

**Ministry of Climate Change, Environment and Energy
Republic of Maldives**

ASSURE PROJECT

Design Supply and Installation of Microgrid Modifications and Expansions
for Integration of Solar Photovoltaic Systems in 20 Islands across Maldives

VOLUME-II

PART 3

EQUIPMENT SCHEDULES

Note : Equipment Schedules provided herein are applicable for all 3 Lots of the bid document for Design Supply and Installation of Microgrid Modifications. Bidders shall refer to equipment schedules for relevant Islands in Each Lot.

CONTENTS

SCHEDULE S1	LVDB MODIFICATION AND EXTENSION SCHEDULE
SCHEDULE S2	MVDB AND RMU SCHEDULE
SCHEDULE S3	SCHEDULE OF STEP-UP TRANSFORMERS
SCHEDULE S4	SCHEDULE OF PACKAGE SUBSTATIONS (PSS)
SCHEDULE S5	SCHEDULE OF OUTDOOR LV DISTRIBUTION BOX REPLACEMENTS
SCHEDULE S6	SCHEDULE OF LV CABLES AND ACCESSORIES
SCHEDULE S7	SCHEDULE OF MV (11 kV) CABLES

Assure Project - Distribution Network Modifications

SCHEDULE S1 - LVDB MODIFICATION AND EXTENSION SCHEDULE

Design, construction and testing shall comply with the technical specifications.

Island No	Island Name	LVDB No	Location	Scope of LVDB Extension								New PV Feeders to be connected MCCB Panels	Unit	Qty
				Busbar Extension	Upgrade Existing T/F Panel #1	Upgrade Existing T/F Panel #2	Upgrade Existing MCCB Panel	New T/F Panel 1	New T/F Panel 2	New Panel (BESS)*	New MCCB Panel			
A04	Dhidhdhoo	A04-LVDB	Power House	Yes	ACB : 6300 A	--	MCCB : 1 x 400 A	ACB : 6300 A	--	ACB : 6300 A	--	PV Fdr Direct Connections to LVDB : PV PRESCHOOL ROOF 49kWp ZONE G FREE FIELD 134kWp (To be connected to via existing REDB)	Nos	1
B01	Hanimaadhoo	B01-LVDB	Power House	Yes	ACB : 5000 A	--	--	ACB : 5000 A	--	ACB : 4000 A	--	--	Nos	1
C02	Milandhoo	C02-LVDB	Power House	Yes	ACB : 5000 A	ACB : 5000 A	MCCB 1: 1x100 A MCCB2 : 1x 250 A MCCB3 : 1x100 A	--	--	ACB : 5000 A	--	PV Fdr Direct Connections to LVDB : PV FREE FIELD GM 50kWp PV FENAKA GM 114kWp / PV WATER PLANT ROOF 29kWp PV POWERHOUSE ROOF 38kWp	Nos	1
D02	Manadhoo	D02-LVDB	Power House	Yes	ACB : 5000 A	ACB : 5000 A	MCCB : 1 x 1000 A	--	--	ACB : 6300 A	--	MCCB PV Connections : PV INDUSTRIAL AREA GM 500kWp	Nos	1
D03	Velidhoo	D03 - LVDB	Power House	Yes	--	--	MCCB : 1 x630 A	ACB : 5000 A	ACB : 5000 A	ACB : 6300 A	--	MCCB PV Connections : PV BRIDGE 30kWp PV OUTER RIVETMENT 210kWp	Nos	1
D04	Hulhudhoo	D04-LVDB	Power House	Yes	--	--	--	--	--	ACB : 3200 A	MCCB : 1x160 A 3x630 A 1x400 A	MCCB PV Connections : PV FFREE FIELD 250kWp PV FFREE FIELD 140kWp	Nos	1
E01	ALIFUSHI	E01 - LVDB	New Power House	Yes	--	--	--	ACB : 5000 A	ACB : 5000 A	ACB : 3200 A	--	--	Nos	1
E02	Hulhudhuffaaruu	E02-LVDB	Power House	Yes	--	--	--	--	--	ACB : 3200 A	MCCB : 4x400 A	MCCB PV Connections : Stadium GM1 180 kWp Stadium GM2 & GM3 (REDB-A) 200 kWp Stadium GM4 & School Road (REDB-B) 220 kWp	Nos	1
F01	Thulhaadhoo	F01-LVDB	Power House	Yes	--	--	MCCB : 1 x 400 A (Replace in Fdr F)	ACB : 5000 A	ACB : 5000 A	ACB : 6300 A	--	--	Nos	1
F03	Dharavandhoo	F03-LVDB	Power House	Yes	--	--	MCCB : 1 x 630 A	ACB : 4000 A	ACB : 4000 A	ACB : 5000 A	--	MCCB PV Connections : PV FF GM6 WATER SPORTS 290kWp	Nos	1

SCHEDULE S1 - LVDB MODIFICATION AND EXTENSION SCHEDULE

Design, construction and testing shall comply with the technical specifications.

Island No	Island Name	LVDB No	Location	Scope of LVDB Extension								New PV Feeders to be connected MCCB Panels	Unit	Qty	
				Busbar Extension	Upgrade Existing T/F Panel #1	Upgrade Existing T/F Panel #2	Upgrade Existing MCCB Panel	New T/F Panel 1	New T/F Panel 2	New Panel (BESS)*	New MCCB Panel				
K01	RAIYMANDHOO	K01-LVDB	Power House	Yes				MCCB : 800A (Motorized)			ACB : 1000 A		Nos	1	
K02	MULAH	K02-LVDB	Power House	Yes				ACB : 3200 A			ACB : 4000 A		Nos	1	
K03	VEYVAH	K03-LVDB	Power House	Yes				MCCB : 800A (Motorized)			ACB : 1000 A		Nos	1	
K05	MULI	K05-LVDB	Power House	Yes				ACB : 4000 A	ACB : 4000 A		ACB : 4000 A		Nos	1	
L02	NILANDHOO	L02-LVDB	Power House	Yes				ACB : 5000 A	ACB : 5000 A		ACB : 6300 A		Nos	1	
N02	THIMARAFUSHI	N02-LVDB	Power House	Yes	--	--	--	--	--		ACB : 6300 A	--	Nos	1	
N04	Guraidhoo	N04-LVDB	Power House	Yes	--	--	--	-	-		ACB : 5000 A	--	Nos	1	
P02	MAAMENDHOO	P02-LVDB	Power House	Yes	--	--	--	-	-		ACB : 2000 A	MCCB : 1x1250 A 3x630 A 1x400 A	FPV LAGOON AREA 600kWp	Nos	1
Q04	FARESMAATHODA	Q04 - LVDB	Power House	Yes	--	--	--	--	--		ACB : 6300 A	--	Nos	1	
Q05	GADHDHOO	Q05-LVDB	Power House	Yes	--	--	--	ACB : 5000 A	ACB : 5000 A		ACB : 5000 A	--	Nos	1	

* ACB Ratings for BESS Panels are indicative. Contractor shall confirm or revise rating during detail design stage to suit maximum output power of battery / inverter system (charge / discharge) as per BESS / Inverter Manufacturer's data sheets

SCHEDULE S2 - MVDB AND RMU SCHEDULE

Design, construction and testing shall comply with technical specifications.

Isalnd No	Island Name	MVDB No	Location	11 kV MVDB Configuration				Unit	Qty
				Busbar	Incomer Fdr Panels	Outgoing Fdr Panels	Bus-coupler		
A04	Dhidhdhoo	A04-MVDB	Power House	Existing MVDB to be used				Nos	0
B01	Hanimaadhoo	B01-MVDB	Power House	Existing MVDB to be used				Nos	0
C02	Milandhoo	C02-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
D02	Manadhoo	D02-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
D03	Velidhoo	D03-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
D04	Hulhudhoo	-	-	MVDB Not required				Nos	0
E01	ALIFUSHI	E01-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
E02	Hulhudhuffaaru	-	Power House	MVDB Not required				Nos	0
F01	Thulhaadhoo	F01-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
F03	Dharavandhoo	F03-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
K01	RAIYMANDHOO	K01 - RMU	Power House	Outdoor Type Two way Ring Main Unit , 12 kV, 21 kA LBS : 1x 630 A , VCB : 1x 200 A VCB, with Earth switches,				Nos	1
K02	MULAH	K02-RMU	Power House	Outdoor Type Two way Ring Main Unit , 12 kV, 21 kA LBS : 1x 630 A , VCB : 1x 200 A VCB, with Earth switches,				Nos	1
K03	VEYVAH	K03-RMU	Power House	Outdoor Type Two way Ring Main Unit , 12 kV, 21 kA LBS : 1x 630 A , VCB : 1x 200 A VCB, with Earth switches,				Nos	1

SCHEDULE S2 - MVDB AND RMU SCHEDULE

Design, construction and testing shall comply with technical specifications.

Isalnd No	Island Name	MVDB No	Location	11 kV MVDB Configuration				Unit	Qty
				Busbar	Incomer Fdr Panels	Outgoing Fdr Panels	Bus-coupler		
K05	MULI	K05-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
		K05-RMU		Outdoor Type Three way Ring Main Unit , 12 kV, 21 kA LBS : 2x 630 A , VCB : 1x 200 A VCB, with Earth switches,				Nos	1
L02	NILANDHOO	L02-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
N02	THIMARAFUSHI	N02-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
N04	Guraidhoo	N04-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
P02	MAAMENDHOO	-	-	MVDB Not required				Nos	0
Q04	FARESMAATHODA	Q06 - MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
Q05	GADHDHOO	Q05-MVDB	Power House	1000 A, 25 KA	02 Nos VCB : 2 x 630 A	02 Nos VCB : 2 x 630 A	VCB : 1000 A	Nos	1
		Q05-RMU	Power House	Outdoor Type Three way Ring Main Unit , 12 kV, 21 kA LBS : 2x 630 A , VCB : 1x 200 A VCB, with Earth switches,				Nos	1

SCHEDULE S3 - SCHEDULE OF STEP-UP TRANSFORMERS

Design, construction and testing shall comply with technical specifications.

Isalnd No	Island Name	Tr No	Location	Transformer Details			Unit	Qty (Supply)	Qty (Installation)
				Voltage Grade	Type	Capacity			
A04	Dhidhdhoo	A04 TR 1 / TR 2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2x3150 kVA	Nos	2	2
B01	Hanimaadhoo	B01 TR 1 / TR 2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2x2500 kVA	Nos	2	2
C02	Milandhoo	C02 TR 1 / TR 2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2x2500 kVA	Nos	2	2
D02	Manadhoo	D02 TR 1 / TR 2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2x2500 kVA	Nos	2	2
D03	Velidhoo	D03-TR1/TR2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2 x 2500 KVA	Nos	2	2
D04	Hulhudhoo	Not Required				-	Nos	0	0
E01	ALIFUSHI	E01-TR1	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2 x 2500 kVA (TFs will be supplied by Fenaka, To be installed by the Contractor)	Nos	0	2
E02	Hulhudhuffaaruu	Not Required					Nos	0	0
F01	Thulhaadhoo	F01-TR1/TR2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2 x 2500 kVA	Nos	2	2
F03	Dharavandhoo	F03-TR1/TR2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2 x 2000 KVA	Nos	2	2
K01	RAIYMANDHOO	K01-TR1	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	1 x 400 KVA	Nos	1	1
K02	MULAH	K02-TR1	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	1 x 1500 KVA	Nos	1	1
K03	VEYVAH	K01-TR1	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	1 x 400 KVA	Nos	1	1
K05	MULI	K05-TR1	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	1 x 2000 KVA	Nos	1	1
L02	NILANDHOO	L02-TR1	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	1 x 2500 KVA	Nos	1	1

SCHEDULE S3 - SCHEDULE OF STEP-UP TRANSFORMERS

Design, construction and testing shall comply with technical specifications.

Isalnd No	Island Name	Tr No	Location	Transformer Details			Unit	Qty (Supply)	Qty (Installation)	
				Voltage Grade	Type	Capacity				
N02	THIMARAFUSHI	N02-TR1/TR2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2 x 2000 kVA	Nos	2	2	
N04	Guraidhoo	N04-TR1/TR2	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2 x 2000 kVA	Nos	2	2	
P02	MAAMENDHOO	Not Required						Nos	0	0
Q04	FARESMAATHODA	Q04-TR1	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	2 x 2500 KVA (Already installed by FENAKA, Contractor not required to supply or install)	Nos	0	0	
Q05	GADHDHOO	Q05-TR1	Power House	0.415 / 11 kV	Oil immersed, Conservator or hermetically sealed type	1 x 2500 KVA	Nos	1	1	

SCHEDULE S4 - SCHEDULE OF PACKAGE SUBSTATIONS (PSS)

Design, construction and testing shall comply with technical specifications.

Isalnd No	Island Name	PSS No	PSS Configuration				PV Fdr Connections	Outgoing MCCBs to be connected to PV Feeders to be provided with Shunt Release and Voltage Protection Relay	Unit	Qty
			11 kV RMU	11/0.4 kV Dry Type T/F	LV Dist. Panel	Outdoor Enclosure				
A04	Dhidhdhoo	A04-PSS-1	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 2 x 800 A, 3 x 400 A, 3 x 250 A Busbar : 1250 A	Yes	PV Zone B - Free Field, 446 kW _p	MCCB : 1 x 800 A	Nos	1
		A04-PSS-2	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 2 x 630 A, 3 x 400 A, 3 x 250 A Busbar : 1250 A	Yes	PV Zone F - Free Field, 370 kW _p	MCCB : 1 x 630 A	Nos	1
		A04-PSS-3	2x 630 A, LBS + 1x 200A, VCB	1500 KVA	Incomer - ACB : 1 x 2000 A Outgoing - MCCB : 1x 1250 A, 2 x 400 A, 2x 250 A, 2 x 160 A Busbar : 2000 A	Yes	PV Zone C - Free Field, 714 kW _p PV Zone E - Free Field, 184 kW _p PV Zone D - Free Field, 130 kW _p PV Youth Centre, 85 kW _p	MCCB : 1 x 1250 A MCCB : 1 x 400 A MCCB : 1 x 250 A MCCB : 1 x 160 A	Nos	1
SUB TOTAL FOR A04 - DIHIDHDOO ISLAND								Nos	3	
B01	Hanimaadhoo	B01-PSS-1	2x 630 A, LBS + 1x 200A, VCB	1250 KVA	Incomer - MCCB : 1x 1600 A Outgoing - MCCB : 2 x 1000 A, 3 x 400 A, 3 x 250 A Busbar : 1600 A	Yes	PV HARBOUR FREE FIELD 1 450kW _p PV HARBOUR FREE FIELD 2 450kW _p	MCCB : 2 x 1000 A	Nos	1
		B01-PSS-2	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 2 x 800 A, 2 x 400 A, 4 x 250 A Busbar : 1250 A	Yes	PV SCHOOL ROOF + GM 400kW _p	MCCB : 1 x 800 A	Nos	1
SUB TOTAL FOR B01 - HAMIMAADOO ISLAND								Nos	2	
C02	Milandhoo	C02-PSS-1	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 4 x 100 A , 2 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV SCHOOL HALL ROOF 114kW _p PV COUNCIL PARKING 62kW _p PV SCHOOL PARKING 55kW _p PV SCHOOL PARKING NE 43kW _p	MCCB : 1 x 250 A MCCB : 3 x100 A	Nos	1
SUB TOTAL FOR C02 - Milandhoo ISLAND								Nos	1	
D02	Manadhoo	D02-PSS-1	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 1 x 63 A, 2 x 100 A, 3 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV MOSQUE ROAD SHED 30kW _p PV CEMETERY ROAD SHED 50kW _p	MCCB : 1 x 63 A MCCB : 1 x 100 A	Nos	1
		D02-PSS-2	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 4 x 100 A, 1x 160 A, 2 x 250 A, 1x 400 A Busbar : 1250 A	Yes	PV HINAVAAGE GM 5kW _p H PV OSPITAL ROOF + GM 175kW _p PV OOREDOO SITE 7.3 GM 00kW _p PV MOSQUE PARKING SHED 50kW _p PV CEMETERY 7.4 ROAD SHED 50kW _p PV SCHOOL ROOF 60kW _p	MCCB : 4 x 100 A MCCB : 1 x 400 A MCCB : 1 x 160A	Nos	1
		D02-PSS-3	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1 x 1250 A Outgoing - MCCB : 2x 100 A, 2x 160 A, 3x250 A, 1x 400 A Busbar : 1250 A	Yes	PV PRESCHOOL ROOF 45kW _p PV AREA 4 GM 60kW _p PV HARBOUR GM 170kW _p PV HARBOUR AREA 1-3 GM 3x25kW _p	MCCB : 2 x 100 A MCCB : 1 x 160A MCCB : 1 x 400A	Nos	1
SUB TOTAL FOR D12 - Manadhoo Island								Nos	3	
D03	Velidhoo	D03-PSS-1	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 2 x 100 A, 4 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV SOCIAL CENTRE ROOF 60kW _p PV HARBOUR AREA GM 200kW _p	MCCB : 1 x 100 A MCCB : 1 x 400 A	Nos	1

SCHEDULE S4 - SCHEDULE OF PACKAGE SUBSTATIONS (PSS)

Design, construction and testing shall comply with technical specifications.

Isalnd No	Island Name	PSS No	PSS Configuration				PV Fdr Connections	Outgoing MCCBs to be connected to PV Feeders to be provided with Shunt Release and Voltage Protection Relay	Unit	Qty
			11 kV RMU	11/0.4 kV Dry Type T/F	LV Dist. Panel	Outdoor Enclosure				
		D03-PSS-2	2x 630 A, LBS + 1x 200A, VCB	1000 KVA	Incomer - MCCB : 1x 1600 A Outgoing - MCCB : 4x 630 A, 2 x 400 A, 2 x 250 A Busbar : 1600 A	Yes	PV SHORE LINE GM LOT 1/3 250kWp PV SHORE LINE GM LOT 2/3 250kWp PV SHORE LINE GM LOT 3/3 250kWp	MCCB : 3 x 630 A	Nos	1
SUB TOTAL FOR D03 - Velidhoo Island									Nos	2
D04	Hulhudhoo	-	-	-	PSS Not Required	-	-	-	Nos	0
SUB TOTAL FOR D04 - Hulhudhoo Island									Nos	0
E01	ALIFUSHI	E01-PSS-1	2x 630 A, LBS + 2x 200A, VCB (4 Way)	1250 KVA	Incomer - MCCB : 1x 1600 A Outgoing - MCCB : 1x1600, 1 x 100 A, 2 x 250 A Busbar : 1600 A	Yes	FPV LAGOON AREA 1000kWp	MCCB : 1 x 1600	Nos	1
SUB TOTAL FOR E01 - ALIFUSHI Island									Nos	1
E02	Hulhudhuffaarau	-	-	-	PSS Not Required	-	-	-	Nos	0
SUB TOTAL FOR E02 - Hulhudhuffaarau Island									Nos	0
F01	Thulhaadhoo	F01-PSS-1	2x 630 A, LBS + 1x 200A, VCB	630 kVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 2 x 100 A, 4 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV SCHOOL 243kWp PV PARKING AREA STADIUM NE 43kWp	MCCB : 1 x 400 A MCCB : 1 x 100 A	Nos	1
		F01-PSS-2	2x 630 A, LBS + 1x 200A, VCB	1250 KVA	Incomer - MCCB : 1x 1600 A Outgoing - MCCB : 4 x 63 A, 1 x 100 A, 1x 250 A, 2 x 800 A Busbar : 1600 A	Yes	PV AREA 13 GM 34kWp PV AREA 16 GM 36kWp PV AREA 17 GM 59kWp PV AREA 14 GM 34kWp PV BUFFER ZONE 1 GM LOT 2/3 367kWp PV BUFFER ZONE 1 GM LOT 3/3 367kWp PV AREA 15 GM 36kWp	MCCB : 4 x 63 A MCCB : 1 x 100 A MCCB : 2 x 800 A	Nos	1
		F01-PSS-3	2x 630 A, LBS + 1x 200A, VCB	1000 KVA	Incomer - MCCB : 1x 1600 A Outgoing - MCCB : 1x 63 A, 2 X 100 A, 2x 160 A, 2 x 250 A, 1x 800 A Busbar : 1600 A	Yes	PV BUFFER ZONE 4 GM 74kWp PV BUFFER ZONE 1 GM LOT 1/3 368kWp PV BUFFER ZONE 3 GM 36kWp PV AREA 12 GM 45kWp PV AREA 12 GM 45kWp AREA 10 GM 57kWp PV AREA 11 GM 64kWp	MCCB : 1 x 63 A, MCCB : 2 x 100 A, MCCB : 2 x 160 A MCCB : 1 x 800 A	Nos	1
SUB TOTAL FOR F01 - Thulhaadhoo Island									Nos	3
F03	Dharavandhoo	F03-PSS-1	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 2 x 160 A, 4 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV FF GM2 HARBOR AREA 240kWp PV FF GM3 HARBOR AREA 120kWp PV FF GM4 HARBOR AREA 70kWp	MCCB : 1 x 400 A MCCB : 1 x 250 A MCCB : 1 x 160 A	Nos	1
		F03-PSS-2	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 1 x 63 A, 2 x 160 A, 3 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV FF GM1 CEMETERY 120kWp PV FF GM7 SCHOOL ROAD 80kWp PV FF GM8 SCHOOL WALKWAY 30kWp	MCCB : 1 x 250 A MCCB : 1 x 160 A MCCB : 1 x 63 A	Nos	1
SUB TOTAL FOR F03 - Dharavandhoo Island									Nos	2

SCHEDULE S4 - SCHEDULE OF PACKAGE SUBSTATIONS (PSS)

Design, construction and testing shall comply with technical specifications.

Isalnd No	Island Name	PSS No	PSS Configuration				PV Fdr Connections	Outgoing MCCBs to be connected to PV Feeders to be provided with Shunt Release and Voltage Protection Relay	Unit	Qty
			11 kV RMU	11/0.4 kV Dry Type T/F	LV Dist. Panel	Outdoor Enclosure				
K01	RAIYMANDHOO	K01-PSS-1	2x 630 A, LBS + 1x 200A, VCB	250 kVA	Incomer - MCCB : 1x 630 A Outgoing - MCCB : 2x400, 2 x 100 A Busbar : 1000 A	Yes	FPV LAGOON AREA 175kWp	MCCB : 1 x 400 A	Nos	1
SUB TOTAL FOR K01 - RAIYMANDHOO Island									Nos	1
K02	MULAH	K02-PSS-1	2x 630 A, LBS + 1x 200A, VCB	1250 kVA	Incomer - MCCB : 1x 1600 A Outgoing - MCCB : 1x1600, 3 x 250 A Busbar : 1600 A	Yes	FPV LAGOON AREA 1000 kWp	MCCB : 1 x 1600	Nos	1
SUB TOTAL FOR K02 - MULAH Island									Nos	1
K03	VEYVAH	-	-	-	PSS Not Required	-	-		Nos	0
SUB TOTAL FOR K03 - VEYVAH Island									Nos	0
K05	MULI	-	-	-	PSS Not Required	-	-		Nos	0
SUB TOTAL FOR K05 - MULI Island									Nos	0
L02	NILANDHOO	E01-PSS-1	2x 630 A, LBS + 2x 200A, VCB (4-Way)	1500 KVA	Incomer - ACB : 1 x 2000 A Outgoing - MCCB : 1x 1600 A, 1 x 400 A, 2x 250 A Busbar : 2000 A	Yes	FPV LAGOON AREA 1200 kWp	MCCB : 1 x 1600	Nos	1
SUB TOTAL FOR L02 - NILANDHOO Island									Nos	1
N02	THIMARAFUSHI	N02-PSS-1	2x 630 A, LBS + 1x 200A, VCB	630 kVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 1x160, 4 x 250 A, 3 x 400 A Busbar : 1250 A	Yes	PV POLICE ROOF AND GM 130kWp PV MOSQUE ROOF 64kWp PV COMMUNITY CENTER ROOF 122kWp* (* connected thro LV dist. Boxes)	MCCB : 1 x 250 A MCCB : 1 x 160A MCCB : 1 x 400 A*	Nos	1
		N02-PSS-2	2x 630 A, LBS + 1x 200A, VCB	630 kVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 2x160, 4 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV ISLAND OFFICE ROOF 76kWp* PV PRESCHOOL ROOF 23kWp* PV MOSQUE ROOF 94kWp* (* connected thro LV dist. Boxes)	MCCB : 2 x 400 A MCCB : 1 x 250A	Nos	1
		N02-PSS-3	2x 630 A, LBS + 1x 200A, VCB	1250 kVA	Incomer - MCCB : 1x 1600 A Outgoing - MCCB : 1x1250, 4 x 250 A, 3 x 400 A Busbar : 1250 A	Yes	PV FREE FIELD GM 690kWp	MCCB : 1 x 1250 A	Nos	1
SUB TOTAL FOR N02 - THIMARAFUSHI Island									Nos	3
N04	Guraidhoo	N04-PSS-1	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 6 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV BUFFER ZONE 5 100kWp PV BUFFER ZONE 6 150kWp PV BUFFER ZONE 7 150kWp PV BUFFER ZONE 8 100kWp	MCCB : 4 x 250 A	Nos	1
		N04-PSS-3	2x 630 A, LBS + 1x 200A, VCB	630 KVA	Incomer - MCCB : 1x 1250 A Outgoing - MCCB : 6 x 250 A, 2 x 400 A Busbar : 1250 A	Yes	PV BUFFER ZONE 1 100kWp PV BUFFER ZONE 2 150kWp PV BUFFER ZONE 3 150kWp PV BUFFER ZONE 4 100kWp	MCCB : 4 x 250 A	Nos	1
SUB TOTAL FOR N04 - Guraidhoo Island									Nos	2
P02	MAAMENDHOO	-	-	-	PSS Not Required	-	-		Nos	0
SUB TOTAL FOR K05 - MAAMENDHOO Island									Nos	0

SCHEDULE S4 - SCHEDULE OF PACKAGE SUBSTATIONS (PSS)

Design, construction and testing shall comply with technical specifications.

Isalnd No	Island Name	PSS No	PSS Configuration				PV Fdr Connections	Outgoing MCCBs to be connected to PV Feeders to be provided with Shunt Release and Voltage Protection Relay	Unit	Qty
			11 kV RMU	11/0.4 kV Dry Type T/F	LV Dist. Panel	Outdoor Enclosure				
Q04	FARESMAATHODA	Q04-PSS-1	2x 630 A, LBS + 2x 200A, VCB (4-Way)	1250 KVA	Incomer - ACB : 1 x 1600 A Outgoing - MCCB : 1x 1600 A, 1 x 400 A, 2x 250 A Busbar : 1600 A	Yes	FPV LAGOON AREA 1000kWp	MCCB : 1 x 1600	Nos	1
SUB TOTAL FOR Q04 - FARESMAATHODA Island									Nos	1
Q05	GADHDHOO	-	-	-	PSS Not Required	-	-		Nos	0
SUB TOTAL FOR Q05 - GADHDHOO Island									Nos	0

SCHEDULE S5 - SCHEDULE OF OUTDOOR LV DISTRIBUTION BOX REPLACEMENTS

Design and construction shall comply with technical specifications

Island No	Island Name	DB No	Location	Scope	Replacment DB Configuration			PV Connections	Unit	Qty
					Incomer	Outgoing (Standard)	Additional Outgoing MCCBs (3P) for PV; with Shunt Release & Votage Protection Relay			
A04	Dhidhdhoo	A04-REDB	Zone G	New	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1x100 A+1x250 A	PV PRESCHOOL ROOF 49kWp PV ZONE G FREE FIELD 134kWp	Nos	1
		A04-S6C1	SS6 - Fdr C	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 160 A	MASJID NOOR ROOF +GM 50kWp	Nos	1
		A04-S3C1	SS3 - Fdr C	Replacment	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 160 A	PV MASJID FURUGAN ROOF +GM 79kWp	Nos	1
		A04-S4E1	SS4 - Fdr E	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 63 A	PV DHIDHDHOO COUNCIL ROOF 28kWp	Nos	1
		A04-S4B4	SS4 - Fdr B	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 63 A	PV MASJID RAHMAN ROOF 30kWp	Nos	1
SUB TOTAL FOR A04 - DIHIDHDOO ISLAND									Nos	5
B01	Hanimaadhoo								Nos	0
SUB TOTAL FOR B03 - HAMIMAADOO ISLAND									Nos	0
C02	Milandhoo	XX	@ Substation 1				MCCB : 250 A (Add to SS1 DB)	PV HARBOUR GM 89kWp	1	1
SUB TOTAL FOR C02 - Milandhoo ISLAND									Nos	1
D02	Manadhoo	--	--	--	--	--		--	-	-
SUB TOTAL FOR D02 - Manadhoo ISLAND									Nos	0
D03	Velidhoo	A-1X1	LV Fdr A	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 100 A	PV ISLAND COUNCIL ROOF 50kWp	Nos	1
SUB TOTAL FOR D03 Velidhoo Island									Nos	1
D04	Hulhudhoo	A-1	LV Fdr A	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 100 A	PV FREE FIELD 3 50kWp	Nos	1
		B-3	LV Fdr B	Replacment	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 160 A	PV FREE FIELD 4 Lot 1 90kWp	Nos	1
		C-5	LV Fdr C	Replacment	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 160 A	FREE FIELD 4 Lot 2 90kWp	Nos	1
		E-1	LV Fdr E	Replacment	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 160 A	FREE FIELD 5 90kWp	Nos	1
SUB TOTAL FOR D04 - Hulhudhoo Island									Nos	4
E01	ALIFUSHI	--	--	--	--	--	--	--	Nos	0
E02	Hulhudhoo	REDB-A	-	New	MCCB : 1 x 400 A	MCCB : 1x250 (Spare)	MCCB : 2x250	Stadium GM2 & GM3 (REDB-A) 200 kWp	Nos	1

SCHEDULE S5 - SCHEDULE OF OUTDOOR LV DISTRIBUTION BOX REPLACEMENTS

Design and construction shall comply with technical specifications

Island No	Island Name	DB No	Location	Scope	Replacment DB Configuration			PV Connections	Unit	Qty
					Incomer	Outgoing (Standard)	Additional Outgoing MCCBs (3P) for PV; with Shunt Release & Votage Protection Relay			
E02	Hulhudhuffaaruu	REDB-B	-	New	MCCB : 1 x 630 A	MCCB : 1x250 (Spare)	MCCB : 2x250	Stadium GM4 & School Road (REDB-B) 220 kWp	Nos	1
SUB TOTAL FOR E02 - Hulhudhuffaaruu Island									Nos	2
F01	Thulhaadhoo	F1	LV Fdr F	Replacment	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 250 A		Nos	1
		F-1X1		Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 2 x 63 A	PV BUFFER ZONE 6 GM 23kWp PV BUFFER ZONE 5 & 7 20kWp	Nos	1
		F-1X2		Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x160 A	PV AREA 8 GM 63kWp	Nos	1
		F2		Replacment	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 250 A	PV AREA 9 GM 124kWp	Nos	1
		A-6	LV FDR A	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 63 A	PV AREA 20 GM Lot 1/3 28kWp	Nos	1
		B-10	LV FDR B	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 63 A	AREA 20 GM Lot 2/3 28kWp	Nos	1
		G-2X2A	LV FDR G	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 63 A	PV AREA 20 GM Lot 3/3 30kWp	Nos	1
		L-1	LV FDR L	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 63 A	PV AREA 19 GM 29kWp	Nos	1
SUB TOTAL FOR F01 Thulhaadhoo Island									Nos	8
F03	Dharavandhoo	E-1	LV Fdr E	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 100 A	PV FF GM5 HOSPITAL ROAD 50kWp	Nos	1
SUB TOTAL FOR F03 Dharavandhoo Island									Nos	1
K01	RAIYMANDHOO	--	--	--	--	--	--	--	Nos	0
K02	MULAH	--	--	--	--	--	--	--	Nos	0
K03	VEYVAH	--	--	--	--	--	--	--	Nos	0
K05	MULI	--	--	--	--	--	--	--	Nos	0
L02	NILANDHOO	--	--	--	--	--	--	--	Nos	0
		F-1X2	LV FDR F	Replacment	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 250 A	PV COMMUNITY CENTER ROOF 122kW	Nos	1

SCHEDULE S5 - SCHEDULE OF OUTDOOR LV DISTRIBUTION BOX REPLACEMENTS

Design and construction shall comply with technical specifications

Island No	Island Name	DB No	Location	Scope	Replacment DB Configuration			PV Connections	Unit	Qty
					Incomer	Outgoing (Standard)	Additional Outgoing MCCBs (3P) for PV; with Shunt Release & Votage Protection Relay			
N02	THIMARAFUSHI	A-3X1	LV FDR A	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 160 A	PV ISLAND OFFICE ROOF 76kWp	Nos	1
		B-6	LV FDR B	Replacment	MCCB : 1 x 400 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 63 A	PV PRESCHOOL ROOF 23kWp	Nos	1
		C-1	LV FDR C	Replacment	MCCB : 1 x 630 A	MCB (3P) : 2 x 63 A MCB (1P) : 18 x 40 A	MCCB : 1 x 250 A	PV MOSQUE ROOF 94kWp	Nos	1
SUB TOTAL FOR N02 THIMARAFUSHI Island									Nos	4
N04	Guraidhoo	-	-	-	-	-		-	Nos	0
SUB TOTAL FOR N04 - Guraidhoo Island									Nos	0
P02	MAAMENDHOO	--	--	--	--	--	--	--	Nos	0
Q04	FARESMAATHODA	--	--	--	--	--	--	--	Nos	0
Q05	GADHDHOO	--	--	--	--	--	--	--	Nos	0

SCHEDULE S6 - SCHEDULE OF LV CABLES AND ACCESSORIES

Design, construction and testing shall comply with technical specifications (specification Nos AP-002)

Isalnd No	Island Name	Connections	Scope	Cable	# Cables per Phase (For Single Core Cables)	Unit	Qty	Cable Lugs (Tinned copper)	HS End Caps	LV Cable Joints	Remarks
								Nos	Set	Set	
A04	Dhidhdhoo	LVDB to TR1 and LVDB to TR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	900	72	--	--	Provisional Circuit Length - 2 x 25 m
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph + 4/N	m	550	44	--	--	Provisional Length per CCT - 1 x 25 m
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	2 / ph + 2/N	m	80	8	8	--	Circuit lengths as shown in diagrams. Cable sies shown in drawings have been standardized to minimize size variations. PV end of each cable to be installed with heat shrinkable end cap at PV site. Other end connected to PSS oe Dist. Box
				0.6/1 kV Cu/XLPE/PVC 4Cx 400 sqmm, Armoured		m	25	4	1	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 300 sqmm, Armoured	2 cables / CCT	m	50	8	2	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 185sqmm, Armoured		m	450	12	3	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 120 sqmm, Armoured		m	125	4	1	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	105	8	2	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 50 sqmm, Armoured		m	195	16	4	--	
		Sub total : A04 - DIHIDHDOO ISLAND						m	2480	176	21
B01	Hanimaadhoo	LVDB to TR1 and LVDB to TR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	900	72	--	--	Provisional Circuit Length - 2 x 25 m
		LVDB to BESS (25 m)		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph + 4/N	m	550	44	--	--	Provisional Length per CCT - 1 x 25 m
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 4Cx 300 sqmm, Armoured	2 cables / CCT	m	100	16	4	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 240 sqmm, Armoured	2 cables / CCT	m	400	8	2	--	
Sub Total : B01 - Hanimaadhoo Island						m	1950	140	6	0	
C02	Milandho	LVDB to TR1 and LVDB to TR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	900	72	--	--	Provisional Circuit Length - 2 x 25 m
		LVDB to BESS (25 m)		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	5/ph + 3/N	m	450	36	--	--	Provisional Length per CCT - 1 x 25 m
				0.6/1 kV Cu/XLPE/PVC 4Cx 185 sqmm, Armoured		m	300	4	1	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 120 sqmm, Armoured		m	235	8	2	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	215	8	2	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 50 sqmm, Armoured		m	185	16	4	--	
Sub total : C02 -Milandho Island						m	2285	144	9	0	
A02	A02	LVDB to TR1 and LVDB to TR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	900	72	--	--	Provisional Circuit Length - 2 x 25 m
		LVDB to BESS (25 m)		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	4/ph + 3/N	m	375	30	--	--	Provisional Length per CCT - 1 x 25 m

SCHEDULE S6 - SCHEDULE OF LV CABLES AND ACCESSORIES

Design, construction and testing shall comply with technical specifications (specification Nos AP-002)

Isalnd No	Island Name	Connections	Scope	Cable	# Cables per Phase (For Single Core Cables)	Unit	Qty	Cable Lugs (Tinned copper)	HS End Caps	LV Cable Joints	Remarks	
								Nos	Set	Set		
D02	Manadhoo			0.6/1 kV Cu/XLPE/PVC 4Cx 300 sqmm, Armoured	2 cables / CCT	m	180	8	2	--		
				0.6/1 kV Cu/XLPE/PVC 4Cx 185sqmm, Armoured		m	80	4	1	--		
				0.6/1 kV Cu/XLPE/PVC 4Cx 120 sqmm, Armoured		m	90	4	1	--		
				0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	1445	44	11	--		
				0.6/1 kV Cu/XLPE/PVC 4Cx 50 sqmm, Armoured		m	125	4	1	--		
Sub total : D02 - Manadhoo Island							m	3195	166	16	0	
D03	Velidhoo	LVDB to TR1 andTR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	900	72	--	--	Provisional Circuit Length - 2 x 25 m	
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	5/ph + 3/N	m	450	36	--	--		
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	280	8	2	--		PSS may be positioned closer to PV site to reduce LV cable lengths
				0.6/1 kV Cu/XLPE/PVC 4Cx 300 sqmm, Armoured		m	1140	24	6	--		
Sub total : Velidhoo Island							m	2770	140	8	0	
D04	Hulhudhoo	LVDB to BESS	Installation in cable trenches / trays at Power	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	2/ph + 2/N	m	200	16	--	--	Provisional Length per CCT - 1 x 25 m	
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 4Cx 50 sqmm, Armoured		m	65	8	2			
				0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	100	4	1			
				0.6/1 kV Cu/XLPE/PVC 4Cx 120 sqmm, Armoured		m	210	8	2			
				0.6/1 kV Cu/XLPE/PVC 4Cx 185 sqmm, Armoured		m	860	20	1			
Sub total : Hulhudhoo Island							m	1435	56	6	0	
E01	ALIFUSHI	LVDB to TR1	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	900	72			Provisional Circuit Length - 2 x 25 m	
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	3/ph + 3/N	m	300	24			Provisional Length per CCT - 1 x 25 m	
		PSS - FPV	Suitable type and size of cables (LV or MV) to be supplied and installed by FPV Contractor				m	-	-	-		Provisional cct length - 95 m from PSS to FPV
Sub total : ALIFUSHI Island							m	1200	96	0	0	
E02	Hulhudhuffaaruu	LVDB to BESS	Installation in cable trenches / trays at Power	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	2/ph + 2/N	m	200	16	--	--	Provisional Length per CCT - 1 x 25 m	
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 4Cx 120 sqmm, Armoured		m	20	8	2	-		
				0.6/1 kV Cu/XLPE/PVC 4Cx 185 sqmm, Armoured		m	135	8	2			

SCHEDULE S6 - SCHEDULE OF LV CABLES AND ACCESSORIES

Design, construction and testing shall comply with technical specifications (specification Nos AP-002)

Island No	Island Name	Connections	Scope	Cable	# Cables per Phase (For Single Core Cables)	Unit	Qty	Cable Lugs (Tinned copper)	HS End Caps	LV Cable Joints	Remarks
								Nos	Set	Set	
				0.6/1 kV Cu/XLPE/PVC 4Cx 300 sqmm, Armoured		m	415	24			
Sub total : Hulhudhuffaaru Island						m	770	56	4	0	
F01	Thulhaadhoo	LVDB to TR1/TR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	900	72	--	--	Provisional Circuit Length - 2 x 25 m
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	4/ph + 3/N	m	375	30	--	--	Provisional Length per CCT - 1 x 25 m
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 4Cx 50 sqmm, Armoured		m	1391	56	14	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	485	16	4	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 185 sqmm, Armoured		m	291	20	5	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 240 sqmm, Armoured		m	50	4	1	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 400sqmm, Armoured		m	245	12	3	--	
Sub total : Thulhaadhoo Island						m	3737	210	27	0	
F03	Dharavandhoo	LVDB to TR1 / TR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	5/ph	m	750	60	--	--	Provisional Circuit Length - 2 x 25 m
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	Cables : 3/ph +3/N	m	300	24	--	--	Provisional Length per CCT - 1 x 25 m
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 4Cx 50 sqmm, Armoured		m	248	8	2	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	25	4	1	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 120 sqmm, Armoured		m	125	8	2	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 185 sqmm, Armoured		m	240	4	1	--	
				0.6/1 kV Cu/XLPE/PVC 4Cx 300 sqmm, Armoured		m	200	8	2	--	
Sub total : Dharavandhoo Island						m	1888	116	8	0	
K01	RAIYMANDHOO	LVDB to TR1	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 3Cx 400sqmm, Armoured		m	25	6			Provisional Circuit Length - 1 x 25 m
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 4Cx 400sqmm, Armoured		m	25	8			Provisional Length per CCT - 1 x 25 m
		PSS - FPV	Suitable type and size of LV cabls to be supplied and installed by FPV Contractor				m	-	-	-	-
Sub total : RAIYMANDHOO Island						m	50	14	0	0	
K02	MULAH	LVDB to TR1	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 3Cx 400sqmm, Armoured	3/ph	m	225	18	-	-	Provisional Circuit Length - 1 x 25 m
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 4Cx 400sqmm, Armoured	3/ph+3N	m	300	24	-	-	Provisional Length per CCT - 1 x 25 m
		PSS - FPV	Suitable type and size of cables (LV) to be supplied and installed by FPV Contractor				m	-	-	-	-

SCHEDULE S6 - SCHEDULE OF LV CABLES AND ACCESSORIES

Design, construction and testing shall comply with technical specifications (specification Nos AP-002)

Isalnd No	Island Name	Connections	Scope	Cable	# Cables per Phase (For Single Core Cables)	Unit	Qty	Cable Lugs (Tinned copper)	HS End Caps	LV Cable Joints	Remarks	
								Nos	Set	Set		
Sub total : MULAH Island							m	525	42	0	0	
K03	VEYVAH	LVDB to BESS	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 4Cx 400sqmm, Armoured		m	25	8	-	-		
		PSS - FPV	Suitable type and size of LV cables to be supplied and installed by FPV Contractor			m	-	-	-	-	Provisional CCT length - 460 m from PSS to FPV	
Sub total : VEYVAH Island							m	25	8	0	0	
K05	MULI	LVDB to TR1	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	5/ph	m	375	30			Provisional Circuit Length - 1 x 25 m	
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	3/ph + 3/N	m	300	24		Provisional Length per CCT - 1 x 25 m		
		PSS - FPV	Suitable type and size of cables (MV) to be supplied and installed by FPV Contractor			m	-	-	-	-	Provisional cct length - 95 m from PSS to FPV	
Sub total : MULI Island							m	675	54	0	0	
L02	NILANDHOO	LVDB to TR1	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	450	36			Provisional Circuit Length - 1 x 25 m	
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	3/ph + 3/N	m	300	24		Provisional Length per CCT - 1 x 25 m		
		PSS - FPV	Suitable type and size of cables (LV or MV) to be supplied and installed by FPV Contractor			m	-	-	-	-	Provisional cct length - 400 m from PSS to FPV	
Sub total : NILANDHOO Island							m	750	60	0	0	
N02	THIMARAFUSHI	LVDB to TR1 / TR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	5/ph	m	750	60			Provisional Circuit Length - 2 x 25 m	
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	Cables : 4/ph +3/N	m	375	30		Provisional Length per CCT - 1 x 25 m		
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 4Cx 50 sqmm, Armoured		m	45	4	1			
				0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	734	80	4			
				0.6/1 kV Cu/XLPE/PVC 4Cx 120 sqmm, Armoured		m	353	20	1			
				0.6/1 kV Cu/XLPE/PVC 4Cx 185 sqmm, Armoured		m	210	4	1			
0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	Cables : 2/ph +2/N	m	80	8	8							
Sub total : THIMARAFUSHI Island							m	2547	206	15	0	
N04	Guraidhoo	LVDB to TR1/TR2	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	6/ph	m	900	72			Provisional Circuit Length - 2 x 25 m	
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	4/ph + 3/N	m	375	30		Provisional Length per CCT - 1 x 25 m		

SCHEDULE S6 - SCHEDULE OF LV CABLES AND ACCESSORIES

Design, construction and testing shall comply with technical specifications (specification Nos AP-002)

Isalnd No	Island Name	Connections	Scope	Cable	# Cables per Phase (For Single Core Cables)	Unit	Qty	Cable Lugs (Tinned copper)	HS End Caps	LV Cable Joints	Remarks	
								Nos	Set	Set		
		PV - LVDB, PSS or Dist Box	Underground installation	0.6/1 kV Cu/XLPE/PVC 4Cx 95 sqmm, Armoured		m	660	32	8			
Sub total : Guraidhoo Island							m	1935	134	8	0	
P02	MAAMENDHOO	LVDB to BESS	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	2/ph + 2/N	m	200	16			Provisional Length per CCT - 1 x 25 m	
		LVDB - FPV	Suitable type and size of cables (LV or MV) to be supplied and installed by FPV Contractor			m	-	-	-		Provisional cct length - 75 m from PSS to FPV	
Sub total : MAAMENDHOO Island							m	200	16	0	0	
Q04	FARESMAATHODA	LVDB to TR1	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	5/ph	m	0	0			Installed by FENAKA	
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	3/ph + 3/N	m	300	24			Provisional Length per CCT - 1 x 25 m	
		PSS - FPV	Suitable type and size of cables (LV or MV) to be supplied and installed by FPV Contractor			m	-	-	-		Provisional cct length - 1000 m from PSS to FPV	
Sub total : FARESMAATHODA Island							m	300	24	0	0	
Q05	GADHDHOO	LVDB to TR1	Installation in cable trenches / trays at Power House	0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	5/ph	m	375	30			Provisional Circuit Length - 1 x 25 m	
		LVDB to BESS		0.6/1 kV Cu/XLPE/PVC 1Cx 630 sqmm, Armoured	4/ph +3/N	m	375	30			Provisional Length per CCT - 1 x 25 m	
		PSS - FPV	Suitable type and size of cables (MV) to be supplied and installed by FPV Contractor			m	-	-	-		Provisional cct length - 370 m from PSS to FPV	
Sub total : GADHDHOO Island							m	750	60	0	0	

Assure Project - Distribution Network Modifications

SCHEDULE S7 - SCHEDULE OF MV (11 kV) CABLES

Design, construction and testing shall comply with technical specifications (specification No AP-003)

Isalnd No	Island Name	Connections		Scope	Cable	Remarks	Unit	Qty	Straight thro'	Terminations	Remarks	
		From	To						Joints	(MVDB & PSS)		
									Nos	Set		
A04	Dhidhoo	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	--	4		
		Existing MV Network (nearest point to PSS)	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x30 m cables provisionally allocated for each PSS	m	180	6	6		
		Existing MV network (radial end point)	MVDB		6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	MV ring completion	m	0	0	0		
		Sub Total : A04 - DIHIDHDOO ISLAND							m	230	6	10
B01	Hanimaadhoo	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	--	4		
		Existing MV Network (nearest point to PSS)	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x30 m cables provisionally allocated for each PSS	m	120	4	4		
		Airport TF	Drug Centre TF		6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	Partial MV ring completion - between South and North 11 kV Feeders (Airport TF - Drug Center TF) - Provisional allocation	m	600	1	2	Connect airport side 11 kV network in a ring back to MVDB	
		Sub Total : B01- Hanimaadhoo Island							m	770	5	10
C02	Milandhoo	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	-	4		
		Existing MV Network (nearest point to PSS)	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	350 m cables provisionally allocated for PSS	m	350	0	3		
		Mosque TF (South)	Green Area TF (North)		6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	Partial 11 kV ring completion. Provisional allocation.	m	700	1	2	Connet new PSS with North side substation to form a ring	
		Sub Total : C02- Milandhoo Island							m	1100	1	9
D02	Manadhoo	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	--	4		
		MVDB	PSS		6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	MV ring - Provisional allocation	m	1840	2	6	Provisional allocation for 11 kV ring between PSS and Powerhouse	
		Sub Total : D02- Manadhoo Island							m	1890	2	10
D03	Velidhoo	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	--	4		
		MVDB	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	MV Ring (provisional allocation)	m	1400	3	6	Provisional allocation for 11 kV ring between PSS and Powerhouse	
		Sub Total : D03- Velidhoo Island							m	1450	3	10
D04	Hulhudhoo	-	-	-	-	-	m	-	-	-		
		Sub Total : D04- Hulhudhoo Island							m	0	0	0
E01	ALIFUSHI	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	-	4		
		MVDB	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	MV Ring (provisional allocation)	m	800	1	2		
		Sub Total : E01 - ALIFUSHI Island							m	850	1	6
E02	Hulhudhuffaaruu	-	-	-	-	-	m	-	-	-		

Assure Project - Distribution Network Modifications

SCHEDULE S7 - SCHEDULE OF MV (11 kV) CABLES

Design, construction and testing shall comply with technical specifications (specification No AP-003)

SCHEDULE S7 - SCHEDULE OF MV (11 kV) CABLES												
		Sub Total : E02- Hulhuhuffaaruu Island						m	0	0	0	
F01	Thulhaadhoo	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	-	4		
		MVDB	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	MV Ring (provisional allocation)	m	1800	3	8	Provisional allocation for 11 kV ring between PSS and Powerhouse	
		Sub Total : F01 - Thulhaadhoo Island						m	1850	3	12	
F03	Dharavandhoo	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	--	4		
		MVDB	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	MV Ring (provisional allocation)	m	1600	3	6	Provisional allocation for 11 kV ring between proposed PSS and Powerhouse	
		Sub Total : F03- Dharavandhoo Island						m	1650	3	10	
K01	RAIYMANDHOO	TR1	RMU	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	1 x 25 m provisionally allocated	m	25	-	2		
		RMU	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured		m	630	1	2		
		Sub Total : K01 - ALIFUSHI Island						m	655	1	4	
K02	MULAH	TR1	RMU	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	1 x 25 m provisionally allocated	m	25	-	2		
		RMU	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured		m	900	1	2		
		Sub Total : K02- MULAH Island						m	925	1	4	
K03	VEYVAH	-	-	-	-	-	m	-	-	-		
		Sub Total : K03- VEYVAH Island						m	0	0	0	
K05	MULI	TR1	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	1 x 25 m provisionally allocated	m	25	-	2		
		MVDB	RMU		6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	1 x 25 m provisionally allocated	m	25	-	2		
		Sub Total : K05 -MULI Island						m	50	0	4	
L02	NILANDHOO	TR1	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	1 x 25 m provisionally allocated	m	25	-	2		
		MVDB	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured		m	260	-	2		
		Sub Total : L02 - NILANDHOO Island						m	285	0	4	
N02	THIMARAFUSHI	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	-	4		
		MVDB	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	MV Ring (provisional allocation)	m	1360	-	8		
		Sub Total : N02 - THIMARAFUTHI Island						m	1410	0	12	Provisional allocation for 11 kV ring between PSS and Powerhouse
N04	Guraidhoo	TR1 and TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	2 x 25 m provisionally allocated	m	50	-	4		
		MVDB	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	MV Ring (provisional allocation)	m	1100	2	6	Provisional allocation for 11 kV ring between PSS and Powerhouse	
		Sub Total : N04 - Guraidhoo Island						m	1150	2	10	

Assure Project - Distribution Network Modifications

SCHEDULE S7 - SCHEDULE OF MV (11 kV) CABLES

Design, construction and testing shall comply with technical specifications (specification No AP-003)

P02	MAAMENDHOO	-	-	-	-	-	m	-	-	-	
Sub Total : P02- MAAMENDHOO Island							m	0	0	0	
Q04	FARESMAATHODA	TR1 / TR2	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured		m	50		4	
		MVDB	PSS	Underground installation	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured		m	800	1	2	
		Sub Total : Q04 - FARESMAATHODA Island							m	850	1
Q05	GADHDHOO	TR1	MVDB	Installation in cable trenches at Power House	6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	1 x 25 m provisionally allocated	m	25	-	2	
		MVDB	RMU		6.35/11 (12) kV Cu/XLPE/PVC 3C x 70 sqmm, Armoured	1 x 25 m provisionally allocated	m	25	-	2	
		Sub Total : Q05 - GADHDHOO Island							m	50	0