was distributed to potential EPC, waiting for their updates of the quotes	In progress	General Contractor (EPC), subcontractors and consultants' agreements are in process.	
4	Procurement				



	A. Material List	The material list has been generated but many long lead times products are waiting for proper approval.	In progress but waiting for approvals	Refer to Material List Annex 1 found below for further information	
	B. Orders	Waiting for LUMA's or PREPA's approval of proposed products.	In progress	lead time of equipment could impact final implementation of project	Major equipment evaluations are dependent upon the Interconnections and Facility Studies as described in item 1A.
5	Implementation				
	A. Installation	Preliminary definition of scope of works have been created and shared with proponents. EPCs will provide updated quotes but final prices and contract are pending on the final design.	In progress	Waiting for Changes to Design Suggested by Luma	
	B. Testing	Master Plan to be generated after approval of the design and upon receiving PREPA's approved testing protocols. Master plan and test procedures will be generated in accordance with PREPA/LUMA approved testing protocols and operations.	Not started	LUMA submitted their test protocols. The master plan will be based on this inf and the final approval of design	

The following table shows the status of RFIs:

#	Number	Description	Status	Date Submitted	Comments
1	RFI-001	Transformer specs and interconnection requirements (Y-D, D-Y or D-D)	Closed	4/26/2022	1 item remained open. Transformer should be YG to Delta on the side of interconnection of 115 KV with PREPA with an internal shift of 30
2	RFI-002	Transformer specs (Not responded under RFI-001)	Closed	5/23/2022	Specifications received. Issues with Wind Conditions requirement. It will be followed through RFI-006
3	RFI-003	SCADA Communication Protocol and Sample of Points	Closed	5/23/2022	Received List. TBR
4	RFI-004	Amount of demand Energy of PR	Closed	5/23/2022	Calculated at 0.0003% or 0.001 %



5	RFI-005	Request of Permit to usage of PREPAs ROW	Closed	5/23/2022	Item is still open. LUMA requested to submit request for usage of easement via another form since it is managed by Land Management Dept
6	RFI-006	Request for exemption to Wind Conditions requirements. Vendors unable to meet criteria of 160 MPH. Current design meets 120 to 140 MPH	Closed	6/2/2022	LUMA stated that the cited specification details the requirements for equipment to be owned, operated, and maintained by PREPA/LUMA. Knowing that this equipment will remain under the care, custody, and control of the proponent, LUMA will not provide technical input on alternate wind load criteria for transformer components, since it is not an evaluation factor to determine the Facility's capability to be interconnected to the grid. Refer to PPOA sections 9.4(a) and (b).
7	RFI-007	Request for approval of GCB proposed product	Closed	6/2/2022	Hitachi GCB Breaker for 115 KV. It has been conditionally approved. LUMA requested to increase CC of GCB1 based on their current design, 145 KV @ 2000 A CC
8	RFI-008	Request for approval of MV Switchgear proposed product	Closed	6/30/2022	LUMA stated that the MV switchgear approval is not within responsibilities. This will remain under contractor decisions regarding the solar farm design.
9	RFI-009	Request for approval of Protective Relays, Network Switch, Controller	Open	7/11/2022	See item 1A above.
10	RFI-010	Request for approval of Dynamic Studies	Open	7/11/2022	This is also part of the Interconnection/ Facility Studies.
11	RFI-011	Request for approval of 3P Main Step-Up Oil Transformer 34/115 KV	Closed	7/11/2022	See attached RFI 011 for clarification of this evaluation.
12	RFI-012	Request for Testing Protocols and operating procedures	Closed	8/1/2022	Delivered



13	RFI-013	Request for LUMA/ PREPA to confirm if the Seismic Design Category can remain in A instead D because there is no historical data that requires to consider inertial loads associated with earthquakes within the area	Closed	10/13/2022	For the moment, LUMA will not evaluate the civil design aspects for the medium voltage switchgear, since this equip is located upstream from the Main Power Transformer, and thus lies beyond LUMA's evaluation responsibilities for privately-owned Renewables projects. During the normal construction project permits process, other government agencies may have requirements
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The following table shows the status of Transmittals:

#	Number	Description	Status	Date Submitted	Comments
1	XTA-TRA-0001	Relay Study and Updated Preliminary design	Open	9/21/2022	See item 1A above.
2	XTA-TRA-0002	Energy Yield Assessment	Open	9/30/2022	This is also part of the Interconnection / Facility Studies.
3	XTA-TRA-0003	Relay Study and Updated Preliminary design based on LUMA's Comments of 10/3/2022	Open	10/28/2022	See item 1A above.

We continue committed to providing PREPA and the people of Puerto Rico clean and efficient energy and to assist in achieving the targets established in the Integrated Resources Plan (IRP) and the Public Policy aimed by the Government of Puerto Rico.

Sincerely,

Fernando Molini-Vizcarrondo

xc: francisco.santos@prepa.com
Mcadavid@kslaw.com
kbolanos@diazvaz.law

Revised by PREPA Representative:

F. Santos
F.Santos (Nov 16, 2022 07:34 AST)

Francisco Santos, Esq.
Manager Business Strategy
and Operations, PREPA
November 15, 2022

Attachments

Equipment and Components – Materials Status List

Equipment	Company/Brand	Status	Comments
PV Modules	RFPs Submitted to vendors	Proposal Received from Talesun and waiting from other vendors (Trina Solar)	Negotiating Commitment and waiting for other proposals
Inverters	Ingeteam	Refresh of Proposal Received from Ingeteam to proceed with PO	Reviewing Contract Terms with Ingeteam
Battery Equipment	Ingeteam	Refresh of Proposal Received from Ingeteam to proceed with PO	Reviewing Contract Terms with Ingeteam
Racks and Anchoring	Schlatter/Solar Mount	Provided latest preliminary design to RBI Solar to have them Revised Proposal	On going
Main Switchgear	Eaton	Received proposal from Eaton and Submitted for approval	LUMA stated that Main Switchgear will remain under the contractor prerogative. No approval necessary
GIS/GCB	Hitachi	Submitted for approval	LUMA approved it with comments. Changes incorporated to proceed with POs
Transformer 34.5/115K	Hitachi	Submitted for approval	Pending
Meters	Eaton	Waiting to receive meters information from Eaton to submit product for approval	
Protective Relays	SEL	Submitted for approval	Pending
Foundations	Pending Completion of design		
Posts & Towers	TBD		
Cables & Miscellaneous	Caribe Sales	Revised proposal received. Final proposal will be delivered upon completing design	

Exhibit B

From: [Sariani E Trejo](#)
To: [Franz Lizardi](#); [Jaime L Lopez](#); [Carolina I Martinez](#); [Omar Aponte Sosa](#)
Cc: [Edwin E Rivera-Pérez](#); [Daniel Hernandez](#); [Melissa K Solivan](#)
Subject: FW: Documentos requeridos para continuar evaluación de proyecto de energía renovable Xzerta
Date: Monday, October 31, 2022 1:41:47 PM
Attachments: [image001.jpg](#)
[image002.jpg](#)
[image003.jpg](#)
[image004.jpg](#)
[RE Documentos requeridos para continuar evaluación de proyecto de energía renovable Xzerta.msg](#)
[Xzerta Solar Deficiencias.pdf](#)

Saludos Franz y el resto del equipo,

Conforme coordinamos hoy en nuestra reunión, adjunto para su conocimiento documentos requeridos a Xzerta desde el pasado 8 de septiembre de 2022. Hasta el momento no hemos recibido los mismos, por lo que la evaluación de uso de servidumbre está detenida hasta tanto el proponente corrija las deficiencias notificadas.

Adjunto carta de deficiencias y copia del correo electrónico con respuesta de recibido por parte de Xzerta.

Quedo a su orden,

Sariani E. Trejo Gutiérrez

Lead, Land Administration

Land and Permits



- ☐ 787.354-2414
- ☐ sariani.trejo@lumapr.com
- ☐ lumapr.com

LUMA Energy ServCo, a Puerto Rico limited liability company

From: [Lisaidyn Perez](#)
To: [Sariani E Trejo](#); [lpilar97](#)
Cc: [fernandomolini](#)
Subject: RE: Documentos requeridos para continuar evaluación de proyecto de energía renovable Xzerta
Date: Thursday, September 8, 2022 3:25:11 PM
Attachments: [image001.jpg](#)
[image002.jpg](#)
[image003.jpg](#)
[image004.jpg](#)

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Muchas Gracias Sariani

Estaremos revisando la información y la someteremos tan pronto la tengamos.

Best Regards,

Lisaidyn P. Perez, CEM, CDSM

Rail Specialized Consultancy and Project Management Services

Email: Lpilar97@Hotmail.com

Email: Lpilar97@gmail.com

Mobile: [787-579-5186](tel:787-579-5186)

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----- Original message -----

From: Sariani E Trejo <Sariani.Trejo@Lumapr.com>

Date: 9/8/22 2:35 PM (GMT-05:00)

To: [lpilar97](#) <lpilar97@gmail.com>, [Lpilar97@Hotmail.com](#)

Subject: Documentos requeridos para continuar evaluación de proyecto de energía renovable Xzerta

Saludos Ing. Lisaidyn Pérez,

Adjuntamos para efectos de notificación documentos requeridos por el área de Ingeniería de

Transmisión de LUMA para continuar con la evaluación de solicitud de uso de servidumbre.

Quedo a su orden,

Sariani E. Trejo

Lead, Land Administration

Land and Permits



☐ 787.354-2414

☐ sariani.trejo@lumapr.com

☐ lumapr.com

LUMA Energy ServCo, a Puerto Rico limited liability company

**PROPONENT REQUEST FOR
INFORMATION (RFI)**

Page 1 of 2

Instruction: This form is used to formally solicit clarification or knowledge for a specific topic that could affect the scope, schedule, or cost of a project. This RFI and any response to it, does not, and shall not, constitute in a request for a change order, a contract change, or an amendment to the agreement and relates solely to a request for information only.

PROJECT INFORMATION	
LUMA RFI No.: <i>For LUMA Use Only</i>	RFI 006 XZERTA
External Party/Contractor RFI No.:	XZERTA RFI 006
Program ID:	PPOA-IPP Xzerta
Project ID:	2013-P00042E
Project Name:	XZERTA 60 MW Solar Renewable Energy
LUMA Project Manager:	DANIEL HERNANDEZ – Director / Market Transformation
External Party / Contractor Project Manager:	Lisaidyn Perez
External Party / Contractor Company Name:	Xzerta Solar Tech LLC
External Party / Contractor Phone Number:	787-579-5186
Issue Date:	06/02/2022

REQUEST	
Requested by:	Lisaidyn P Perez
Response Due Date:	6/17/2022

INFORMATION REQUESTED:

Xzerta is hereby requesting an exemption for the wind conditions requirement found on the latest specification for the transformer as well on the contract specifications for the GCB and other equipment. The reason is that vendors have stated that they don't have products meeting nor been qualified for 160 mph wind speeds with an overload factor of 1.1 (176mph) as of today. See requirement below,

Wind conditions: The transformer, its bushings, surge arresters, coolers, control cabinet, and accessories, shall be designed and constructed to withstand sustained hurricane-force wind velocities up to 160 mph with a 1.1 overload factor.

**PROPONENT REQUEST FOR
INFORMATION (RFI)**

Page 2 of 2

RESPONSE *For LUMA Use Only*

Responded By:	Franz Lizardi, PE Project Manager, Utility-Scale Renewables
Response Date:	10/20/2022

RESPONSE TO REQUESTED INFORMATION:*Enter the complete answer to the information originally requested*

The cited specification details the requirements for equipment to be owned, operated, and maintained by PREPA/LUMA.

Knowing that this equipment will remain under the care, custody, and control of the proponent, LUMA will not provide technical input on alternate wind load criteria for transformer components, since it is not an evaluation factor to determine the Facility's capability to be interconnected to the grid. Refer to PPOA sections 9.4(a) and (b).

However, please bear in mind that other government agencies might have stricter requirements regarding wind loading for structures and equipment. It is the proponent's responsibility to follow Prudent Utility Practices in the design and permitting process.

Responses revised by:**DOCUMENTS/ REFERENCES:***Enter the list of the supporting documents for the RFI answer (if applicable)*

1.

2.

**PROPONENT REQUEST FOR
INFORMATION (RFI)**

Page 1 of 4

Instruction: This form is used to formally solicit clarification or knowledge for a specific topic that could affect the scope, schedule, or cost of a project. This RFI and any response to it, does not, and shall not, constitute in a request for a change order, a contract change, or an amendment to the agreement and relates solely to a request for information only.

PROJECT INFORMATION	
LUMA RFI No.: <i>For LUMA Use Only</i>	RFI 011 XZERTA
External Party/Contractor RFI No.:	XZERTA RFI 011
Program ID:	PPOA-IPP Xzerta
Project ID:	2013-P00042E
Project Name:	XZERTA 60 MW Solar Renewable Energy
LUMA Project Manager:	DANIEL HERNANDEZ – Director, Renewable Systems Projects
External Party / Contractor Project Manager:	Lisaidyn Perez
External Party / Contractor Company Name:	Xzerta Solar Tech LLC
External Party / Contractor Phone Number:	787-579-5186
Issue Date:	07/11/2022

REQUEST	
Requested by:	Lisaidyn P Perez
Response Due Date:	8/5/2022

INFORMATION REQUESTED:

Xzerta is hereby submitting Hitachi's product specifications for the Mineral Oil Liquid-Filled three-phase Main or Step-up power transformer 64/70/95 MVA 115/34.5 kV OLTC on HV Side for LUMA/ PREPA perusal and approval. Please refer the attached documents for technical data of components and layouts.

Technical Data is as follows:

OPP-22-6773531

64/70/95 MVA_ 115±16x0.625%/34.5 kV_ ONAN/OFAF_ Dyn1_ OLTC

	Unit	Primary Winding	Secondary Winding	Tertiary Winding	Notes
Rated ONAN Power	KVA	64000	64000	1	
Rated ONAF Power	KVA	95000	95000	1	
No load Rated Voltage	V	115000	34500	1	
Taps		+8-8x1.25% []	+1-1x1% []		



PROPONENT REQUEST FOR INFORMATION (RFI)

Page 2 of 4

Connections		Delta	wye		
Frequency	Hz	60			
Insulation Level	KV	123.00	25.00	15.00	
Lightning Impulse Withstand (BIL)	KV	550	150	110	
Power Frequency Withstand	KV	207	50	34	
Ambient temperature	°C	40			
Maximum Altitude Operation a.s.l.	m	1000			
Winding material		Cu	Cu		
Impedance	%	13.4			* See note 1
Vector Group		Dyn1			
Cooling type		ONAN/ONAF			
Insulation Class		A0 (105°C)			
Thermal insulation		Conventional Mineral Oil			
Temperature Rises					
Top Oil	°C	65			
Winding average	°C	65			
Hot Spot	°C	80			
Losses					
Non-load- 100% Nominal Voltage	W	39000			
Full Load -ONAN Nominal Voltage	W	370000			* See note 1
I. current, 100% Nominal Voltage	%	<1%			
Efficiency at 75°C * See note 1					
Load		100%	75%	50%	25%
Power factor=	1.00	99.57131927	99.65435673	99.72392219	99.7391035
Power factor=	0.80	99.46472274	99.56831893	99.65514076	99.67409195
Regulation at 75°C * See note 1					
Load		100%			
Power factor=	1.00	1.466838073			
Power factor=	0.80	8.990352719			
CARACTERISTICAS CONSTRUCTIVAS					
Transformer type	Conservator				
Total Dimensions (L x W x H) m	8 x 5.5 x 6.8			Weight[kG]	97000
Transport Dimensions (L x W X H) m	6.5 x 3.1 x 4.0			Weight[kG]	60000
Radiators	Dismantlable, wafer type				
Tap Changer type	OLTC, Tipo VUCG, En HV SIDE				
Primary Bushings type	Condenser type, on cover, ANSI, Color Brown				
Secondary Bushings type	Solid type, on cover, ANSI, Color Brown				
Tertiary Bushings type	Solid type, on cover, ANSI, Color Brown				
Enclosures or Terminal boxes	No.				

INCLUDED TESTS

Code	Description	Serial	Un	Qty	Unit	Subtotal
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DESIGN STANDARDS



ANSI

*

NOTES

Impedance and losses are referenced to 85°C, Rated Power ONAN and Rated Voltage. Sustain Winds up to 140 MPH.

The proposed transformer shall be manufactured in HITACHI ENERGY COLOMBIA LTDA. Dosquebradas, Colombia. This facility is ISO 9001; ISO 14001 and OSHAS 18001 certified. Also, the test room is certified under ISO/IEC 17025.

RESPONSE For LUMA Use Only

Responded By:	Franz Lizardi, PE Project Manager, Utility-Scale Renewables
Response Date:	10/20/2022

RESPONSE TO REQUESTED INFORMATION:

Enter the complete answer to the information originally requested

During this *preliminary* evaluation, LUMA takes no exception with the use of this transformer for interconnection of XZERTA's system to the grid.

This response shall not be construed as a submittal approval, since the Interconnection Studies, Facility Studies, and Final Design have yet to be performed. As per PPOA Section 4.2: "*The Interconnection Study and Facility Study shall, at a minimum, (a) determine the power capabilities of the major interconnection equipment required to complete the Interconnection Facilities, (b) specify the maximum fault currents necessary to specify short circuit duty and interrupting ratings, (c) approve or disapprove generator step-up (GSU) transformer impedance and transformer tap ranges necessary for proper control of voltage and reactive power flow, (d) quantify impact to PREPA's system and the actions and costs required to mitigate such impact for inclusion in the Reimbursement Amount, (e) designate the PREPA dispatching centers that will coordinate the operation of the Facility, and (f) specify the final design requirements for the Facility and the PREPA Interconnection Facilities.*"

Responses revised by:

DOCUMENTS/ REFERENCES:

Enter the list of the supporting documents for the RFI answer (if applicable)

1.

2.



**PROPONENT REQUEST FOR
INFORMATION (RFI)**

Page 4 of 4

8 de septiembre de 2022

Lisaidyn P. Perez, CEM, CDSM

Rail Specialized Consultancy and Project Management Services

Vía correo electrónico: lpilar97@gmail.com / Lpilar97@Hotmail.com

**NOTIFICACIÓN DEFICIENCIAS SOBRE SOLICITUD DE USO DE SERVIDUMBRE
LÍNEAS DE TRANSMISIÓN 50,500 - 115 kV Y 2,100 – 38 kV, PROYECTO PPOA-IPP
XZERTA TEC SOLAR 1- CONTRATO 2013-P00042E, UBICADO EN PR-130 KM 7.0, BO.
NARANJITO, HATILLO (HAT TB-04302)**

Estimada Ing. Lisaidyn Pérez:

El Acuerdo de Operación y Mantenimiento del Sistema de Transmisión y Distribución de Puerto Rico ("Acuerdo de O&M") suscrito entre la Autoridad de Energía Eléctrica de Puerto Rico (la Autoridad) y LUMA Energy LLC (LUMA), otorga a LUMA la provisión y ejecución de toda la administración, operación, mantenimiento, reparación, restauración y reemplazo y otros servicios relacionados para el Sistema T&D.

El pasado 19 de julio de 2022 fue recibida su solicitud para uso de servidumbre como parte del proyecto renovable de referencia. Como parte de la solicitud solo se han presentado planos conceptuales y mono lineales. Para continuar con su evaluación, el área de Ingeniería de Transmisión de LUMA ha solicitado los siguientes documentos:

- Planos e información que detallen con mayor precisión el proyecto propuesto, cómo y dónde se impactarían las servidumbres, en especial la que discurre de Cambalache a Mayagüez, proyecciones de condiciones de acceso y ensanche de la línea eléctrica de incluirse el proyecto, cruce de alguna línea propuesta con líneas eléctricas existentes y uso de estructuras pertenecientes a la Autoridad de Energía Eléctrica, así como propuestas sobre conexión.

Para poder continuar con la evaluación de la solicitud deberá someter los documentos antes requeridos.

De tener cualquier duda puede comunicarse a los siguientes correos electrónicos: sariani.trejo@lumapr.com, melissa.solivan@lumapr.com.

Cordialmente,

f/Lcda. Sariani E. Trejo Gutiérrez