[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
1	Equipment			
2	Battery and rack switchgear	S,E,I,C	Contractor shall provide all external interface DC cabling to/from each BESS Enclosure. Internal BESS enclosure wiring within the BESS enclosures is furnished by the equipment OEM's.	_
3	BESS (including BMS)	S,E,I,C	Contractor shall fully install the BESS Enclosures under the OEM Equipment Supply Contract. Installation includes all electrical, HVAC, fire protection, and foundation interfaces required by the OEM installation documents and specified by the Exhibit 1 – Scope Book.	_
4	ACC/DCC	S,E,I,C	The Contractor shall design the DC collection system using a design philosophy typical for utility-scale BESS project in the United States. The DC collection system shall allow the power to be collected from the individual BESS enclosures, combined, and routed to the inverters, stepped-up in voltage and exported to the grid.	
5	PCS	S,E,I,C	Contractor shall fully install the PCS Equipment under the OEM Equipment Supply Contract. Installation includes all electrical, HVAC, and foundations interface required by the OEM installation documents and specified by the Exhibit 1 – Scope Book.	_
6	MVT	S,E,I,C	Contractor shall fully install the MVT Equipment under the OEM Equipment Supply Contract. Installation includes all electrical, HVAC, and foundations interface required by the OEM installation documents and specified by the Exhibit 1 – Scope Book.	_

[BESS Project Name]

Key: Supply (S), Engineering (E), Installation (I), Commissioning (C)

Ref. No.	Item	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
			Contractor shall provide and install Outdoor Switchgear necessary by Contractors detailed design to provide a means of disconnect between the PCS and the POI interface.	
7	MV Switchgear	S, E, I, C	The switchgear shall be designed, manufactured, and tested in accordance with the latest IEC, ANSI, and NEMA standards. The MV and LV switchgear shall be of a design that has passed testing for arc-flash resistance according to Standard IEEE C.37.20.7 or shall be provided with arc-flash mitigation if required.	_
			The switchgear shall be adequately rated Per Appendix 2 of the Scope Book.	
8	BESS Plant Controller (and SCADA)	S, E, I, C	Contractor shall install and commission Plant Controller (and SCADA) systems equipment per Exhibit 1 Scope Book Section 3.4.	_
9	Fiber conduit to POI	S, E, I, C	Power – Contractor shall provide for allowance of [300 lineal feet of 6" conduit for 3-phase 22.86 kV power tie-in from the MV switchgear to the POI at existing 22.86 kV distribution pole].	_
			Fiber – Contractor shall provide for allowance of [300 lineal feet of 2" PVC conduit to support 96 fiber optic cable to the POI at existing 22.86 kV distribution pole].	
10	Fiber to POI Including Terms and Testing	C (support)	The Owner shall furnish and install fiber optic cabling from offsite to the POI.	S, E, I, C
11	Emergency Response Panel Interface	S, E, I, C	Contractor shall provide and install one ERP measuring 4' wide x 5 feet tall x 1' deep (minimum). The ERP shall be installed on a 3' x 6' x 8" thick reinforced concrete pad with one 4" conduit dedicated for fiber	_

[Generic] BESS EPC Scope Book

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
			communications cables and one 4" conduit dedicated for power cables.	
			Contractor shall provide and install one area light fixture at emergency response panel.	
12	Reserved.	_		
13	Distribution Controller Interface to BESS SCADA	S, E, I, C	Excluded from EPC	
14	Internet Access	S, E, I, C	Excluded from EPC	
15	Auxiliary Power - Low voltage switchboard/transformers	S, E, I, C	Contractor shall provide and install a complete LV auxiliary power system which shall include but not be limited to, 100% redundant auxiliary transformers and one low voltage switchboard.	_
16	Freight and Logistics to Site	S, E, I, C	Contractor shall provide freight and on-site handling for all other equipment and material provided under the EPC.	_
17	Site Work and Construction Management Services			
18	Structural foundations and anchoring for all equipment, panels, and enclosures	S, E, I, C	Contractor shall provide reinforced concrete foundations for all BESS equipment, including but not limited to foundations for: BESS enclosures PCS	_
	pariolo, and onologues		MV TransformersMV switchgear	

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
			Auxiliary Transformers	
			LV distribution panels	
			ERP – Emergency Response Panel	
			Concrete work shall, as a minimum, be designed, specified, and installed in accordance with applicable ACI requirements. Reinforced concrete structures and foundations shall be designed in accordance with the applicable provisions of ACI 318, "Building Code Requirements for Reinforced Concrete." Concrete work shall conform to the requirements of ACI 301, Specifications for Structural Concrete.	
19	Site/Safety and Equipment Identification Labels – NEC, Arc Flash, OSHA, and other code required labels for equipment and areas, as well as equipment identification	S, E, I, C	Contractor shall apply all required labels to all equipment. Instruction plates, nameplates and labels shall be provided for all items of the Plant giving particulars about rating, duty, size, model number, serial number and full information for identification and operation. Labels shall be of sufficient size to carry a full description of the Plant item and its complete identifier.	
20	BESS Equipment Labels	S, E, I, C	Contractor shall provide all required Labels to all BESS equipment, including ARC flash labels. Instruction plates, nameplates and labels shall be provided for all items of the Plant giving particulars about rating, duty, size, model number, serial number and full information for identification and operation. Labels shall be of sufficient size to carry a full description of the Plant item and its complete identifier.	_

[BESS Project Name]

Ref. No.	Item	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
21	Trenching, Raceway, and Conduit	S, E, I, C	Contractor shall provide raceways for all below grade cable in conduits or duct banks (use of direct buried cabling is prohibited).	_
22	External Interface - Power and Instrument Cable	S, E, I, C	Contractor shall provide for all external cable and wiring of all BESS equipment, including but not limited to: DC cable and connections Auxiliary Power cable and connections FO communications cable and connections Fire protection devices (if required) Grounding connections	_
23	Site grounding and lightning protection systems	S, E, I, C	Contractor shall provide a site ground grid and lightning protection system.	_
24	Site Security Fence and Gate System	S, E, I, C	Contractor shall provide and install perimeter security chain link fencing. Chain-link fencing shall be a 7-foot-high chain link fence with a 1-foot top guard (total 8-foot high) of three strands of nine-gauge barbed wire and designed to meet NESC and IEEE standards. Barbed wire shall be on arms oriented at 45 degrees facing up and outward. Fence posts shall be spaced no more than 8 ft apart, set in concrete finished no more than 2 inches above finished grade, and shall be grounded to meet NESC and IEEE standards. If any portions of the fence are located under transmission lines, they shall be isolated and grounded according to Utility requirements and NESC standards.	_

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
			One 24' Motor operated slide gate shall be provided by Contractor at the plant entrance.	
			One area light shall be provided by Contractor at the plant entrance gate.	
			Contractor shall provide conduit and poles set at two- opposite corners of BESS site for Owner supplied security cameras.	
			The civil works, including grading and drainage, provided by Contractor shall incorporate the following criteria: • The size of the developed BESS Site shall be determined by EPC Contractor's detailed design including OEM layout and equipment	
25	Grading and Drainage	S, E, I, C	 access requirements The minimum equipment setback criteria shall be: 20' between containers 	_
	(Construction and Operation)	0, 2, 1, 0	 100' to fence line to any BESS enclosure 	
			 20 MW-Hr limitation on a single enclosure 	
			 All equipment shall be on foundations twelve- inch (12") freeboard above the 100-year, 24- hour rainfall event 	
			BESS site shall be lime or Geotech stabilized with minimum 4' deep rock	

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
			Contractor shall design and construct a permanent entrance road to BESS plant; the road shall be 24' wide consisting of compacted gravel road to/from entrance tie-in at the existing Old Gentilly Road.	
26	Roads (Temporary and Permanent)	S, E, I, C	All roads shall be designed to sustain the maximum loads from the vehicles likely to use them during construction and throughout the life of the Plant, including articulated vehicles, material handling equipment and transporters used for the removal and replacement of major pieces of equipment. All materials used in the permanent construction shall be of good quality and shall conform to the relevant Codes and Standards.	
27	Site Management during construction	S, E, I, C	Contractor shall provide all on-site management during construction.	_
28	Construction Permits	S, E, I, C	Contractor will be responsible for preparing, submitting, and securing all required site and construction-related permits. Contractor will also be required to prepare and submit all site compliance certifications regarding work completion to applicable agencies (e.g., as-built certification of storm water management system, if required).	_
29	Onsite Utility Owner Coordination	S, E, I, C	Contractor shall provide all on-site coordination and management of construction and commissioning activities related to utility requirements, including but not limited to temporary and permanent electrical power tie-ins, water tie-ins, and stormwater management.	_

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
30	Site Specific Environmental, Health and Safety Program and Reporting	S, E, I, C	Contractor shall provide a comprehensive Site Specific Environmental, Health and Safety Program in accordance with all applicable laws and policies.	_
31	Start-up & Commissioning and Testing Program	S, E, I, C	Contractor shall provide a Commissioning Plan to cover all Project scope including all labor, equipment, activities, tests, and procedures required to comprehensively execute the Commissioning Requirements. Commission Plan and Requirements shall cover the Project apparatus, equipment, devices and auxiliary systems and their associated protection, control, and instrumentation schemes/systems required prior to energization, energization and phase-in activities, subsequent in-service checks and testing, and commissioning close-out. All equipment, devices, components, and materials specific to the Project shall be included.	
32	Coordination of interconnection and back feed power from the transmission system	S, E, I, C	Contractor shall coordinate the interconnection and back feed power from the transmission system. All proper protection systems shall be installed, including fusing, relaying and lightning protection, as applicable, to ensure the safe and reliable operation of the collection system. Collection system grounding shall meet all applicable codes, standards, and guidelines (including NEC) and shall ensure the safe and reliable operation of the collection system.	
33	Temporary Power for Construction and Commissioning	S, E, I, C	Contractor shall provide all temporary power needed for construction, commissioning, and testing of the Project or performance of the Work in each case or any portion thereof.	_

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
34	Temporary Facilities (Offices, Parking, Security, Water, Trash Disposal)	S, E, I, C	Contractor shall provide all utility interconnections needed for construction, commissioning, and testing of the Project or performance of the Work in each case or any portion thereof (e.g., offices, security, parking, potable and non-potable water, wastewater, sanitation (including sewage), temporary power, telecommunications, broadband internet, and fuel).	_
35	Engineering, Design, and Project Management Services			
36	Project Administration and Management	S, E, I, C	Contractor shall provide overall project administration and management for the Project. The Contractor's management team shall be technically competent, shall be adequately trained, shall have a minimum of four (4) years of experience (unless otherwise mutually agreed) in the construction and startup of BESS Equipment. The Contractor's team shall be present onsite during all construction and commissioning work and shall instruct the Contractor's construction and commissioning personnel in the proper construction, initial operation, and maintenance of the BESS equipment consistent with Prudent Utility Practice.	
37	Project Equipment and Material Management	S, E, I, C	The Contractor shall provide a material management plan for all procured items, consumables and construction, installation, and commission works.	_
38	Permits/Business License	S, E, I, C	Excluded from EPC	_

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
39	Landowner Coordination	S, E, I, C	The Contractor shall take all reasonable measures to reduce the impacts of vehicular traffic and dust on the neighboring villages, towns, and businesses.	_
40	Contractor proposed schedule and list of submittals for each of the Preliminary and Final Design Submittal phases.	S, E, I, C	The Contractor shall perform the work in accordance with the project schedule. Contractor shall provide Owner the overall Project schedule along with an approximate start date, major milestones, and durations for Contractor's work. Contractor shall furnish a construction schedule, in a format acceptable to Owner as part of the bid package and in accordance with the project schedule. Upon approval by Owner, the construction schedule shall become part of the Contract and may be revised only with written approval of Owner in the form of a contract change order.	_
41	Engineering and Design of the complete Project including As-Builts	S, E, I, C	The Plant shall have a design life of minimum of 20 years. All equipment shall have a design life at least equal to the plant design life unless otherwise specified or required by applicable codes, standards, and regulations. All equipment supplied and Work by Contractor shall be designed to ensure satisfactory and reliable operation under the full range of seismic and ambient conditions and under all Plant operating conditions and variation ranges specified. The Contractor shall provide sufficient access around all equipment in accordance with good industry practices and OSHA regulations to allow for safe and effective operation, monitoring, maintenance, and removal.	

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
42	30%, 60%, 90% Design Packages for Review	S, E, I, C	Submission of all documents shall be in electronic format through a mutually agreed-upon document manager. Documents shall be submitted for 30% design, 60% design, 90% design, issued for construction, and as built. A preliminary list of documents and drawings to be submitted to the Owner for review and approval is given below in the Submittals tab. The provided document list may not be inclusive of all documents that need to be submitted. The Contractor shall be responsible for providing all documentation necessary to fully characterize the design, construction, and operation of the Plant.	
43	Project Document Preparation and Submittal	S, E, I, C	Contractor is responsible for completing all engineering for the Plant. The Contractor shall prepare and submit to the Owner for approval, general arrangement and detailed design drawings of the Plant and parts thereof; drawings shall be dimensioned and generally drawn to scale in accordance with good industry practice. A professional engineer of record in the state where the project shall be constructed shall seal all design drawings, specifications, and calculations. Drawings submitted shall comply with this Technical Specification, all applicable laws, regulations, and applicable permits.	
44	Maintain Set of Red-lined IFC Drawings on Site	S, E, I, C	Contractor shall provide to Owner 'Red-Lined' drawings with all 'as built' changes made by the Contractor prior to Commissioning Team leaving site. A station copy shall remain in the Contractor's trailer during the project phase and shall be stored in the substation control	_

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
			house once the Project is turned over to Owner as an accurate set for operations personnel.	
45	Electrical Studies	S, E, I, C	Contractor shall provide Electrical Studies specified in Section 6.2 of the Exhibit 1 Scope Book.	_
46	Protection and Control Relaying	S, E, I, C	After energization, Contractor shall perform all relay phase in verifications shall be performed on all relays. This includes calculating expected magnitude and phase angles to compare to actual values. Phase in documentation shall be submitted upon successful verification.	_
47	Relay and Meter Programming	S, E, I, C	Contractor shall inspect and test each protective relay in accordance with NETA-ATS section 7.9. Contractor shall program each device with the recommended relay settings provided by the engineer.	_
48	Fire Protection and Detection Studies and Design Within BESS Equipment Enclosures	S, E, I, C	Excluded from BOP EPC	_
49	Fire Protection System Outside BESS Equipment Enclosures, per AHJ Requirements	S, E, I, C	As required by AHJ Requirements	_
50	Geotechnical Engineering Investigation Report	S, E, I, C	The Contractor shall provide the Geotechnical Report documenting the subsurface exploration of the site. The Geotechnical Report shall provide sufficient detail to adequately design all aspects of the Plant and shall be submitted to the Owner for review. All required geotechnical investigation(s) shall be carried out by	_

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
			personnel with specialized training and experience in soil mechanics and foundation engineering and are solely the responsibility of the Contractor. The geotechnical investigation(s) shall be performed in accordance with relevant ASTM Standards. All geotechnical testing, analysis, evaluation, and design methodologies shall be published methods that are generally accepted.	
51	ALTA and Topographical Survey	S, E, I, C	The Contractor shall perform a survey suitable for establishing topographic mapping. The optimum Site elevation(s) for the most efficient and economical operation of the Plant shall be determined by the Contractor and submitted to the Owner for approval along with detailed calculations on which the Contractor has based its assumptions in determining the optimum level(s) and flood/drainage considerations. The Contractor shall determine the final Site elevations during the detailed design of the Plant, and these shall be subject to the approval of the Owner.	
52	Site Hydrology/Flood Study and Report	S, E, I, C	The Contractor shall perform a Hydrology/Flood Study to identify storm water design recommendations to facilitate the design of stormwater requirements, including but not limited to detention ponds, grassy swales, and final grading.	
53	Lease, Site Control, Easements and Associated Agreements	S, E, I, C	Land Acquisition By Developer	_

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
54	Quality Assurance Program and Reporting	S, E, I, C	The Contractor shall provide a quality plan and prepare inspection records for all procured items, consumables and construction, installation, and commission works.	
			Contractor shall ensure that all material shall be new and of the proven quality and of the class meeting standards and purpose specified and shall withstand the variations of ambient conditions and other transient and abnormal working conditions within specified limits without distortion or deterioration or the setting up of undue strains in any part, such as to affect the efficiency and reliability of the Plant, and also without affecting the strength and suitability of the various parts for the work performed.	_
55	Project Controls Program and Reporting	S, E, I, C	Contractor shall provide a Project Controls Program (schedule, commodity curves, etc.) upon which the Contractor will execute the work.	
			Contractor shall provide adequate methods and tools for budget control, scheduling, tracking, trending, and reporting of work in progress for the engineering, procurement and construction activities related to the Project.	_
56	Operation & Maintenance Manuals (excluding Owner provided equipment)	S, E, I, C	The Contractor shall furnish to the Owner Operations & Maintenance Manuals for all equipment provided under Contract.	_
57	BESS Training	S, E, I, C	Excluded from EPC	_
58	Balance of Plant and Substation Training	S, E, I, C	Contractor shall provide a Training Plan for operation and maintenance of all Balance of Plant systems and equipment.	_

[BESS Project Name]

Ref. No.	ltem	Developer and/or EPC Contractor Responsibility	Scope Basis for Developer and/or EPC Contractor	Owner Responsibility
59	Emergency Response Plan (ERP) including furnishing and installing specified signage, literature, MSDS, etc. as required in accordance with the ERP.	S, E, I, C	Contractor shall provide an Emergency Response Plan (ERP). The ERP shall establish procedures in place to prepare for and respond to an emergency at the BESS Project. The Plan delineates emergency response	
			responsibilities of personnel and identifies mutual aid resources available by off-site responders.	_
			The plan identifies training provided to site personnel in responding to emergencies and identifies drill procedures and incident investigation procedures.	
60	Hazard Mitigation Analysis (HMA)	S, E, I, C	Contractor shall provide a Hazard Mitigation Analysis in accordance with the requirements of IFC (2021). Contractor shall adhere to any additional HMA requirements specified by NFPA 855 2023 Edition.	_