

# PROPOSED ELECTRICITY NETWORK MODIFICATIONS FOR INTEGRATING RENEWABLE ENERGY DESIGN DIAGRAMS

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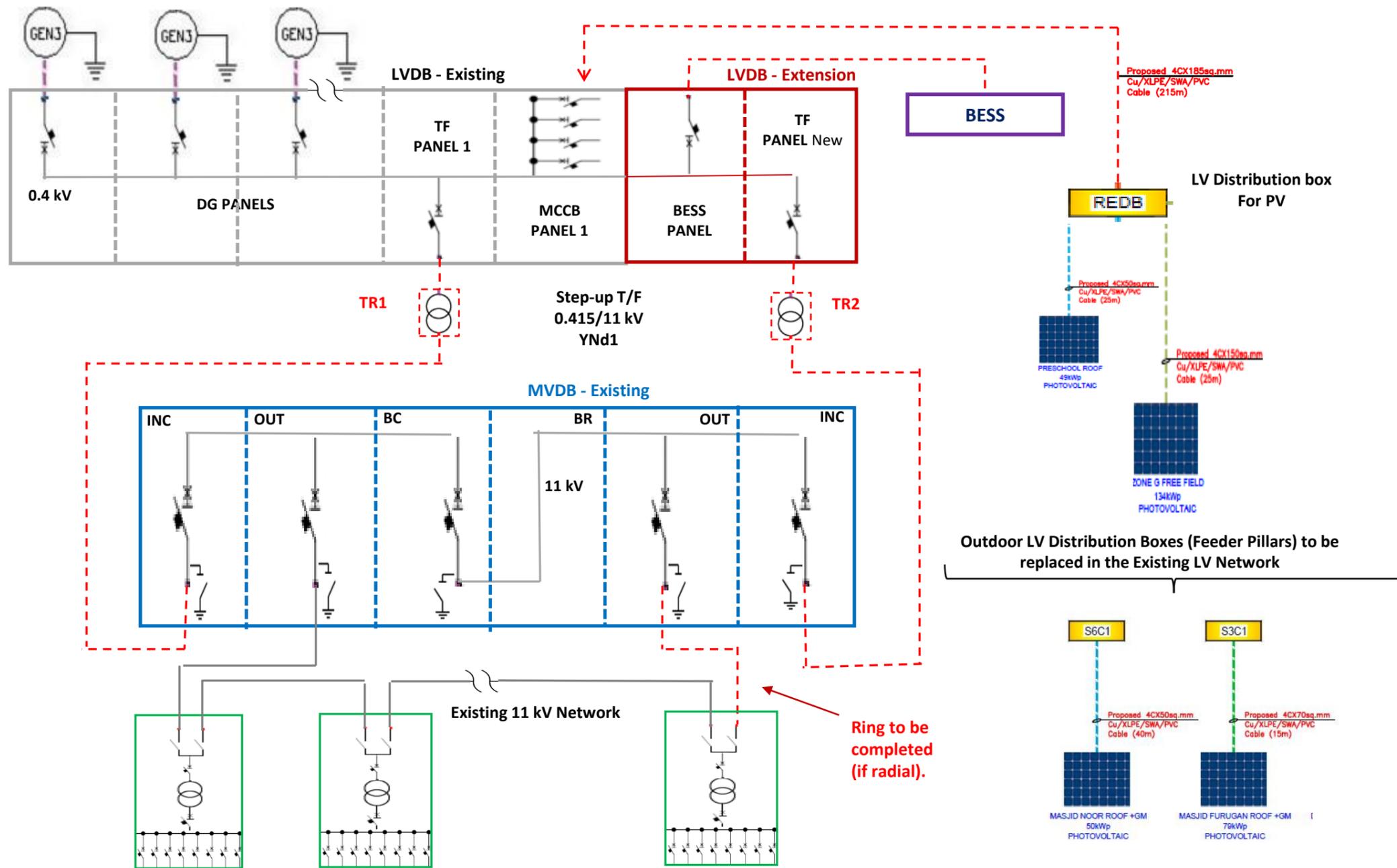
## ASSURE PROJECT

**Accelerating Sustainable  
System Development using  
Renewable Energy**

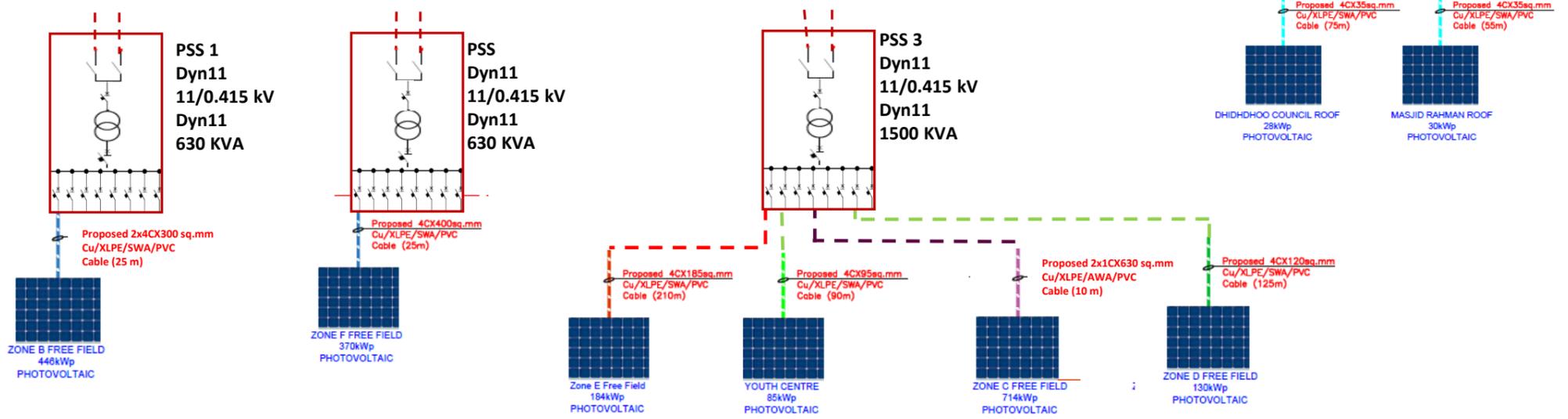
The design diagrams provided herein are indicative. Detailed designs shall be prepared and finalized by the successful Bidder upon survey.

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

<b>A04</b>	<b>DHIDHDHOO ISLAND</b>
<b>B01</b>	<b>HANIMAADHOO ISLAND</b>
<b>C02</b>	<b>MILANDHOO ISLAND</b>
<b>D02</b>	<b>MANADHOO ISLAND</b>
<b>D03</b>	<b>VELIDHOO ISLAND</b>
<b>D04</b>	<b>HOLHUDHOO ISLAND</b>
<b>E01</b>	<b>ALIFUSHI ISLAND (FPV)</b>
<b>E02</b>	<b>HULHUDHUFFARU ISLAND (PV)</b>
<b>F01</b>	<b>THULHAADHOO ISLAND</b>
<b>F03</b>	<b>DHARAVANDHOO ISLAND</b>
<b>K01</b>	<b>RAIYMANDHOO ISLAND (FPV)</b>
<b>K02</b>	<b>MULAH ISLAND (FPV)</b>
<b>K03</b>	<b>VEYVAH ISLAND (FPV)</b>
<b>K05</b>	<b>MULI ISLAND (FPV)</b>
<b>L02</b>	<b>NILANDHOO ISLAND (FPV)</b>
<b>N02</b>	<b>THIMARAFUSHI ISLAND</b>
<b>N04</b>	<b>GURAIIDHOO ISLAND</b>
<b>P02</b>	<b>MAAMENDHOO ISLAND (FPV)</b>
<b>Q04</b>	<b>FARESMAATHODA ISLAND (FPV)</b>
<b>Q05</b>	<b>GADHDHOO ISLAND (FPV)</b>



Connect new PSS to Existing 11 kV network at nearest point in Field- Loop In / Loop Out



**ASSURE** Accelerating Sustainable System Development using Renewable Energy

Proposed Electricity Network Modifications for Integrating Renewable Energy

**A04 DHIDHDHOO ISLAND**

DRAWING NO : A04 – AS – GR1  
 REVISION NO : 02  
 DATE : 27 MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 6300 A  
 BESS PANEL : ACB – 6300 A  
 MCCB PANELS : as per Schedules

**MVDB – EXISTING**  
 Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 3000 kWh / 3000 kW**

**STEP-UP T/F**  
 0.415/11 kV - 2 x 3150 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

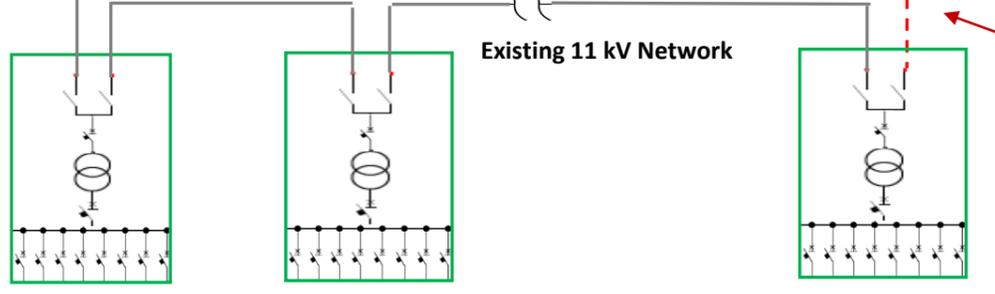
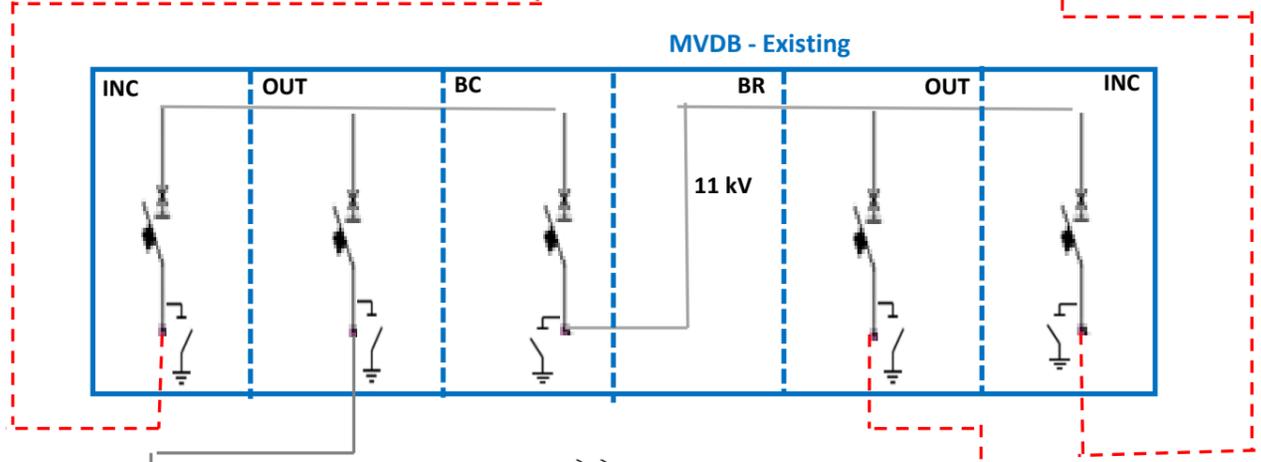
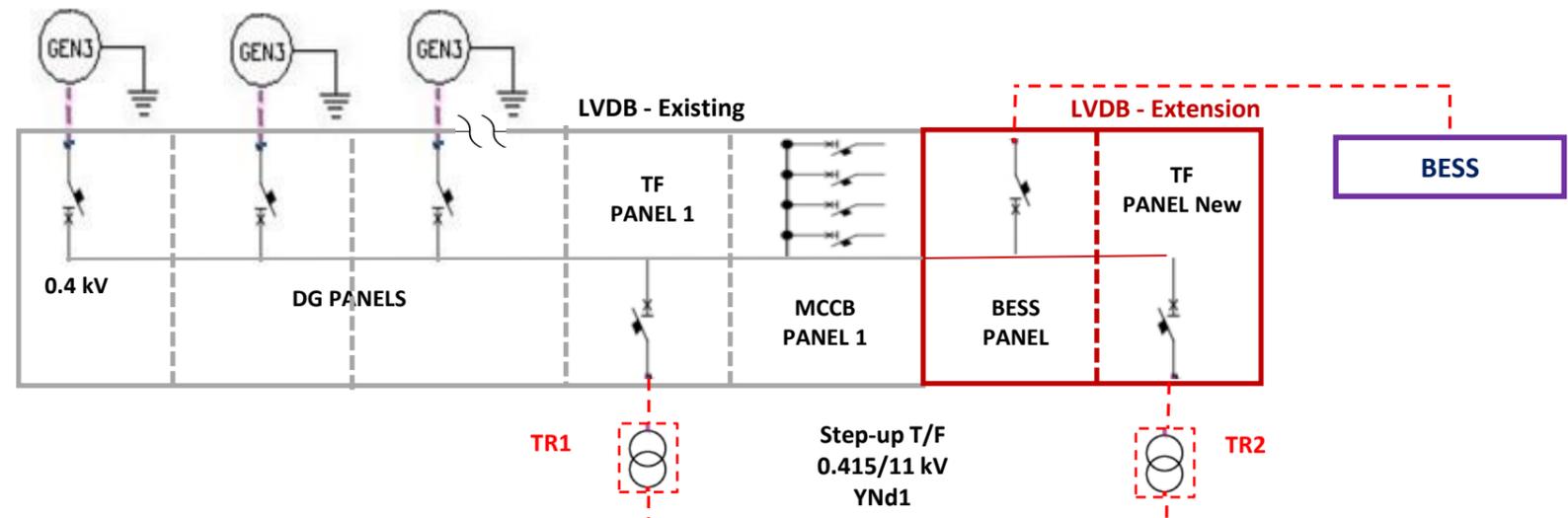
**LEGEND**

- Electrical Symbols : IEC 60417
- - - - UG Cables – New
- UG Cables - Existing
- P/B Existing LV Distribution Box (To be replaced)

**NOTES**

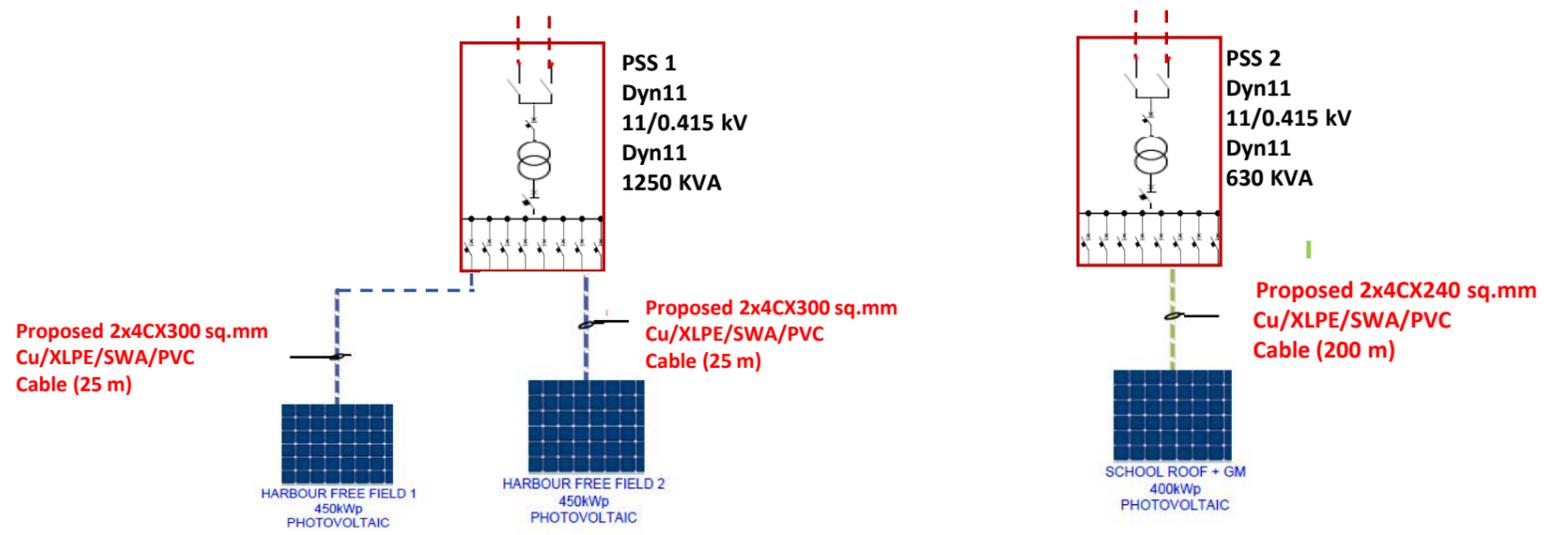
- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications





Partial 11 kV Ring Between South (Airport TF) and North (Drug Center TF) to be completed.

Connect new PSS to Existing 11 kV network at nearest point in Field- Loop In / Loop Out



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**B01 HANIMAADHOO ISLAND**

DRAWING NO : B01 – AS – GR1  
 REVISION NO : 02  
 DATE : MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 5000 A  
 BESS PANEL : ACB – 4000 A  
 MCCB PANELS : as per Schedules

**MVDB – EXISTING**  
 Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 1000 A

**BESS** : 2000kWh / 2000 kW

**STEP-UP T/F**  
 0.415/11 kV - 2 x 2500 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

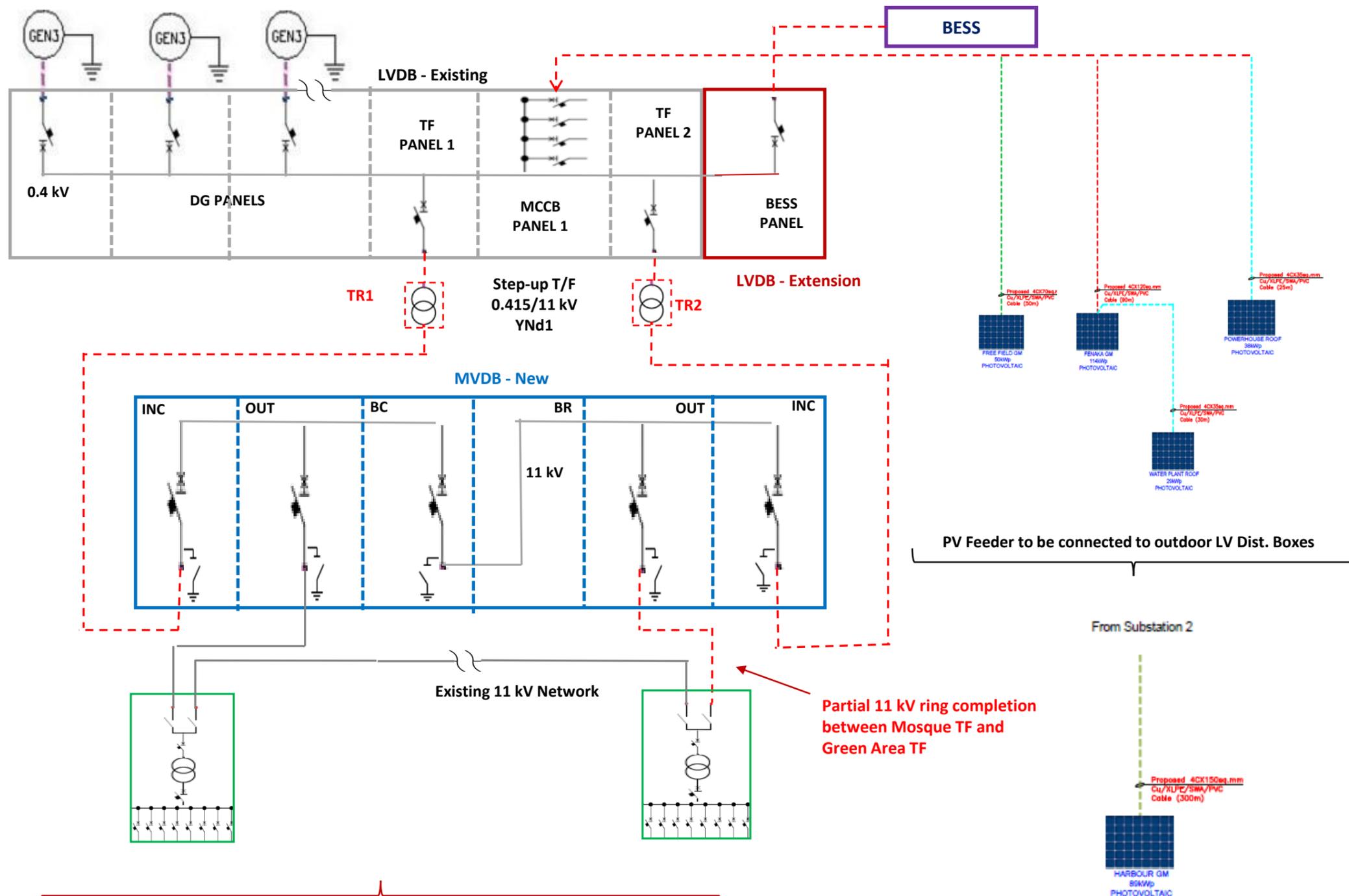
**LEGEND**

- Electrical Symbols : IEC 60417
- - - - UG Cables – New
- UG Cables - Existing
- Existing LV Distribution Box (To be replaced)

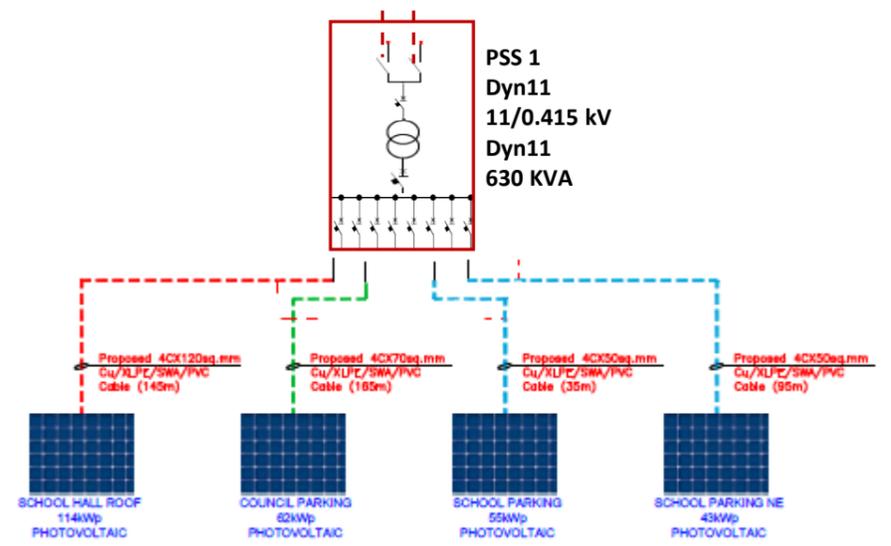
**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications





Connect new PSS to Existing 11 kV network at nearest point in Field- Loop In / Loop Out



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**C02 MILANDHOO ISLAND**

DRAWING NO : C02 – AS – GR1  
 REVISION NO : 03  
 DATE : MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 5000 A  
 BESS PANEL : ACB – 5000 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**  
 Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler : VCB - 630 A

**BESS : 2500 kWh / 2500 kW**

**STEP-UP T/F**  
 0.415/11 kV - 2 x 2500 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

- Electrical Symbols : IEC 60417
- UG Cables – New
- UG Cables - Existing
- P/B Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
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**D02 MANADHOO ISLAND**

DRAWING NO : D02 – AS – GR1  
 REVISION NO : 02  
 DATE : MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 5000 A  
 BESS PANEL : ACB – 6300 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**

Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 3000 kWh / 3000 kW**

**STEP-UP T/F**

0.415/11 kV - 2 x 2500 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**

As per Schedules

**LEGEND**

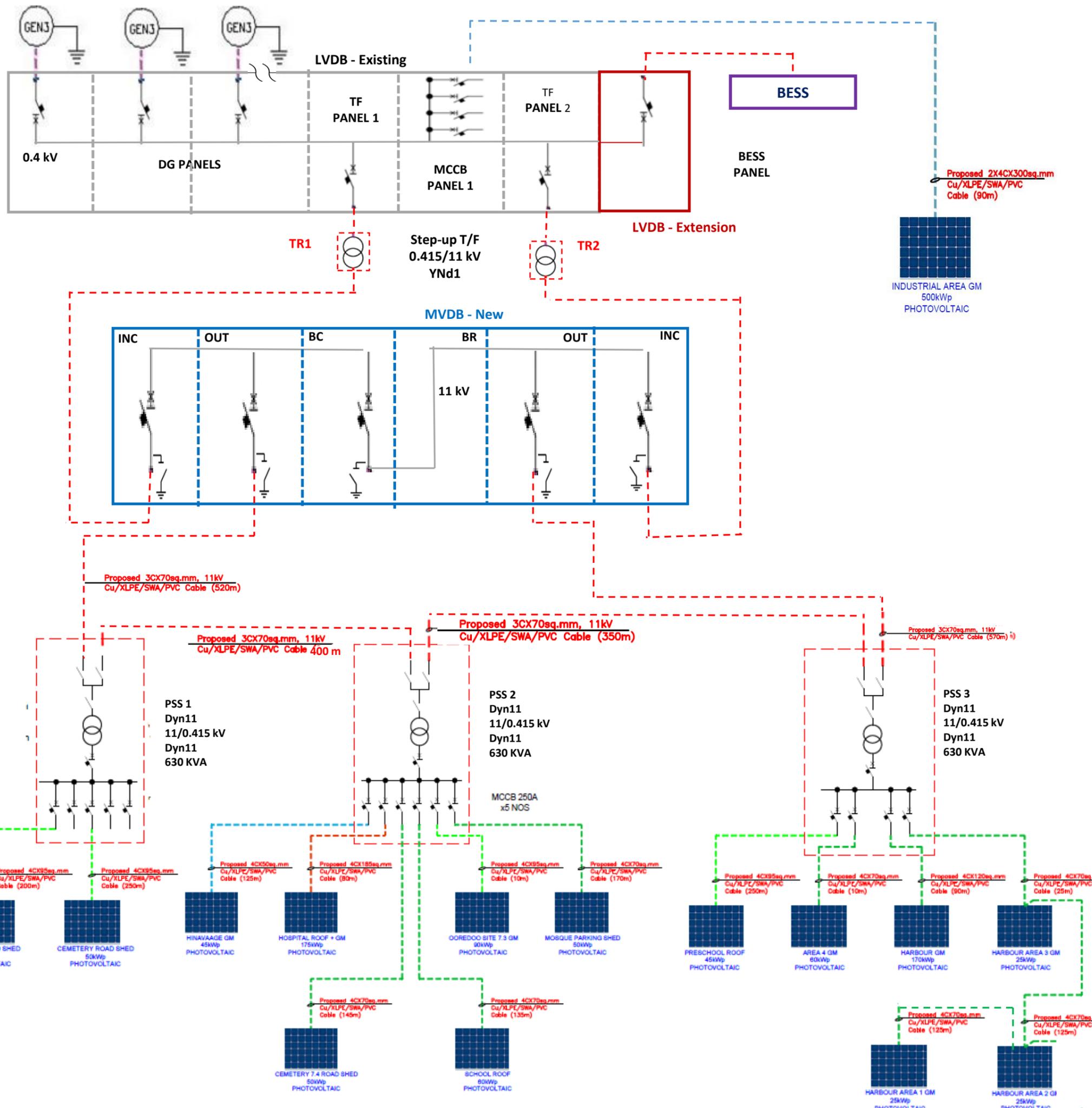
- Electrical Symbols : IEC 60417
- UG Cables – New
- UG Cables - Existing
- P/B Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



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CORPORATION LIMITED



DRAWING NO : D03 – AS – GR1  
 REVISION NO : 02  
 DATE : MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 5000 A  
 BESS PANEL : ACB – 6300 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**

Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 3000 kWh / 3000 kW**

**STEP-UP T/F**

0.415/11 kV - 2 x 2500 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**

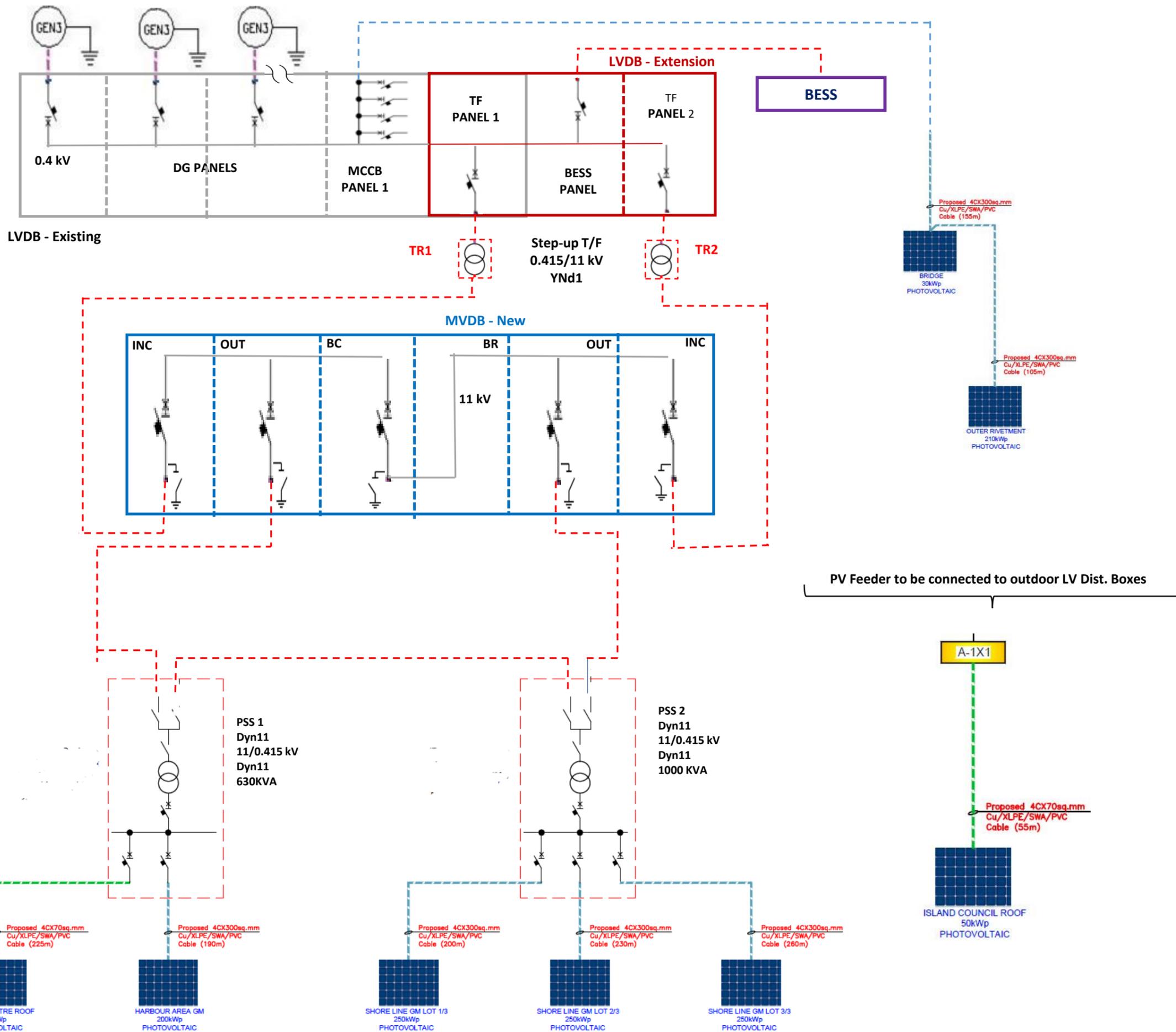
As per Schedules

**LEGEND**

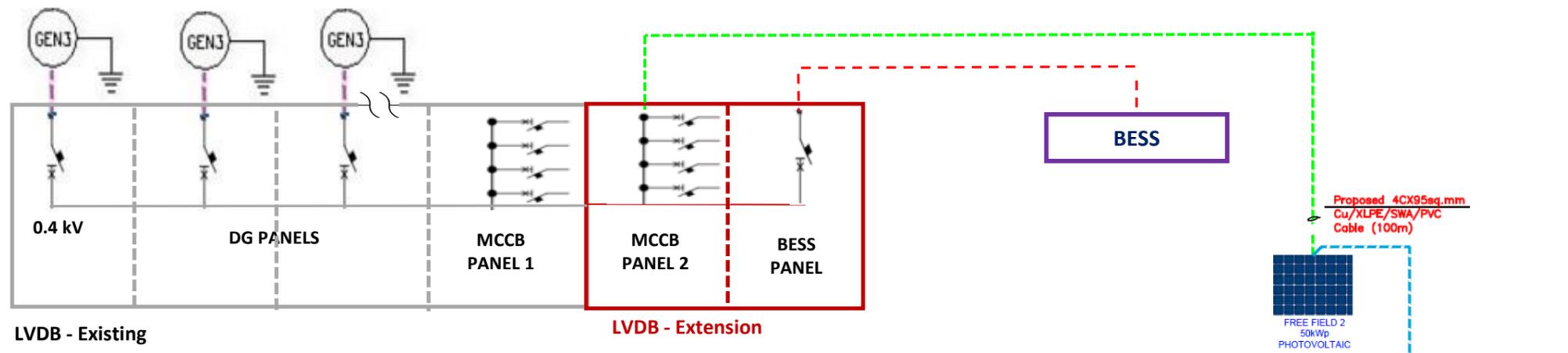
- Electrical Symbols : IEC 60417
- UG Cables – New
  - UG Cables - Existing
  - P/B Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
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CORPORATION LIMITED



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**Proposed Electricity Network Modifications for Integrating Renewable Energy**

**D04 HOLHUDHOO ISLAND**

DRAWING NO : D04 – AS – GR1  
 REVISION NO : 02  
 DATE : MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

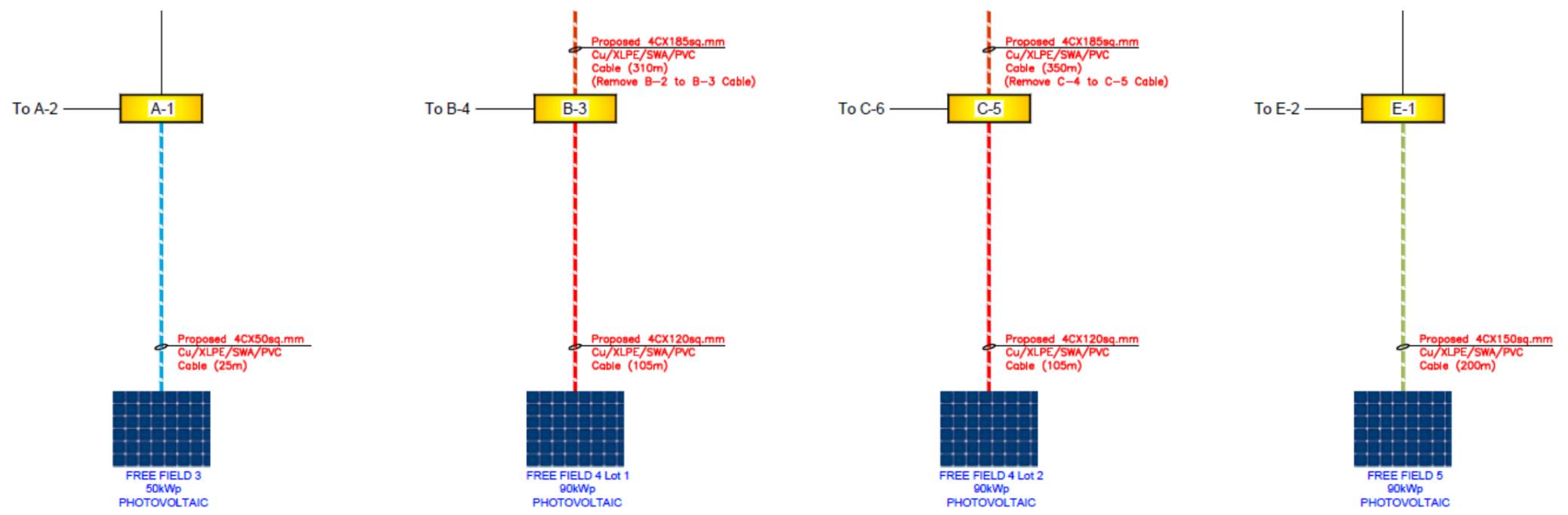
**LVDB - EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 BESS PANEL : ACB – 3200 A  
 MCCB PANELS : as per Schedules

**BESS : 1500 kWh / 1500 kW**

**STEP-UP T/F – N/A**

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

PV Feeder to be directly connected to outdoor LV Dist. Boxes and cable connections



**LEGEND**

Electrical Symbols : IEC 60417

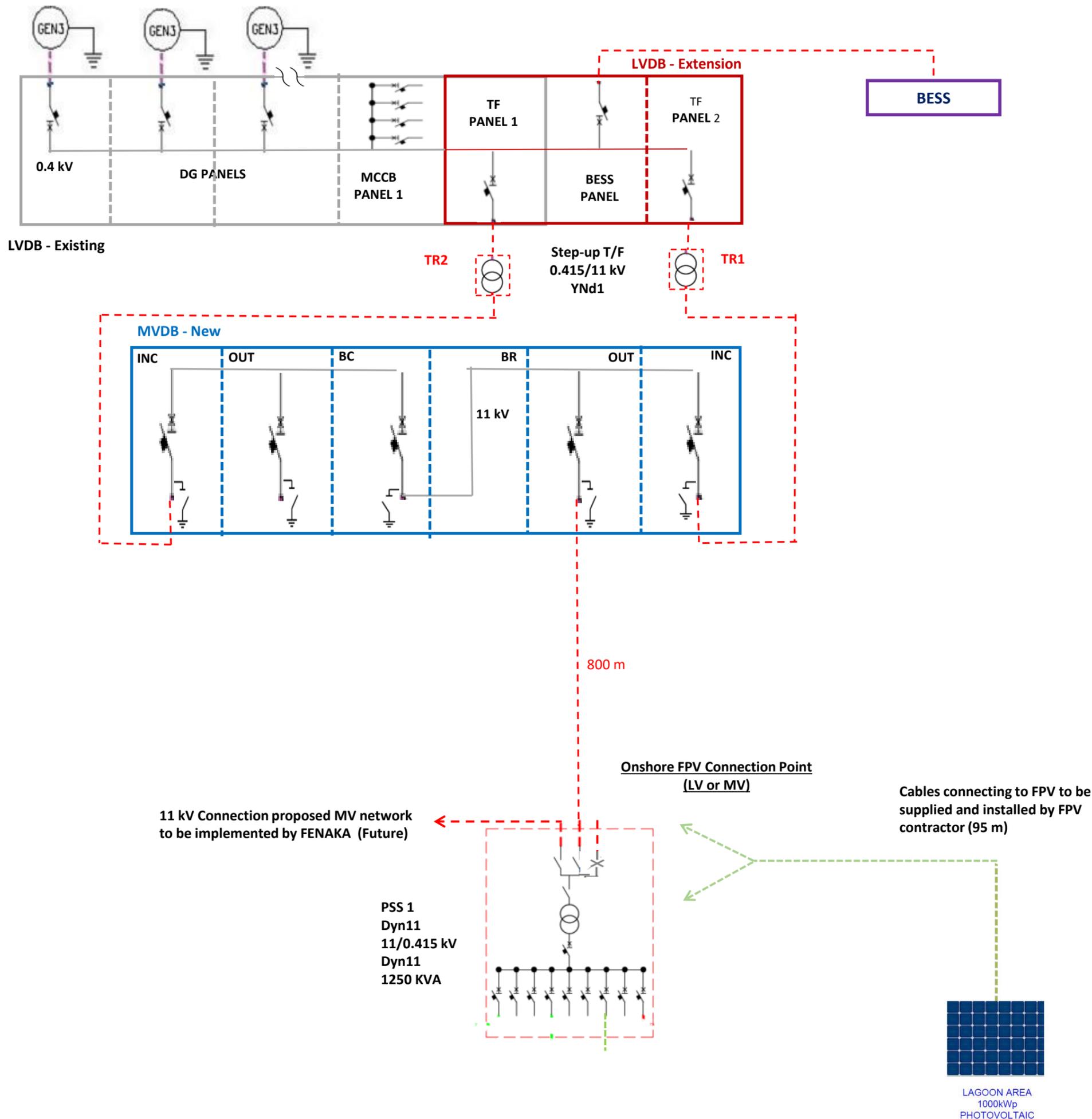
--- UG Cables – New

— UG Cables - Existing

**p/B** Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



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**E01 ALIFUSHI ISLAND**

DRAWING NO : E01 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 5000 A  
 BESS PANEL : ACB – 4000 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**  
 Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 2000 kWh / 2000 kW**

**STEP-UP T/F**  
 0.415/11 kV - 2 x 2000 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

Electrical Symbols : IEC 60417

--- UG Cables – New  
 — UG Cables - Existing

Existing LV Distribution Box (To be replaced)

**NOTES**

\* Single Line Diagram Representation  
 \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor  
 \* Design shall comply with Technical Specifications



DRAWING NO : E02 – AS – GR1  
 REVISION NO : 03  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 BESS PANEL : ACB – 3200 A  
 MCCB PANELS : as per Schedules

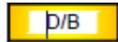
**MVDB:** - Nil

**BESS :** 1500 kWh / 1500 kW

**STEP-UP T/F –** Nil

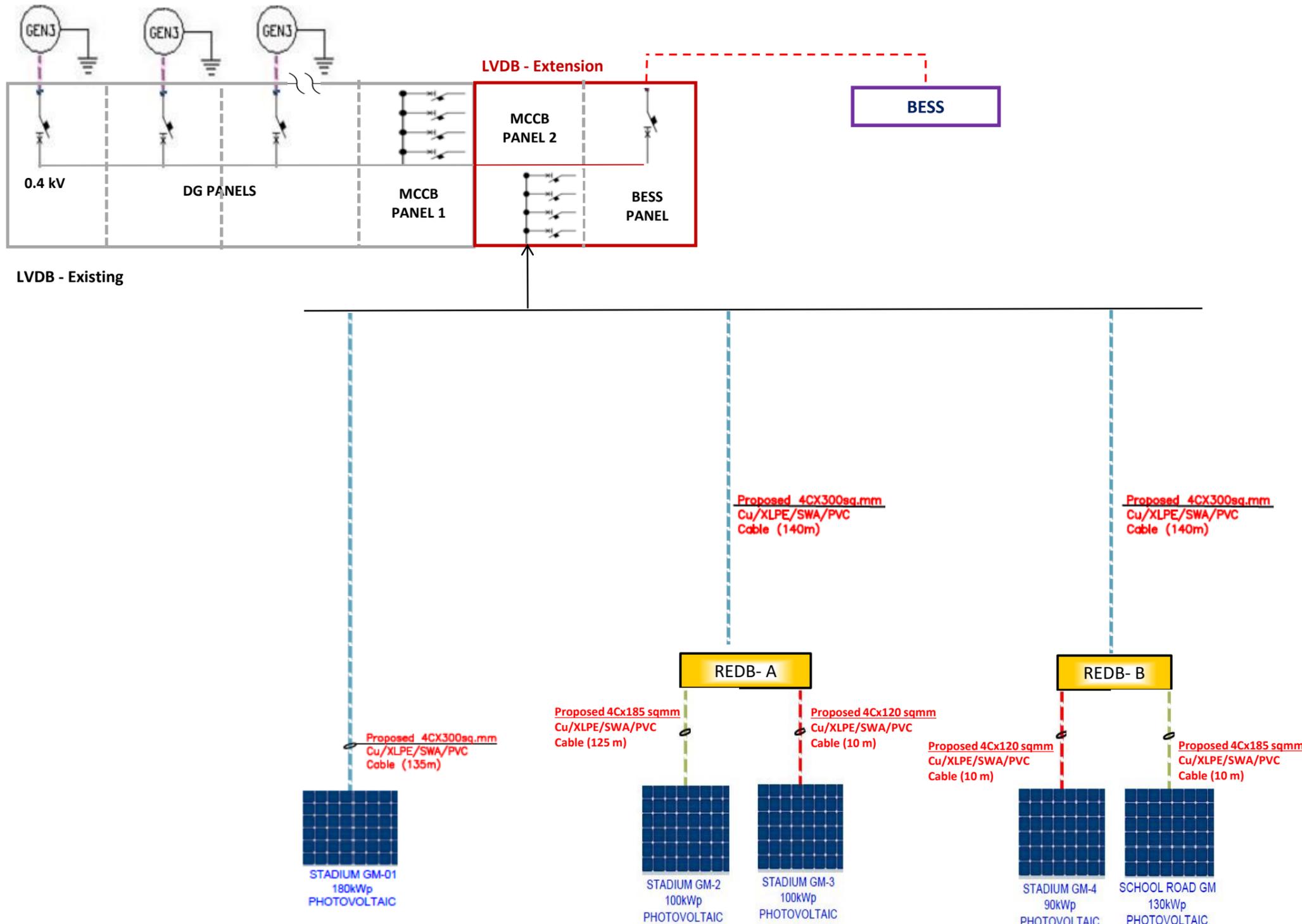
**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

Electrical Symbols : IEC 60417  
 - - - - - UG Cables – New  
 \_\_\_\_\_ UG Cables - Existing  
 Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



**F01 – THULHAADHOO ISLAND**

DRAWING NO : F01 – AS – GR1  
 REVISION NO : 02  
 DATE : MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 5000 A  
 BESS PANEL : ACB – 6300 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**

Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 3000 kWh / 3000 kW**

**STEP-UP T/F**

0.415/11 kV - 2 x 2500 KVA  
 Vector gr : YNd1

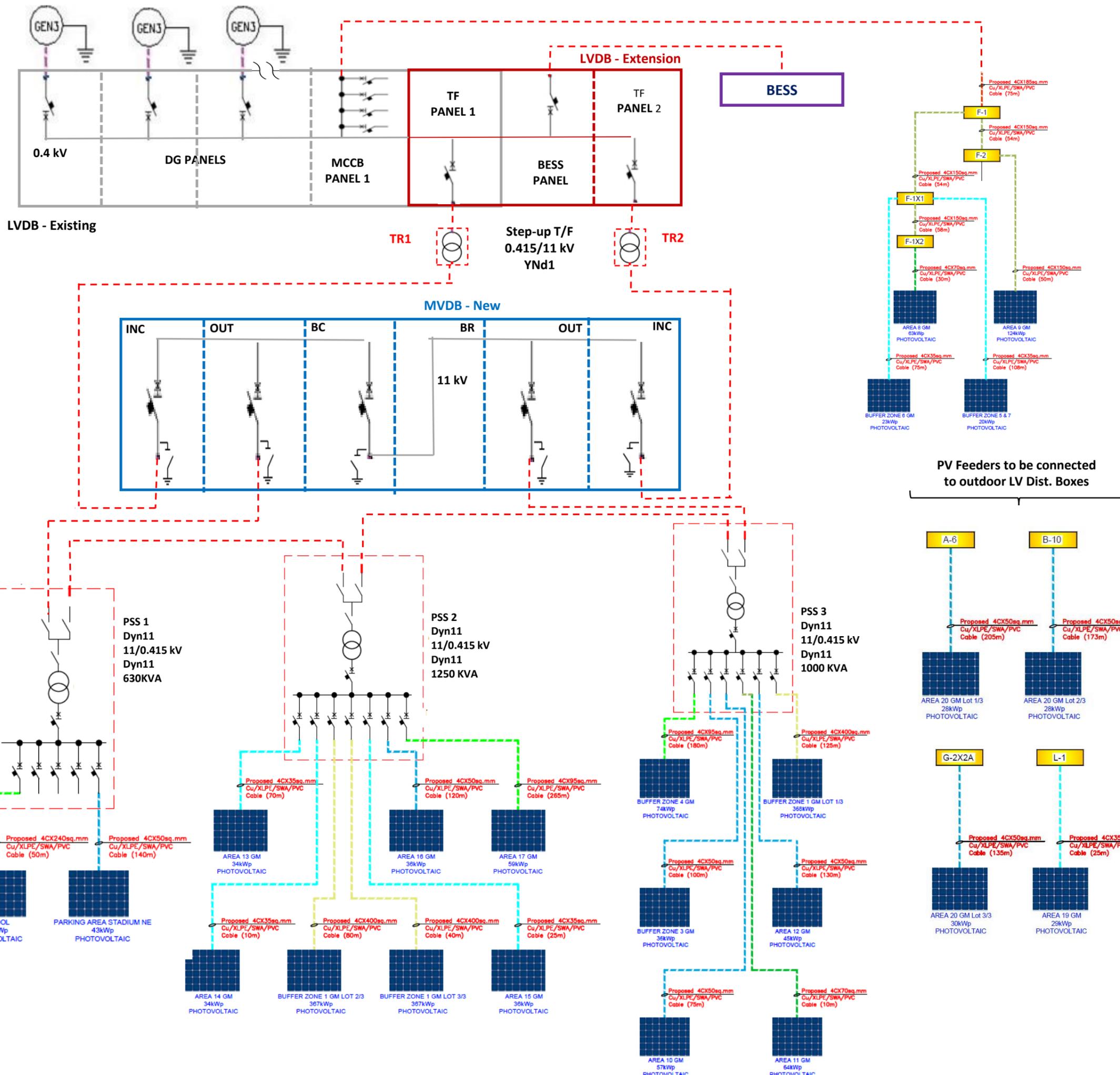
**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

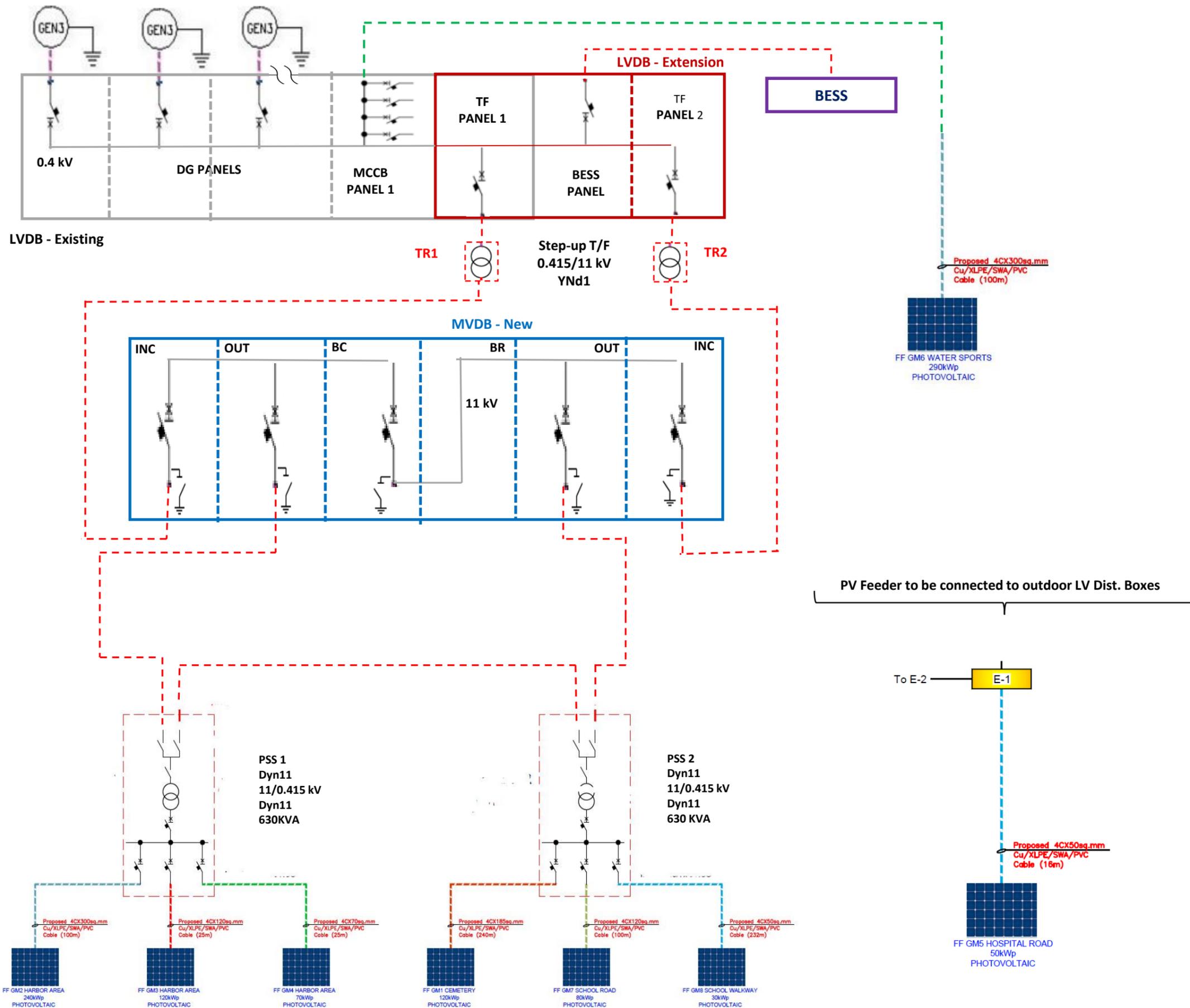
**LEGEND**

- Electrical Symbols : IEC 60417
- - - UG Cables – New
  - UG Cables - Existing
  - P/B Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
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Proposed Electricity Network Modifications for Integrating Renewable Energy

**F03 – B DHARAVANDHOO ISLAND**

DRAWING NO : F03 – AS – GR1  
 REVISION NO : 03  
 DATE : MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 4000 A  
 BESS PANEL : ACB – 5000 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**  
 Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 2500 kWh / 2500 kW**

**STEP-UP T/F**  
 0.415/11 kV - 2 x 2000 KVA  
 Vector gr : YNd1

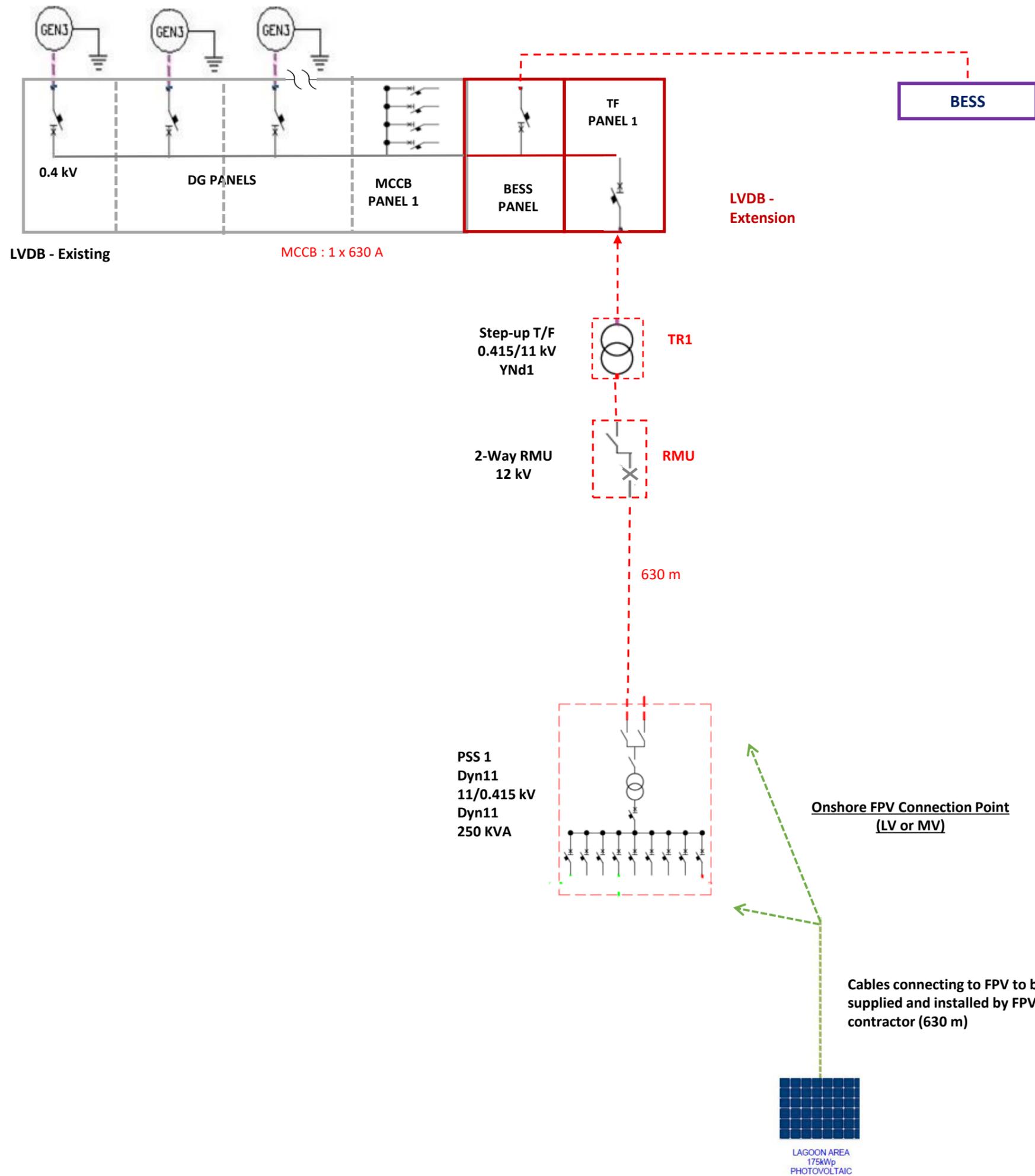
**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

- Electrical Symbols : IEC 60417
- UG Cables – New
- UG Cables - Existing
- Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
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**K01 RAIYMANDHOO ISLAND**

DRAWING NO : K01 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB – EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 : MCCB – 800 A (Motorized)  
 BESS PANEL : ACB – 1000 A  
 MCCB PANELS : as per Schedules

**RMU– NEW**  
 12 kV Outdoor Type Two-way RMU1x 630 A LBS + 1x 200 A VCB with ES

**BESS : 500 kWh / 500 kW**

**STEP-UP T/F**  
 0.415/11 kV - 1 x 400 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

Electrical Symbols : IEC 60417  
 - - - UG Cables – New  
 ——— UG Cables - Existing  
 [p/B] Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



DRAWING NO : K02 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 BESS PANEL : ACB – 4000 A  
 TR PANEL : ACB - 3200 A  
 MCCB PANELS : as per Schedules

**RMU - NEW**

12 kV 2-WAY RMU  
 LBS 630 A, VCB 200 A, with ES

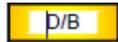
**BESS : 2000 kWh / 1000 kW**

**STEP-UP T/F –**

0.415/11 kV - 1 x 1500 KVA  
 Vector gr : YNd1

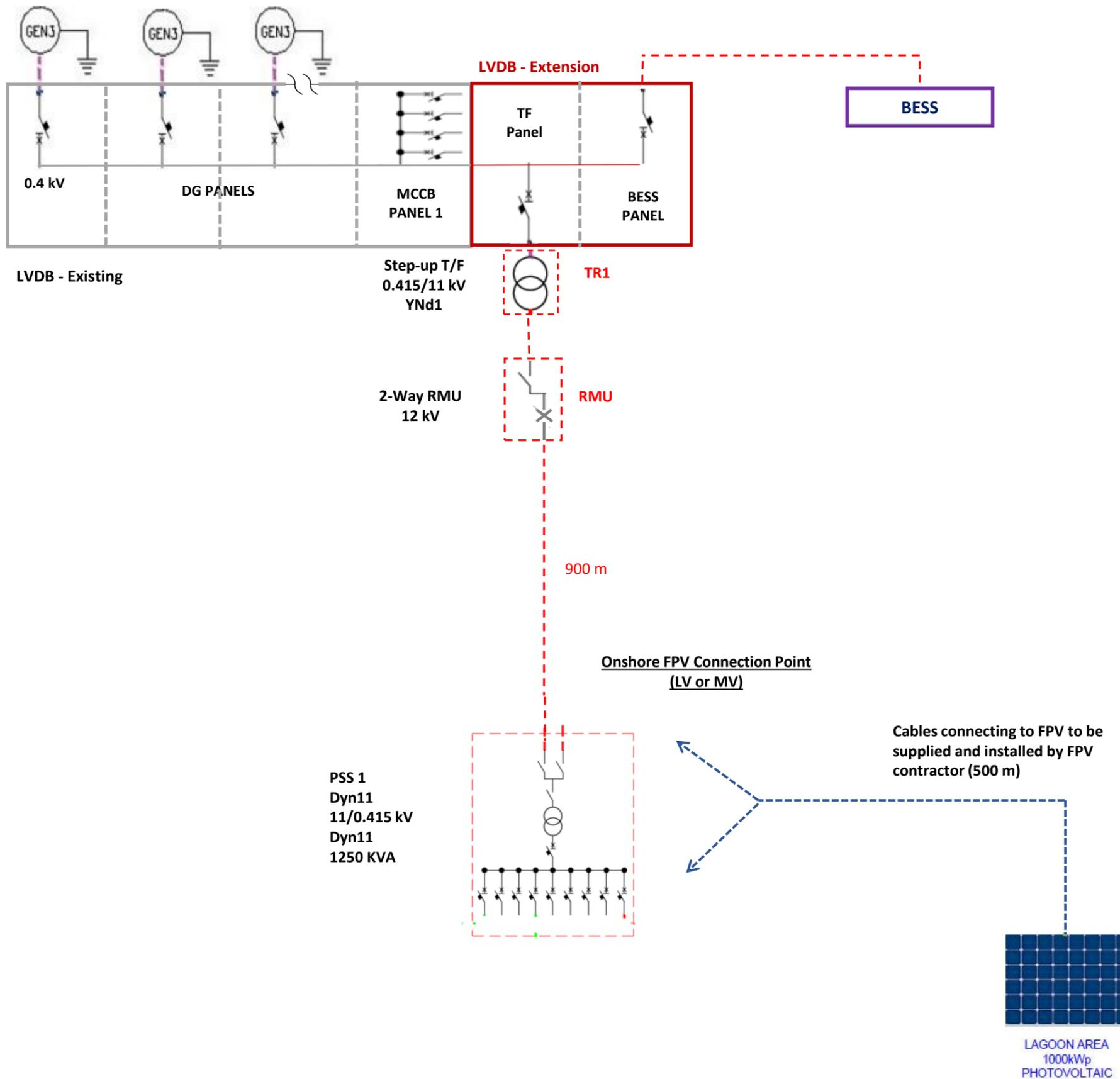
**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

Electrical Symbols : IEC 60417  
 - - - UG Cables – New  
 ——— UG Cables - Existing  
 Existing LV Distribution Box (To be replaced)

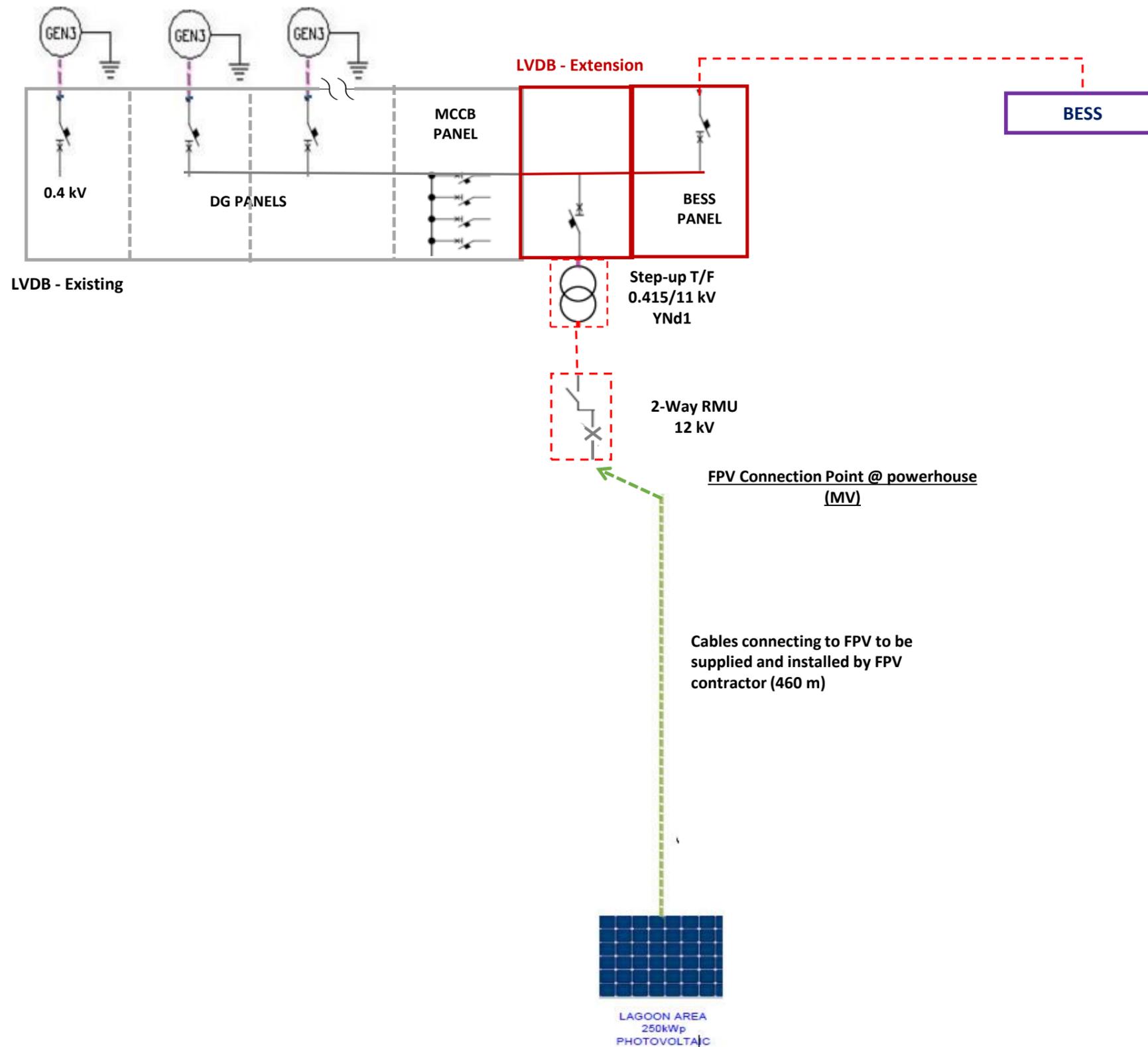
**NOTES**

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- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
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**FENAKA**  
 CORPORATION LIMITED

LAGOON AREA  
 1000kWp  
 PHOTOVOLTAIC



**ASSURE** Accelerating Sustainable System Development using Renewable Energy

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**K03 VEYVAH ISLAND**

DRAWING NO : K03 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 : MCCB – 800 A (Motorized)  
 BESS PANEL : ACB – 1000 A  
 MCCB PANELS : as per Schedules

**BESS** : 500 kWh / 500 kW

**RMU - NEW**

12 kV 2-WAY RMU  
 LBS 630 A, VCB 200 A, with ES

**STEP-UP T/F**

0.415/11 kV - 1 x 400 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**

As per Schedules

**LEGEND**

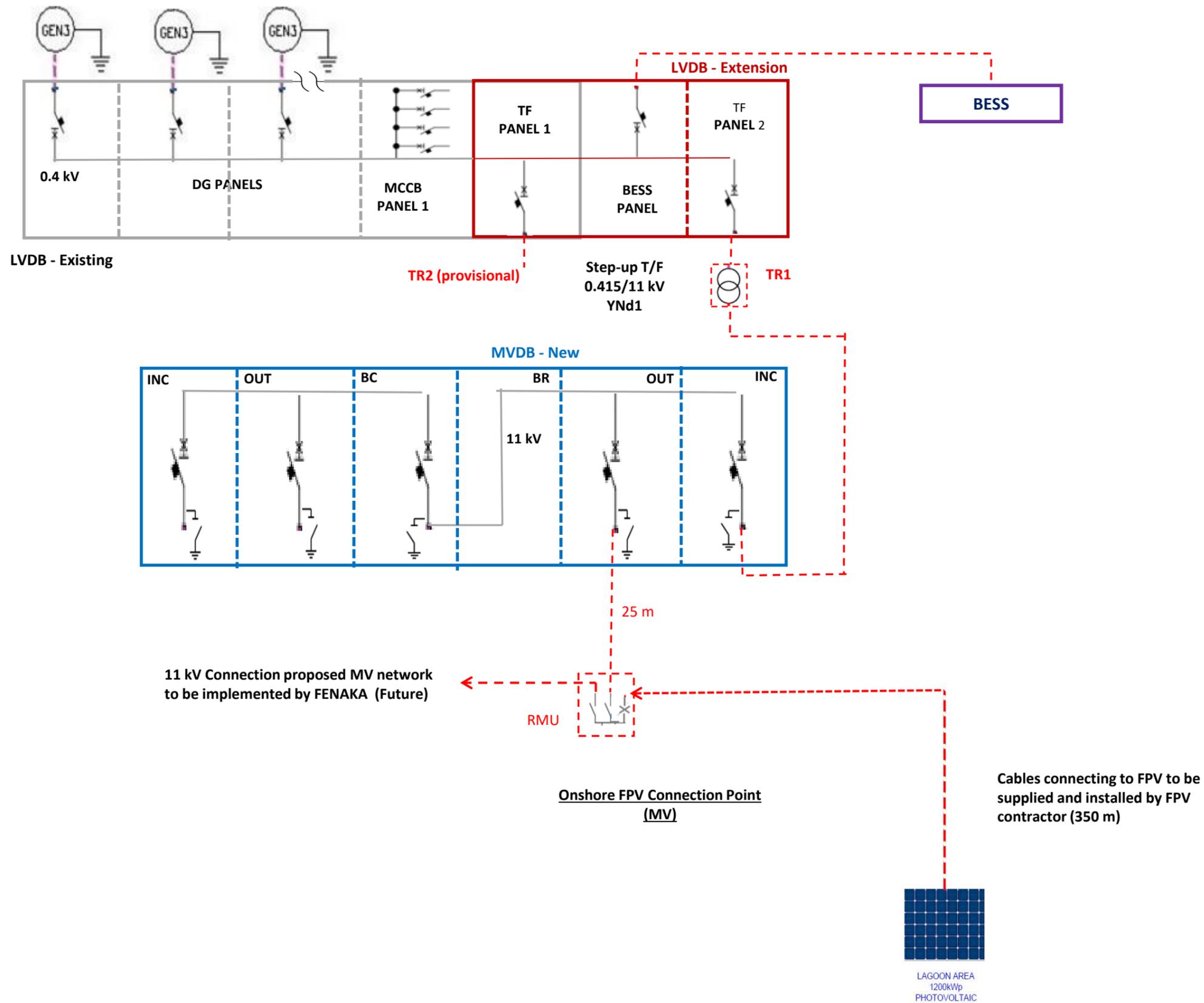
- Electrical Symbols : IEC 60417
- - - - - UG Cables – New
  - UG Cables - Existing
  - P/B Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



**FENAKA**  
CORPORATION LIMITED



**ASSURE** Accelerating Sustainable System Development using Renewable Energy

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**K05 MULI ISLAND**

DRAWING NO : K05 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 4000 A  
 BESS PANEL : ACB – 4000 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**

Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A  
 +  
 RMU 2 x 630 A LBS, 1 X 200 A VCB

**BESS : 2000 kWh / 2000 kW**

**STEP-UP T/F**  
 0.415/11 kV - 1 x 2000 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

Electrical Symbols : IEC 60417

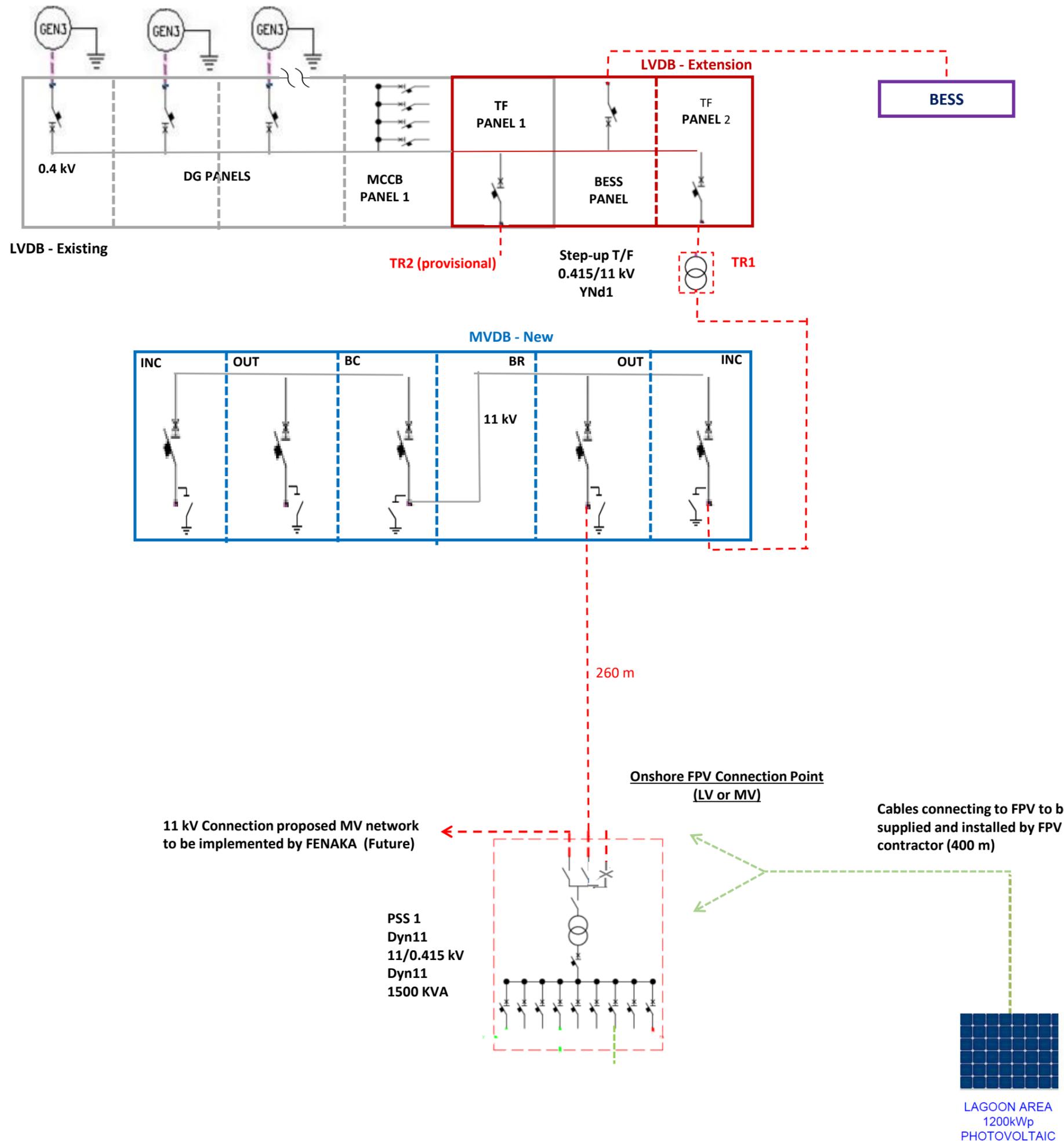
--- UG Cables – New

p/B Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications





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**L02 NILANDHOO ISLAND**

DRAWING NO : L02 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 5000 A  
 BESS PANEL : ACB – 2000 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**

Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 3000 kWh / 3000 kW**

**STEP-UP T/F**

0.415/11 kV - 1 x 2500 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

Electrical Symbols : IEC 60417

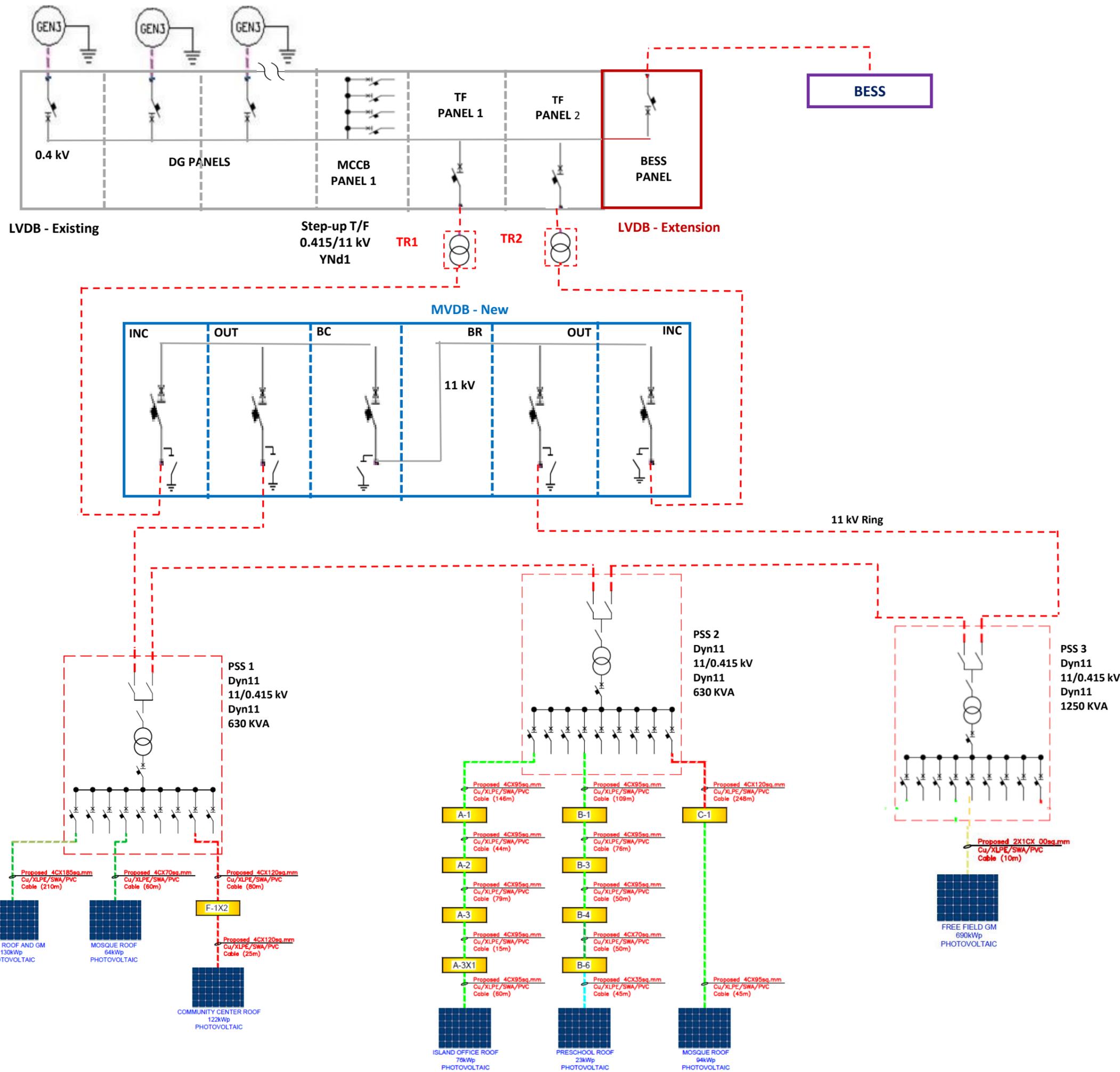
--- UG Cables – New

— UG Cables - Existing

Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



**ASSURE** Accelerating Sustainable System Development using Renewable Energy

Proposed Electricity Network Modifications for Integrating Renewable Energy

**N02 THIMARAFUSHI ISLAND**

DRAWING NO : N02 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 4000 A (Existing)  
 BESS PANEL : ACB – 6300 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**  
 Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 3000 kWh / 3000 kW**

**STEP-UP T/F**  
 0.415/11 kV - 2 x 2000 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

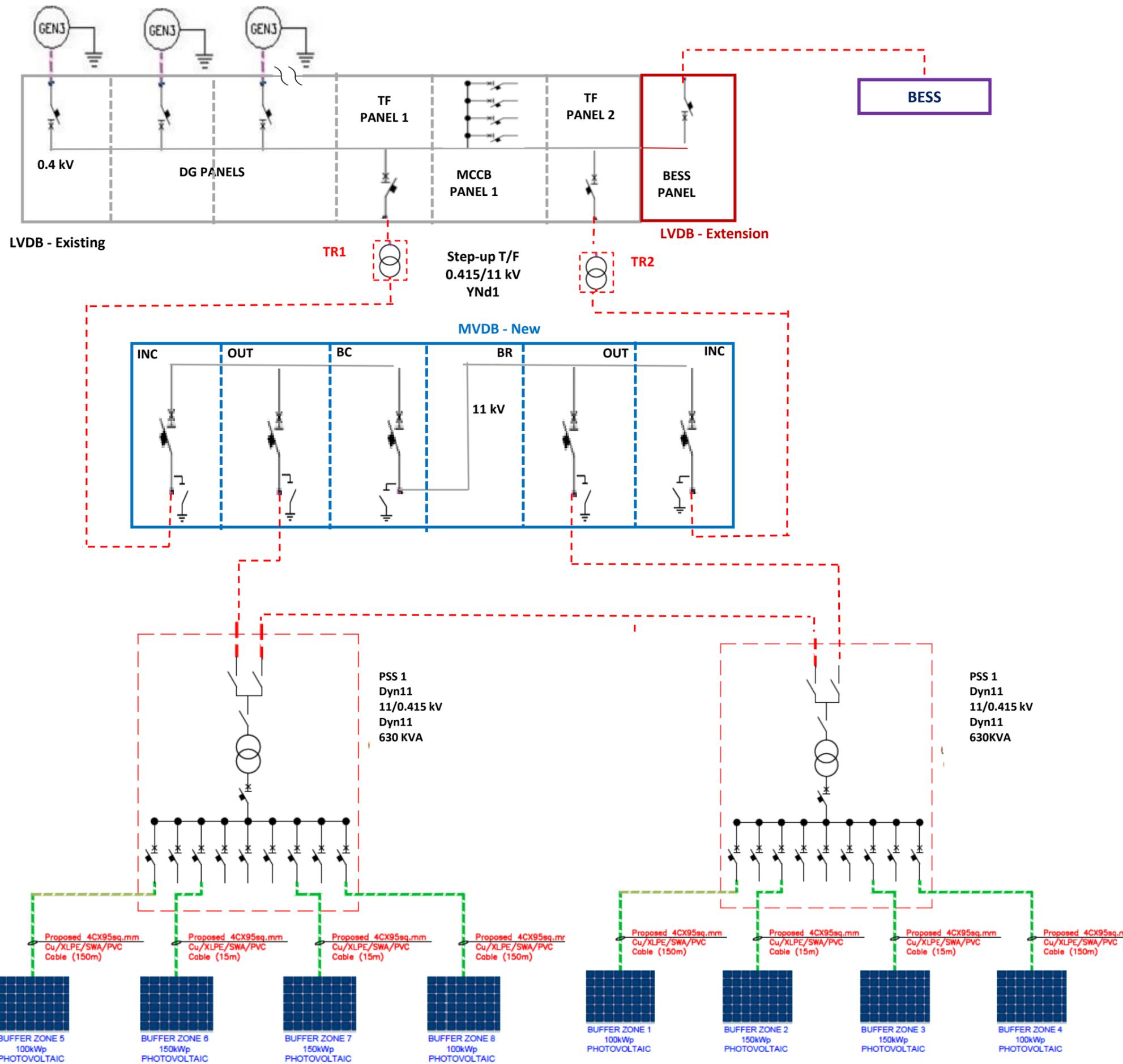
**LEGEND**

- Electrical Symbols : IEC 60417
- UG Cables – New
- UG Cables - Existing
- P/B Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications





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**N04 GURAI DHOO ISLAND**

DRAWING NO : N04 – AS – GR1  
 REVISION NO : 02  
 DATE : MAY 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 BESS PANEL : ACB – 5000 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**

Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

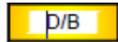
**BESS** : 2500 kWh / 2500 kW

**STEP-UP T/F**

0.415/11 kV - 2 x 2000 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

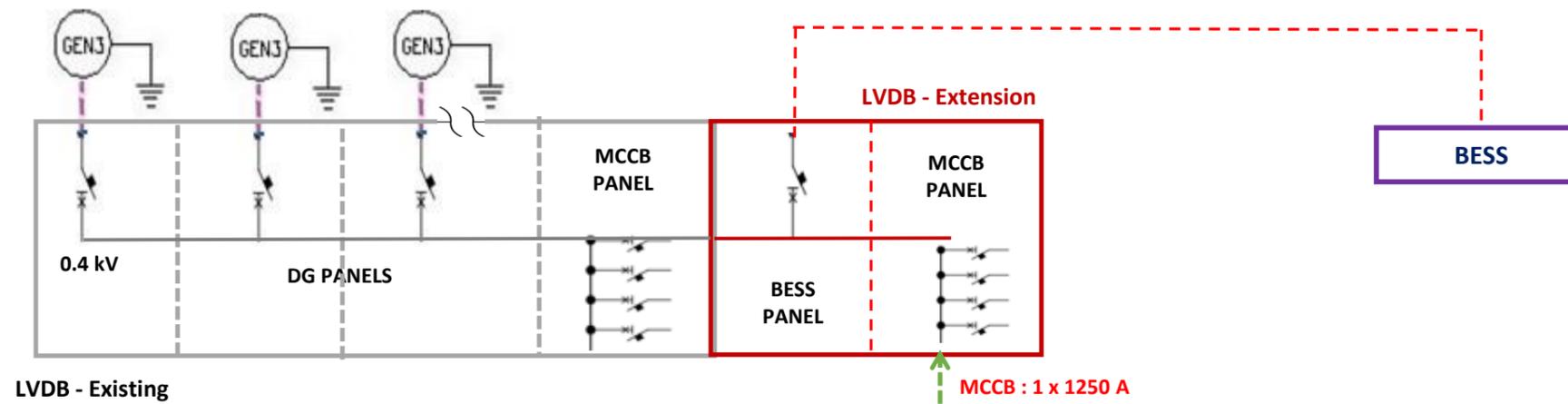
- Electrical Symbols : IEC 60417
- UG Cables – New
- UG Cables - Existing
-  Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



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LVDB - Existing

Onshore FPV Connection Point (LV)

MCCB : 1 x 1250 A

Cables connecting to FPV to be supplied and installed by FPV contractor (75 m)



LAGOON AREA  
600kWp  
PHOTOVOLTAIC

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Proposed Electricity Network Modifications for Integrating Renewable Energy

**P02 MAAMENDHOO ISLAND**

DRAWING NO : P02 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 BESS PANEL : ACB – 2000 A  
 MCCB PANELS : as per Schedules

**BESS** : 1000 kWh / 1000 kW

**PSS, LV Dist. Boxes AND CABLES:**

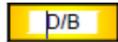
As per Schedules

**LEGEND**

Electrical Symbols : IEC 60417

--- UG Cables – New

— UG Cables - Existing

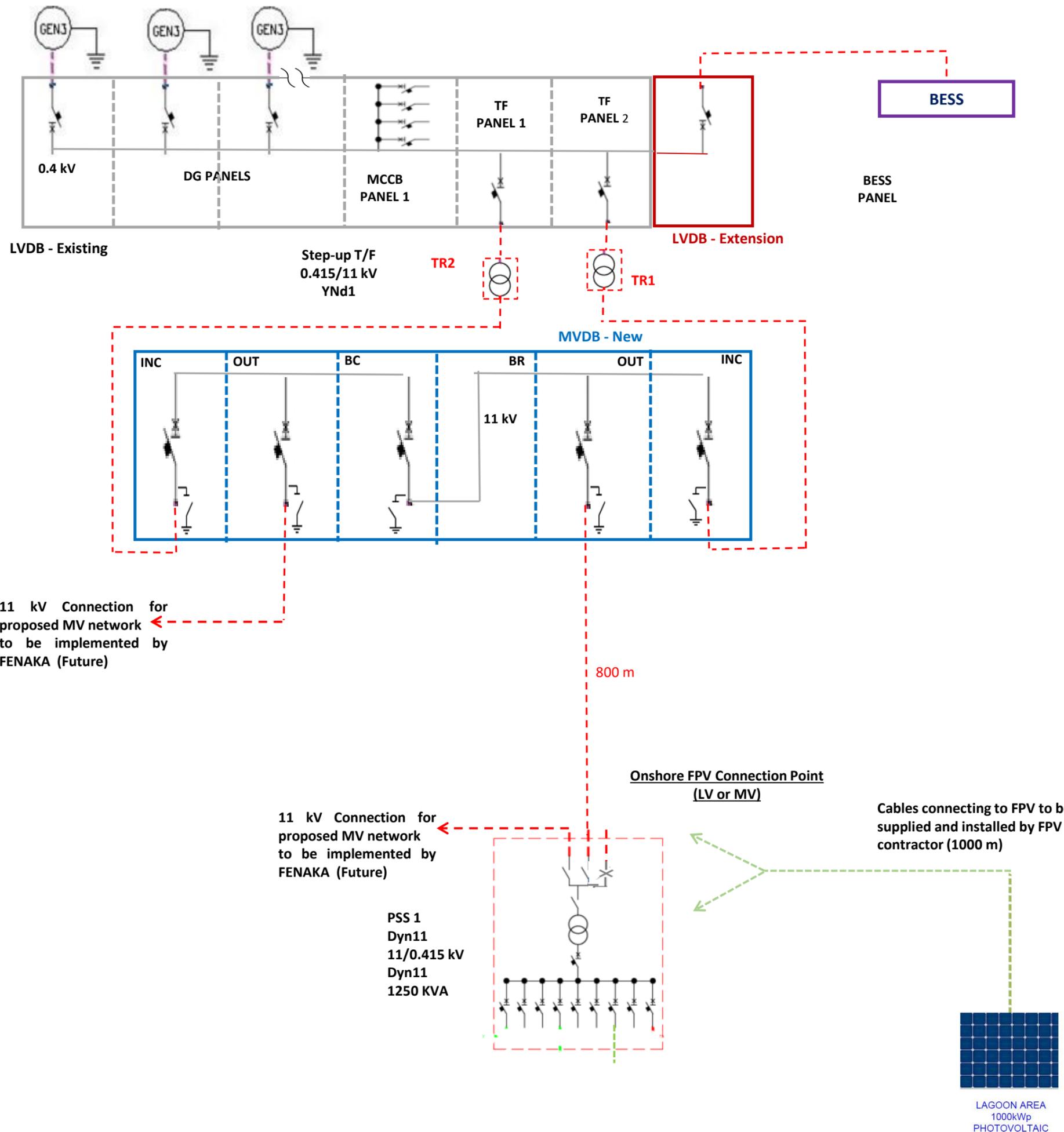
 Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



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Proposed Electricity Network Modifications for Integrating Renewable Energy

**Q04 FARESMAATHODA ISLAND**

DRAWING NO : Q04 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**

Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 BESS PANEL : ACB – 6300 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**

Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A

**BESS : 3000 kWh / 3000 kW**

**STEP-UP T/F**

0.415/11 kV - 1 x 2500 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

- Electrical Symbols : IEC 60417
- - - - - UG Cables – New
  - \_\_\_\_\_ UG Cables - Existing
  - P/B Existing LV Distribution Box (To be replaced)

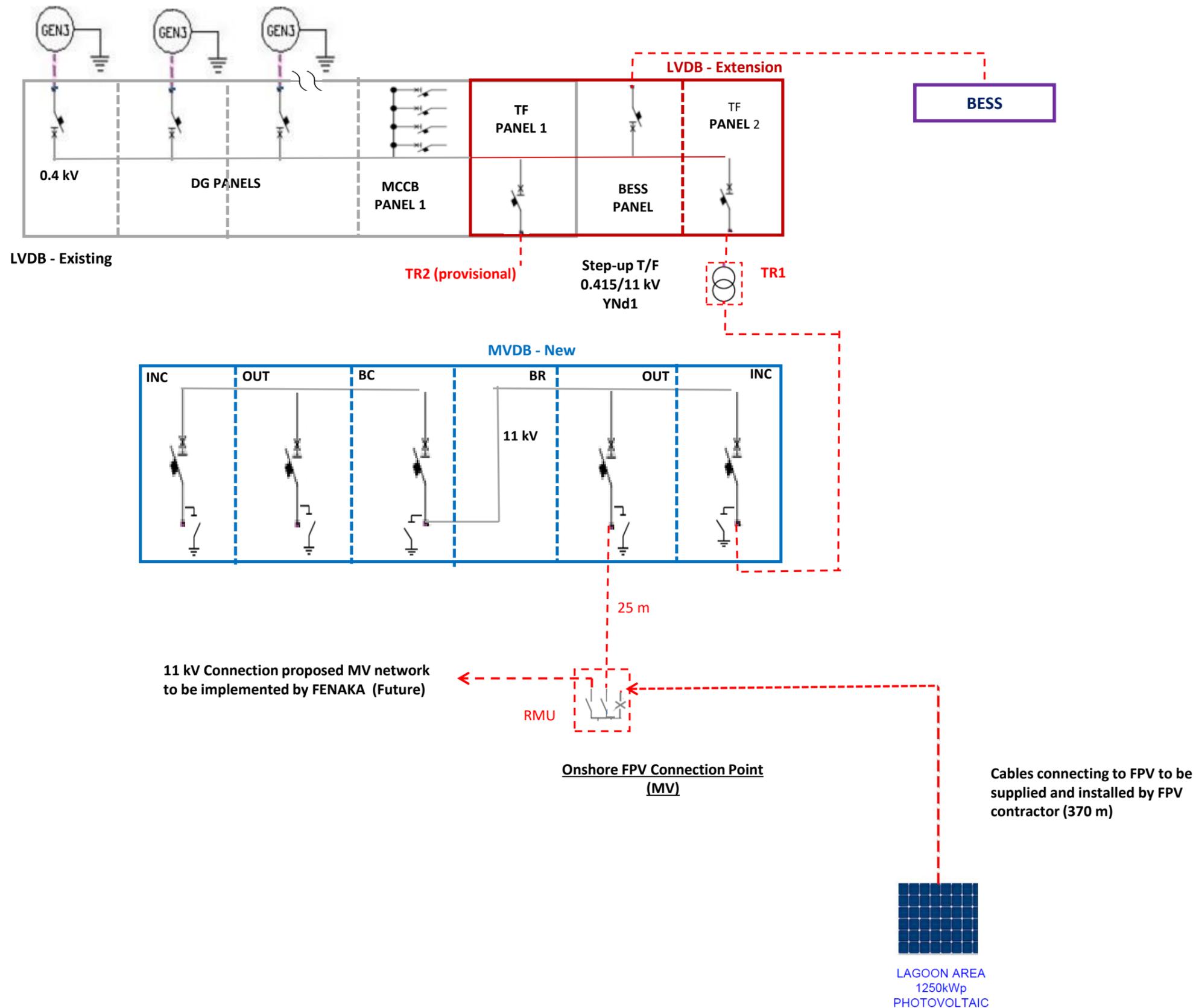
**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications



**FENAKA**  
CORPORATION LIMITED

LAGOON AREA  
1000kWp  
PHOTOVOLTAIC



**ASSURE** Accelerating Sustainable System Development using Renewable Energy

**Proposed Electricity Network Modifications for Integrating Renewable Energy**

**Q05 GADHDHOO ISLAND**

DRAWING NO : Q05 – AS – GR1  
 REVISION NO : 02  
 DATE : JUNE 2023  
 DESIGN : PMU  
 DRAWING : PMU

**KEY RATINGS**

**LVDB - EXTENSION**  
 Busbar : 50 Hz, 415 V, 8000 A, 65 kA  
 TF PANEL 1 & 2 : ACB – 4000 A  
 BESS PANEL : ACB – 5000 A  
 MCCB PANELS : as per Schedules

**MVDB – NEW**  
 Busbar : 630 A, 25 kA  
 Incomer / Outgoing : VCB - 630 A  
 Bus Coupler VCB - 630 A  
 +  
 RMU 2 x 630 A LBS, 1 X 200 A VCB

**BESS : 2500 kWh / 2500 kW**

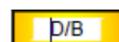
**STEP-UP T/F**  
 0.415/11 kV - 1 x 2500 KVA  
 Vector gr : YNd1

**PSS, LV Dist. Boxes AND CABLES:**  
 As per Schedules

**LEGEND**

Electrical Symbols : IEC 60417

--- UG Cables – New

 Existing LV Distribution Box (To be replaced)

**NOTES**

- \* Single Line Diagram Representation
- \* LVDB & MVDB – Secondary Circuits not shown. Detailed design to be done by Contractor
- \* Design shall comply with Technical Specifications

