

BESS Plant Value - as defined in Section 7.1. Contract Price of Agreement


BESS MILESTONES


	Milestone	Payment (% of BESS Portion)	Trigger Event	Required Documents for Milestone Invoicing
OFF ISLAND MILESTONES	B1	10%	Mobilization: Manufacturing slot reservation	Contract signature (executed contract)
	B2	2%	System study	Copy of Report
	B3	10%	Mobilization: Orders of Long lead Equipment*	Copy of unpriced Purchase Orders
	B4	2%	Detailed Engineering Package - 30% completion	according to drawing submittal document
	B5	2%	Detailed Engineering Package - 60% completion	according to drawing submittal document
	B6	2%	Detailed Engineering Package - 90% completion	according to drawing submittal document and completion of Management of Change (MOC) paperwork
	B7	10%	Successful Factory Acceptance Test for switchgear	Copy of Factory Acceptance Test Report
	B8	10%	Successful Factory Acceptance for inverter	Copy of Factory Acceptance Test Report
	B9	10%	Successful Factory Acceptance for auxiliary transformer	Copy of Factory Acceptance Test Report
	B10	10%	Batteries ready to ship	Forwarders Certificate of Receipt (FCR)
	B11	6%	Gridsolve containers ready to ship	Forwarders Certificate of Receipt (FCR)
	B12	6%	Gridsolve containers Delivery - Ocean Shipment	Photographic evidence - unloaded equipment in St. Thomas
	B13	5%	Rest of BESS equipment Delivery - Ocean Shipment	Photographic evidence - unloaded equipment in St. Thomas
ON ISLAND MILESTONES	B1ST	4%	Piling completed	Photographic evidence
	B2ST	2%	GridSolves & BESS equipment placed on foundation	Photographic evidence
	B3ST	3%	Mechanical Completion achieved (GEMS Ready for Commissioning)	Copy of Mechanical Completion Certificate
	B4ST	4%	Substantial Completion or start of Commercial Operation	Copy of Substantial Completion Certificate
	B5ST	2%	Final Acceptance of BESS system	Copy of Final Acceptance Certificate

100%

Long Lead Equipment: inverters, switchgear, aux transformer, Gridsolve

NOTE: Milestones may not be completed in sequence

 - General Power Plants		Doc. Classification: Internal			
		Title: List of Documents Civil	DocID:		
		Author: Jussi Koskinen	Revision: -		
		Checked by: /	Sheets: 2		
		Finalised	Status:		
		Type: List of documents	Description:		
			Project: P/17402 WAPA Randolph Harley Ext		
Changed		Document Type	Name and Description	Document Id	
rev. new				Vendor Doc ID	Wärtsilä Doc ID
				Rev.	Size/ Pages
					Design Phase
WD-P6.3 Design Master, Civil					
01 General					
02 Architectural Drawings					
200 CIVIL WORKS & STRUCTURES	Specification	POWER PLANT - COLOUR PROGRAM INTERIOR		A4P/2	30%
	Specification	POWER PLANT - COLOUR PROGRAM EXTERIOR		A4P/2	30%
210 Control Building	Drawing	CONTROL HOUSE - ELEVATIONS		A2+ 1/	30%
	Drawing	CONTROL HOUSE - PLAN AND SECTION		A2+ 1/	30%
250 POWER TRANSMISSIONS	Drawing	Site Fence - Plan and Sections		A2+ 1/	30%
03 Earthworks and Siteworks					
260 SITE WORKS	Dimensional drawing	Levelling and surfacing		A0/	60%
	Specification	Earthworks Technical Specifications		A0/	60%
04 Foundations					
200 CIVIL WORKS & STRUCTURES	Layout drawing	FOUNDATION LOCATION PLAN - LAYOUT PLAN		A0/	90%
	Layout drawing	CABLE RACK SUPPORT FOUNDATION LOCATION PLAN - LAYOUT PLAN		A0/	90%
210 Grid Solv (Battery Container)	Layout drawing	PILE MAP Grid Solv Foundation - LAYOUT PLAN		A1/	60%
	Dimensional drawing	Grid Solv - PLAN AND SECTIONS		A1+ 1/	90%
	Reinforcement drawing	Grid Solv - PLAN AND SECTIONS		A0/	90%
220 PCS Container Inverter & MV Transformer	Layout drawing	PILE MAP PCS Foundation - LAYOUT PLAN		A1/	60%
	Dimensional drawing	PCS - PLAN AND SECTIONS		A1+ 1/	90%
	Reinforcement drawing	PCS - PLAN AND SECTIONS		A0/	90%
230 MV-Switchgear	Dimensional and reinforcement	dMV-Switchgear FOUNDATION - PLAN AND SECTIONS		A2+ 1/	90%
	Layout drawing	PILE MAP FOR MV-Switchgear - PLAN AND SECTIONS		A1/	60%
240 Station Transformer	Dimensional and reinforcement	dStation Transformer FOUNDATION - PLAN AND SECTIONS		A2+ 1/	90%
	Layout drawing	PILE MAP FOR Station Transformer - PLAN AND SECTIONS		A1/	60%
240 CONTROL BUILDING	Layout drawing	PILE MAP Control Building Foundation - LAYOUT PLAN		A1/	60%
	Dimensional drawing	Control Building - PLAN AND SECTIONS		A1+ 1/	90%
	Reinforcement drawing	Control Building - PLAN AND SECTIONS		A0/	90%
250 Cable Routing	Dimensional and reinforcement	dCable Rack Support FOUNDATION - PLAN AND SECTIONS		A1/1	90%
	Dimensional drawing	CABLE TRENCH - PLAN AND SECTIONS		A1/1	90%
	Reinforcement drawing	CABLETRENCH - PLAN AND SECTIONS		A1/1	90%
	Dimensional and reinforcement	dCable Pulling Pit - Plan and Sections		A1/1	90%
	Dimensional drawing	CONDUIT TRENCH - PLAN AND SECTIONS (Conduits buried in concrete)		A1/1	90%
05 Frame					
250 Cable Routing	Dimensional and reinforcement	dCable Rack Support - Manufacturing and assembly drawing		A1/1	90%
06 Finishing and Furnishing					
200 CIVIL WORKS & STRUCTURES					
240 Control Building	Material list	Control Room - ROOM SPECIFICATION		A3/	90%
	Details	CONTROL HOUSE - ACCESS FLOOR		A2/1	90%
	Assembly drawing	CONTROL HOUSE - ACCESS FLOOR +1.850		A2/	90%
07 Heating, Ventilation & Air Conditioning					
240 Control Building	Flow diagram	Ventilation and air conditioning		A2/	90%
	System description	HVAC System Description & Calculations - Ventilation and air conditioning		A4/	90%
	Layout drawing	Ventilation and air conditioning		A1+ 1/	90%
08 Plumbing & Sanitary Installations					
	Layout drawing	SITE WORKS - UNDER GROUND PIPE SYSTEM		A0/	90%
09 Drawings for Information					
Calculation Reports					
Design PE Stamping					

 WÄRTSILÄ - General Power Plants		Doc. Classification: Confidential			
		Title:	List of Documents - electrical	DocID:	DBAF433795
		Author:		Revision:	-
		Checked by:	/	Sheets:	1
		Approved		Status:	Approved
		Type:	List of documents	Description:	
		Project:			
Changed		Document Type	Name and Description	Document Id	
rev. new				Vendor Doc ID	Wärtsilä Doc ID
				Rev.	Size/ Pages
				30%	60% 90%
WD-P6.2 Design Master, Electrical					
Layout drawing		ESS system		-	A4/
					X
01 - Battery system					
01 - Battery modules & racks					
Drawing		GridSolv electrical diagram String Power distribution		-	A4/
					X
02 - DC Cabling					
Specification		DC cable specification		-	A4/
					X
03 - Battery container					
Layout drawing		Container clearance - Greensmith		-	A4/
Layout drawing		General Container Arrangement - Greensmith		-	A4/
Layout drawing		Container arrangement - grounding - Greensmith		-	A4/
Layout drawing		Foundation, cable entry and site grounding detail - Greensmith		-	A4/
List		Bill of Materials GridSolv Container		-	A4/
Layout drawing		HVAC battery container		-	A4/
					X
02 - Inverter Station (PCS)					
01 - Inverter					
Layout drawing		Inverter drawing		-	A4/
Wiring diagram		Inverter Circuit diagram		-	A4/
List		Inverter Settings		-	A4/
					X
02 - Transformer					
Layout drawing		Medium voltage power skid		-	A4/
					X
03 - Control system (GEMS)					
01 - Control system					
Layout drawing		Automation layout		-	A4/
Layout drawings		GEMS server rack		-	A4/
Wiring diagram		GEMS server rack		-	A4/
Wiring diagram		AC collection system - 3-line diagram		-	A4/
List		Low voltage AC panel schedules		-	A4/
Layout drawing		Control / LV container		-	A4/
Layout drawing		Control / LV container floor layout plan		-	A4/
Layout drawing		Control / LV container Connection details		-	A4/
					X
04 - Medium Voltage system					
01 - MV switchgear					
Drawing		Single Line Diagram BESS		-	A4/
Layout drawing		MV switchgear		-	A4/
Wiring diagram		MV switchgear		-	A4/
Calculation		Relay Setting Calculation - MV System		-	A4/
Calculation		Short Circuit Calculation - Report - MV and LV System		-	A4/
Calculation		Short Circuit Calculation - Appendix - MV and LV System		-	A4/
Single line diagram		Load flow single line		-	A4/
Report		Load flow report - Appendix		-	A4/
List		Load flow summary - Appendix		-	A4/
Specification		Principal Protection Scheme (update)		-	A4/
Report		Arc flash analysis -MV -LV system		-	A4/
Calculation		Arc Flash analysis -Appendix (Including labels)-MV and LV system		-	A4/
					X
2					
Specification		MV cable specification		-	A4/
					X
03 - System Grounding					
Study		Ground Potential Rise Study		-	A4/
					X
05 - Ancillary systems					
01 - Auxiliary Low Voltage system					
Drawing		Gridsolve electrical drawings		-	A4/
Specification		Gridsolve electrical drawings		-	A4/
Layout drawing		LV cable specification		-	A4/
Wiring diagram		LV Switchgear		-	A4/
					X
02 - UPS system					
Layout Drawing		UPS system		-	A4/
Wiring diagram		UPS system		-	A4/
					X
03 - Auxiliary transformer					
Layout drawing		Auxiliary transformer drawing		-	A4/
					X
06 - Earthing network					
Report		Soil resistivity report		-	A4/
					X
07 - Lightning protection					
Report		Lightning protection study		-	A4/
					X
08 - Lighting					
Drawing		ESS layout and lighting plan		-	A4/
					X
08 - Grid Code, Reports & Studies					
Report		Foundation design report		-	A4/
					X
Plant electrification					
Earthing					
01 - Below 0-level					
Layout drawing		GROUNDING DETAILS SHEET		-	
Layout drawing		GROUNDING PLAN		-	
Material list		GROUNDING BILL OF MATERIAL - ELECTRICAL		-	
Specification		UNDERGROUND ELECTRICAL INSTALLATION SPECIFICATION - Underground Installation		-	
					X
02 - Above 0-level					
Material list		Earthing Design - Above 0 level		-	
Layout drawing		Earthing Layout - Above 0 level		-	
					X
Cables & Raceways					
01 - Conduits					
Material list		Cable Conduits - Cable Conduits			
Layout drawing		Power Details - Conduits			
Layout drawing		Power Details - Electrical			
Layout drawing		Cable Conduit			
Design NWD file		Cable Conduits			
					X
02 - Ladders					

Material list	Cable Ladders - Cable Ladders				X
Layout drawing	Cable Installation - Installation details				X
Material list	Cable Ladders Installation - Cable Ladders				X
List	Cable Ladder - Cable Filling Percentage Report				X
3D view	Cable Ladders				X
Layout drawing	Cable Ladders				X
Design NWD file	Cable Conduits	X	X		X
03 - Cables					
Specification	LV,Control & Instrumentation Cable Specification	X			
Specification	Control cable types to be used -	X			
Material list	Installation Material - DC Cables				
Material list	Installation Material - LV Cables				X
Material list	Cable Material - MV Cables				X
Report	Big LV Cable calculation report - 480 V Power Applications		X		
Layout drawing	Power Details - Electrical	X			
Material list	Installation Material - MV Cables			X	
Report	MV Cable Calculation Report - 15 KV Cables			X	
List	Cable Schedule - Cables	X			
Material list	Cable Material - DC Cables				X
Material list	Cable Material - Control Cables				X
Material list	Cable Material - LV Cables				X
04 - Lighting					
01 - Layouts, lists & Panels					
Layout drawing	Lighting Layout - Lighting System				
Layout drawing	Lighting System				X
Layout drawing	Lighting Detail Drawings				X
Material list	Lighting System - Lighting Design				X
Specification	Above Ground Installation Specification - Electrical				X
Layout drawing	Power Details - Electrical				X