

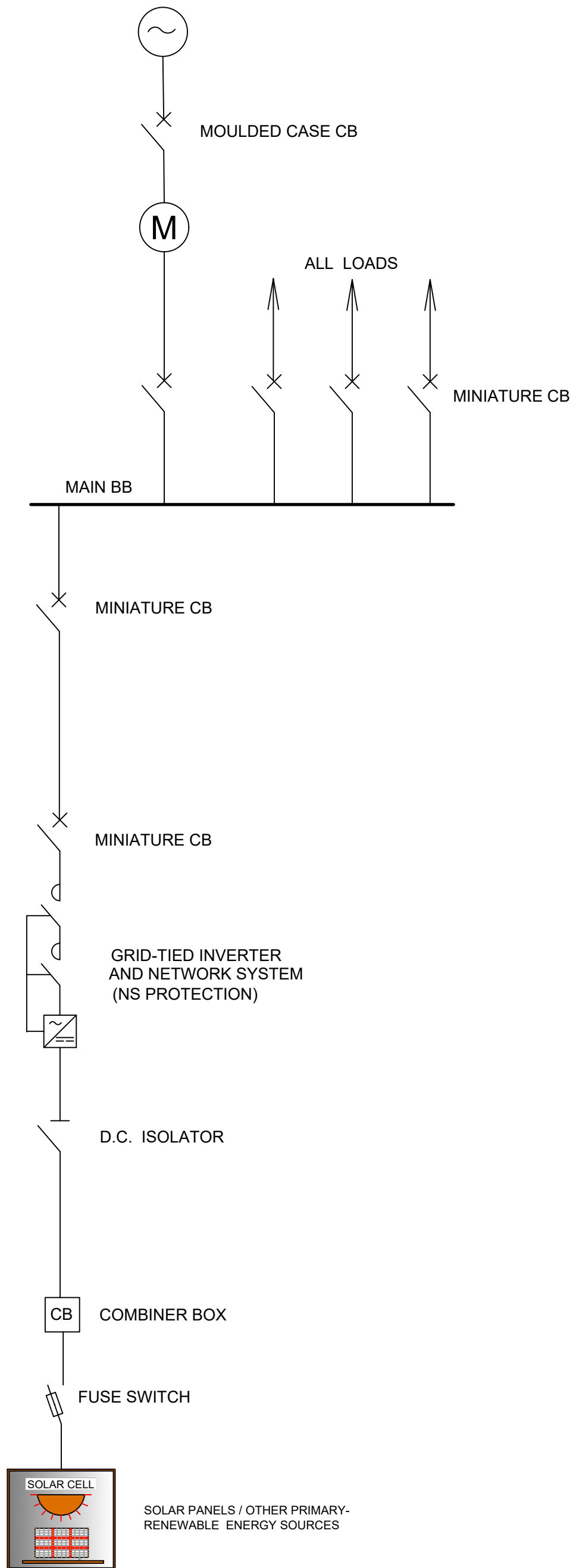
No.	AMENDMENTS	DATE
1	DRAWING NUMBER CHANGED	PT.M 10/11/2019
2	DRAWING REVIEWED	PT.M 05/05/2021
3	XXXXXXXXXX	X.XX 00/00/00
4	XXXXXXXXXX	X.XX 00/00/00
5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00



ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

EMBEDDED GENERATION (SSEG) : LEGEND		
SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	1



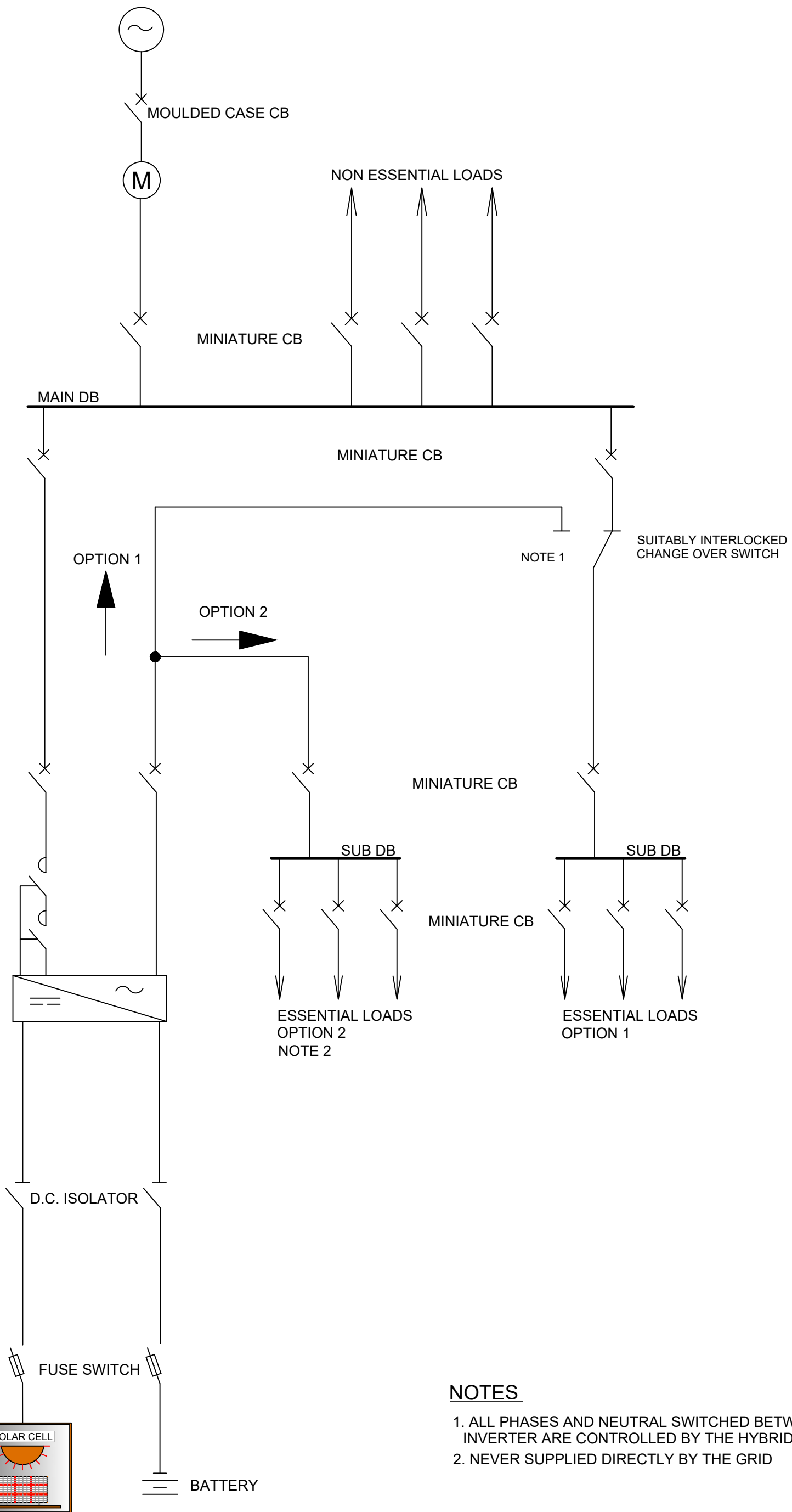
No.	AMENDMENTS	DATE
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2	DRAWING REVIEWED	PT.M 05/05/2021
3	XXXXXXXXXX	X.XX 00/00/00
4	XXXXXXXXXX	X.XX 00/00/00
5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00



ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

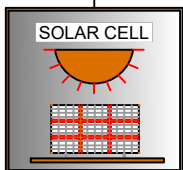
TYPICAL SSEG : GRID-TIED WITH NO STORAGE		
SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	2



NOTES

- 1. ALL PHASES AND NEUTRAL SWITCHED BETWEEN GRID AND INVERTER ARE CONTROLLED BY THE HYBRID INVERTER
- 2. NEVER SUPPLIED DIRECTLY BY THE GRID

SOLAR PANELS / OTHER PRIMARY-RENEWABLE ENERGY SOURCES



BATTERY

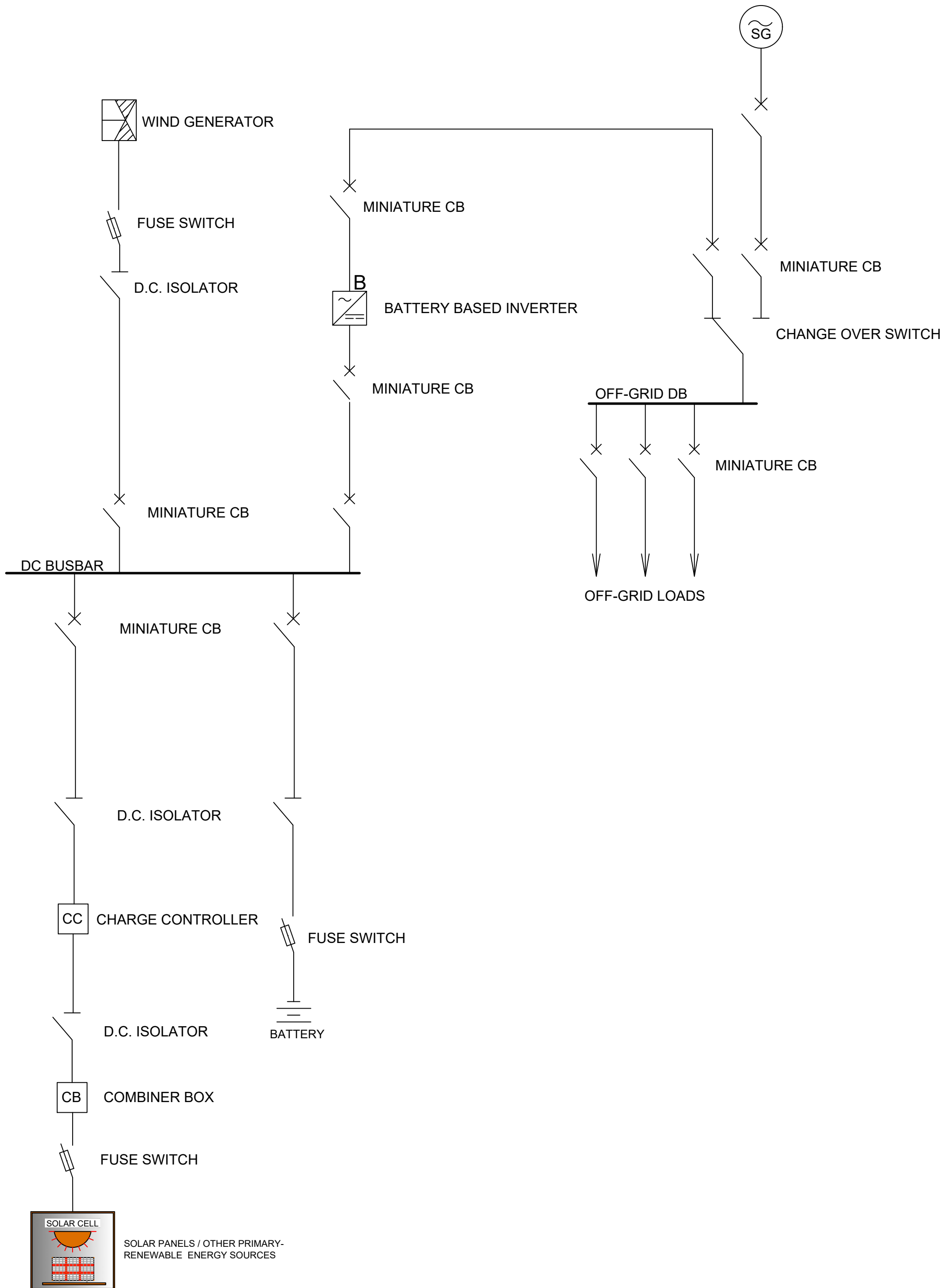
No.	AMENDMENTS	DATE
1	DRAWING NUMBER CHANGED	PT.M 10/11/2019
2	DRAWING REVIEWED	PT.M 05/05/2021
3	XXXXXXXXXX	X.XX 00/00/00
4	XXXXXXXXXX	X.XX 00/00/00
5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00



ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

TYPICAL SSEG : GRID-TIED WITH STORAGE		
SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	3



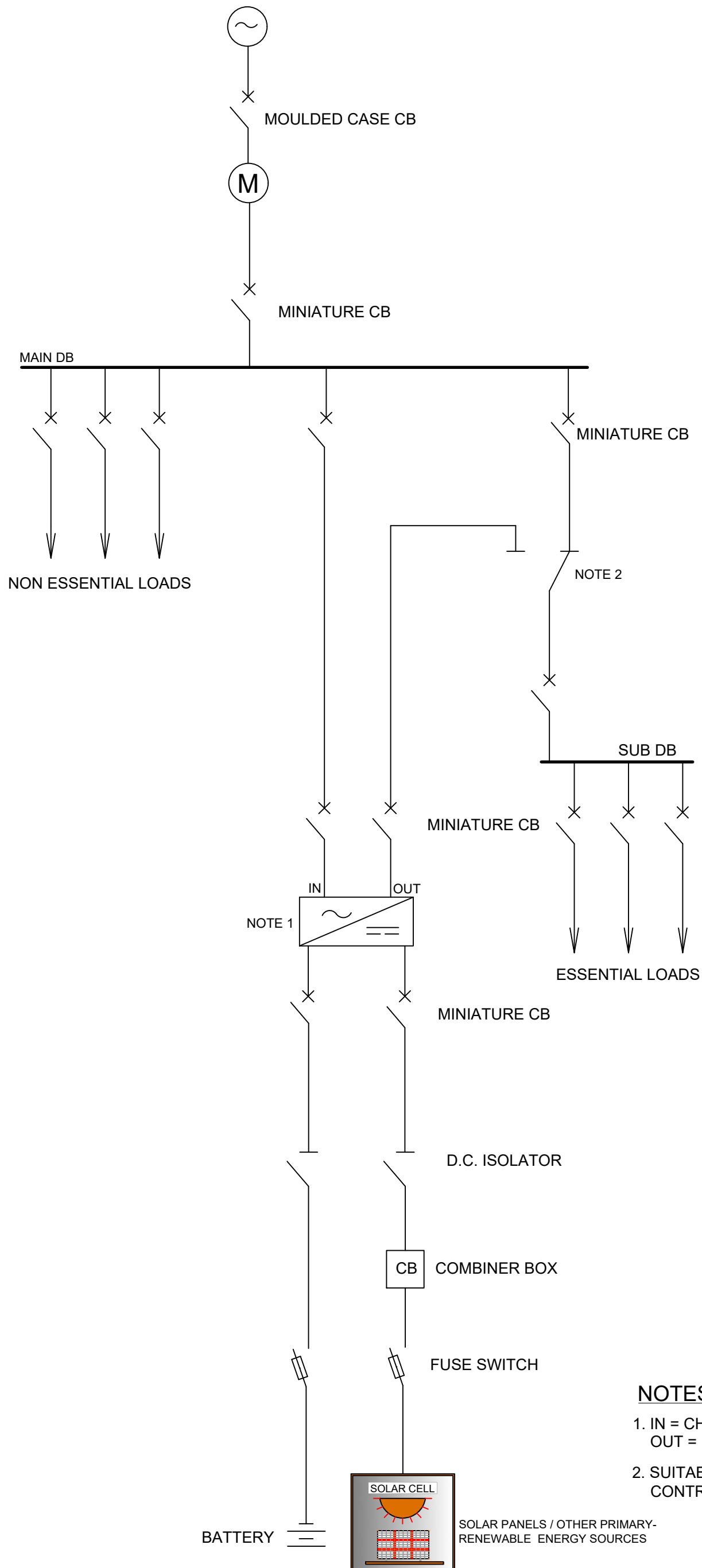
No.	AMENDMENTS	DATE
1	DRAWING NUMBER CHANGED	PT.M 10/11/2019
2	DRAWING REVIEWED	PT.M 05/05/2021
3	XXXXXXXXXX	X.XX 00/00/00
4	XXXXXXXXXX	X.XX 00/00/00
5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00



ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

TYPICAL SSEG : OFF GRID		
SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	4



NOTES

- 1. IN = CHARGER / RECTIFIER MODE
OUT = INVERTER MODE
- 2. SUITABLE INTERLOCKED CHANGE -OVER SWITCH CONTROLLED BY PASSIVE STANDBY UPS

BATTERY

SOLAR PANELS / OTHER PRIMARY-RENEWABLE ENERGY SOURCES

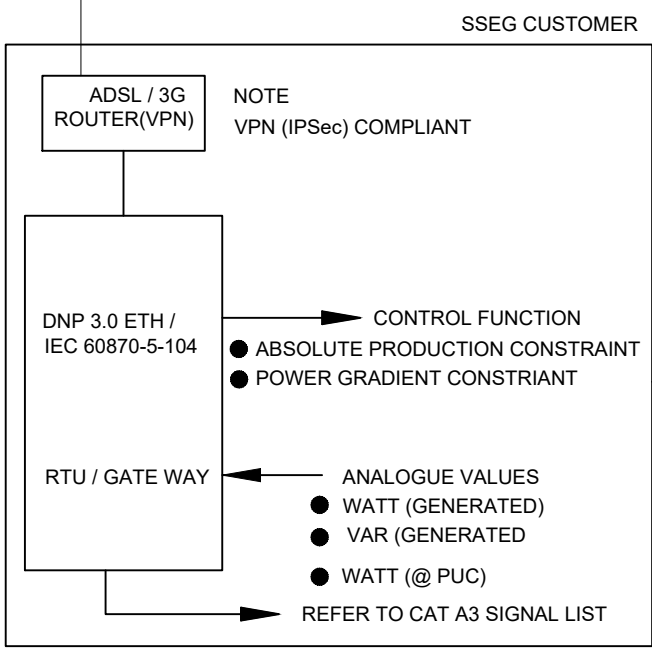
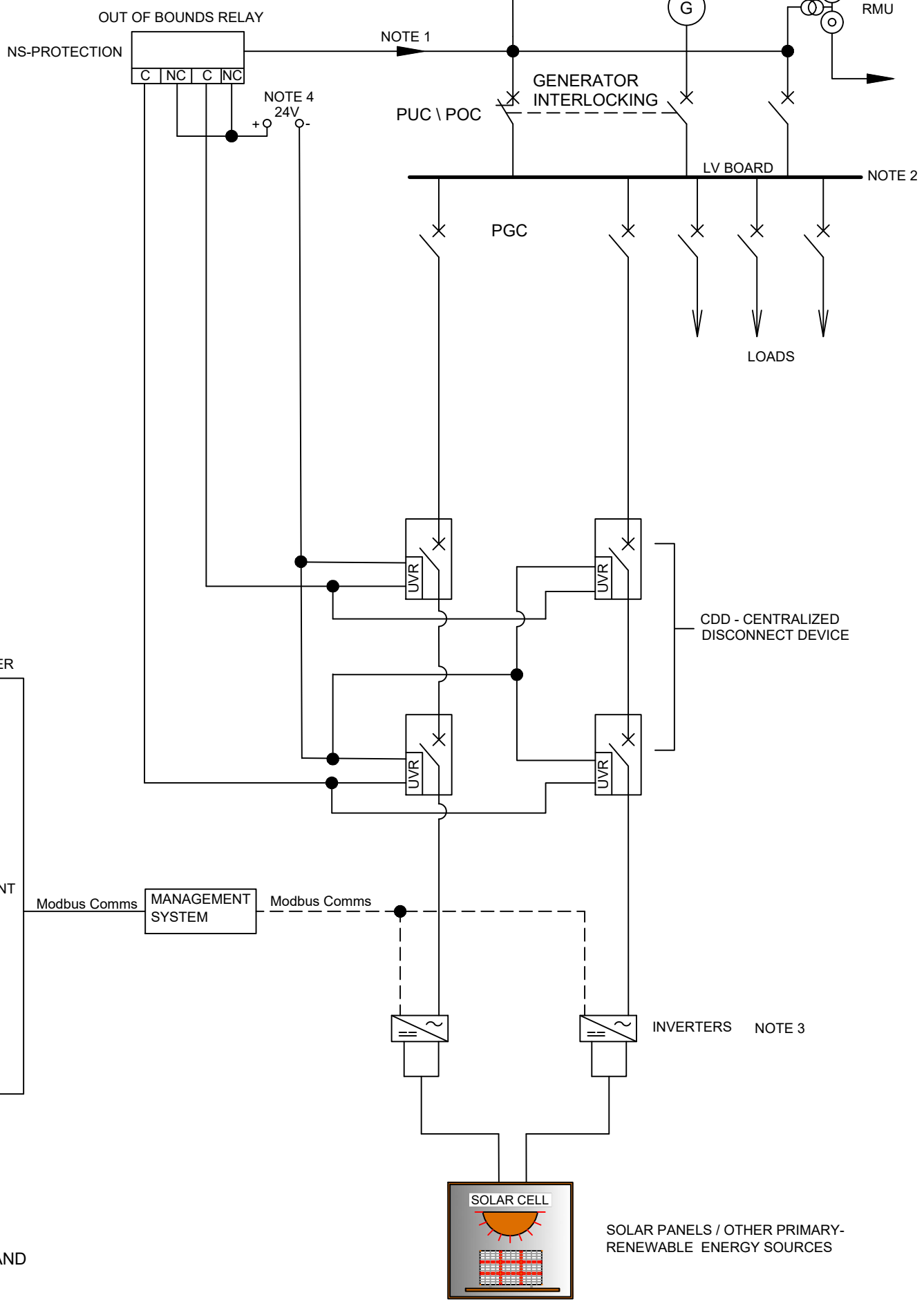
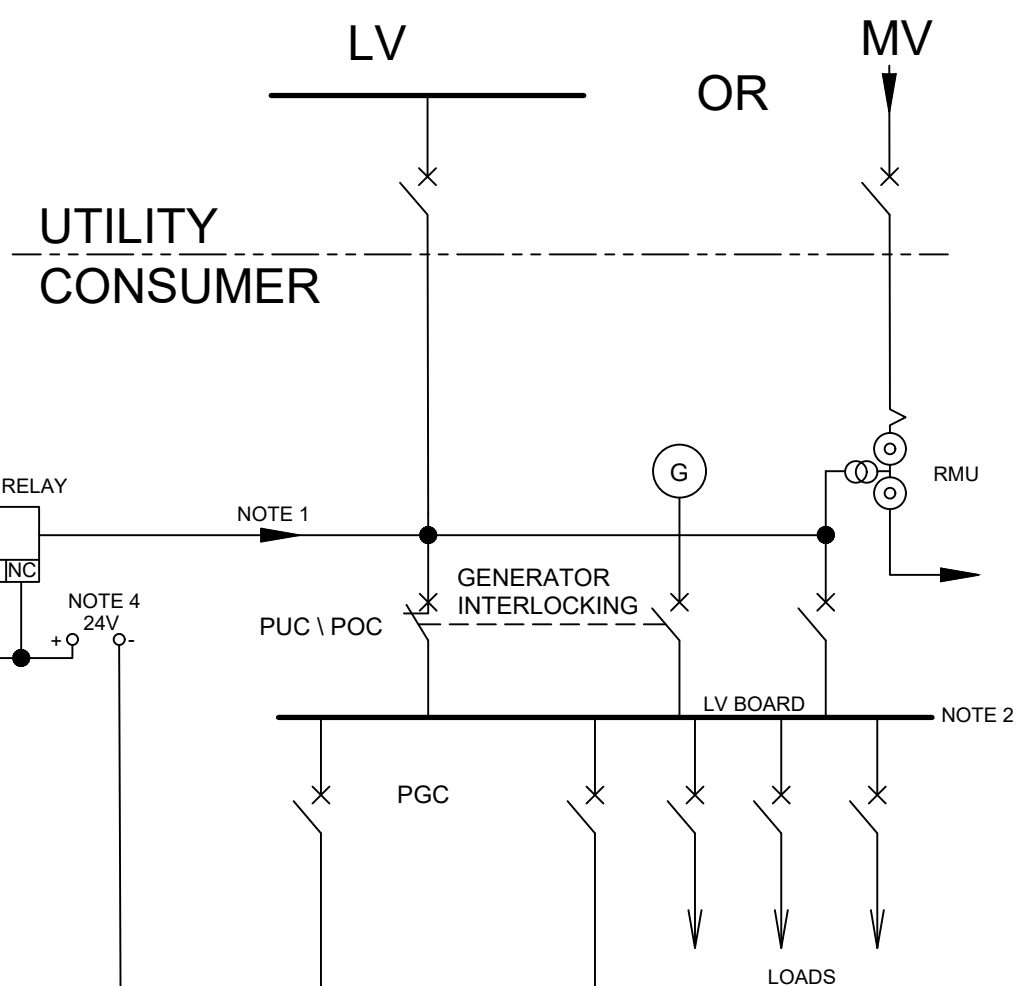
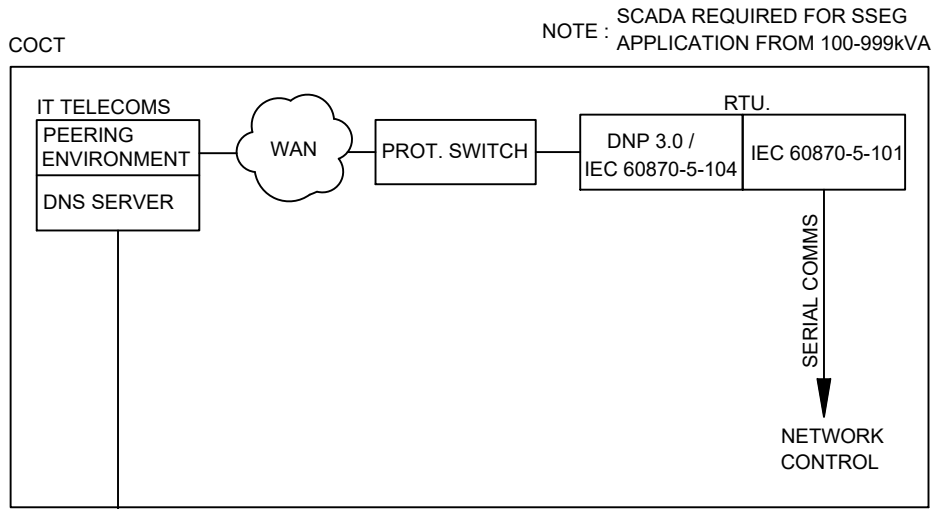
No.	AMENDMENTS	DATE
1	DRAWING NUMBER CHANGED	PT.M 10/11/2019
2	DRAWING REVIEWED	PT.M 05/05/2021
3	DRAWING REVIEWED	PT.M 28/10/2021
4	XXXXXXXXXX	X.XX 00/00/00
5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00



ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

TYPICAL SSEG : PASSIVE STANDBY UPS UTILIZED AS STANDBY HYBRID SSEG (SHOWN IN CHARGER/RECTIFIER MODE)		
SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	5



ABBREVIATIONS

VNP - VIRTUAL PRIVATE NETWORK

UVR - UNDER VOLTAGE RELEASE

RTU - REMOTE TERMINAL UNIT

- NOTES**
1. VOLTAGE SENSING TAKING CLOSEST TO THE PUC AND UPSTREAM OF ANY STANDBY SUPPLY GENERATOR CHANGE-OVER SWITCH .
 2. COULD BE MANY DBs SUPPLIED INDIVIDUALLY FROM PUC OR FROM MV RING FED TRANSFORMERS CONNECTED TO THE PUC
 3. COULD BE DECENTRALIZED LOCATIONS .
 4. APPROPRIATE Vdc, ELSE BACK-UP AC .

No.	AMENDMENTS	DATE
1	DRAWING NUMBER CHANGED	PT.M 10/11/2019
2	RING MAIN UNIT ADDED	PT.M 10/02/2021
3	DRAWING REVIEWED	PT.M 05/05/2021
4	XXXXXXXXXX	X.XX 00/00/00
5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00



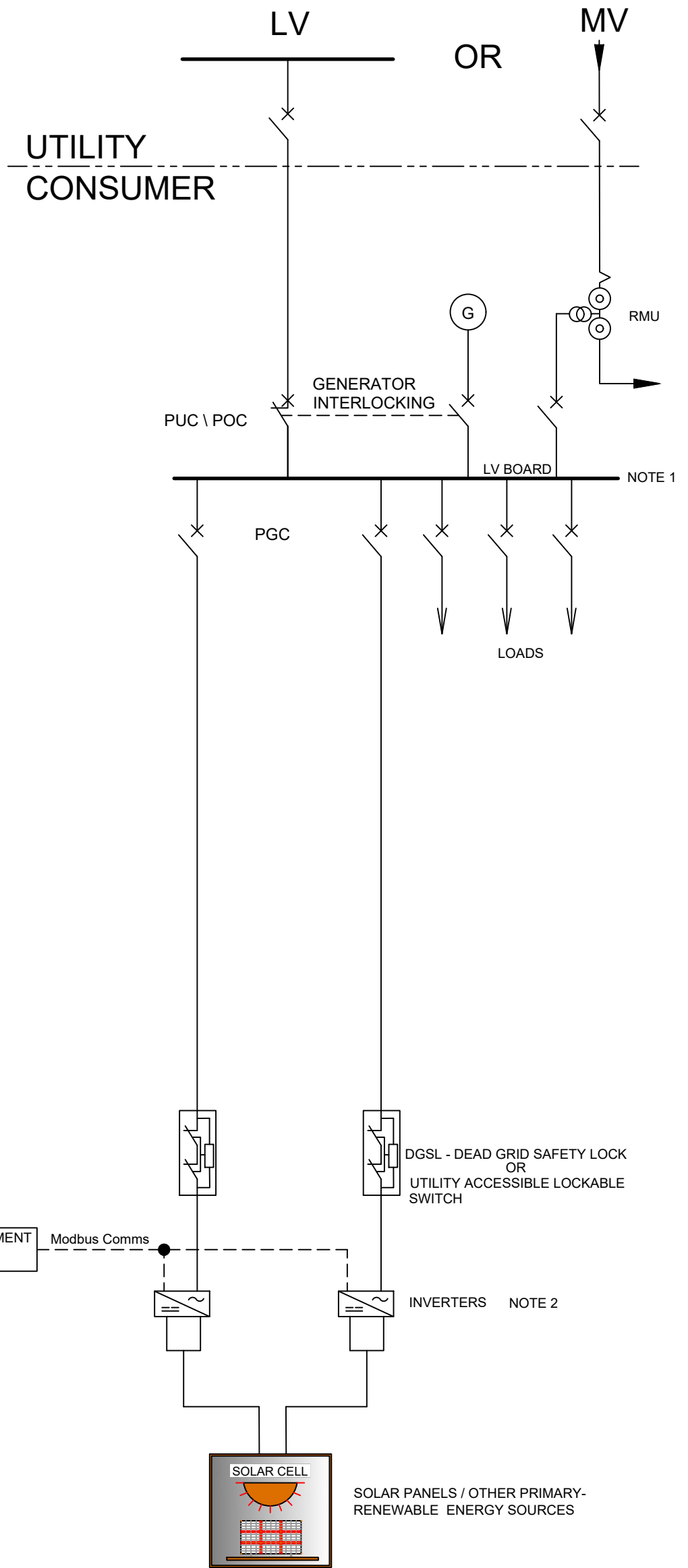
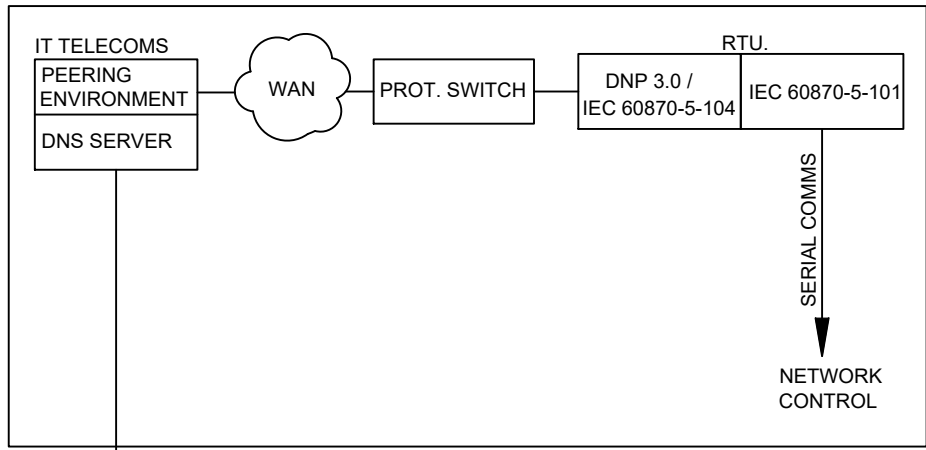
ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

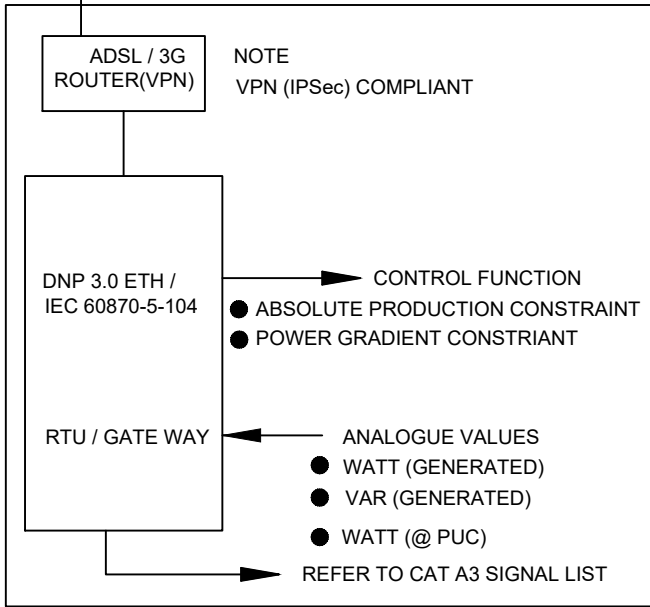
CATEGORY A2 & A3 - LV OR MV CONNECTED WITH CDD		
SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	6

NOTE : SCADA REQUIRED FOR SSEG APPLICATION FROM 100-999kVA

COCT



SSEG CUSTOMER



ABBREVIATIONS

VNP - VIRTUAL PRIVATE NETWORK
RTU - REMOTE TERMINAL UNIT

NOTES

1. COULD BE MANY DBs SUPPLIED INDIVIDUALLY FROM THE PUC OR FROM MV RING FED TRANSFORMERS CONNECTED TO THE PUC
2. COULD BE DECENTRALIZED LOCATIONS .

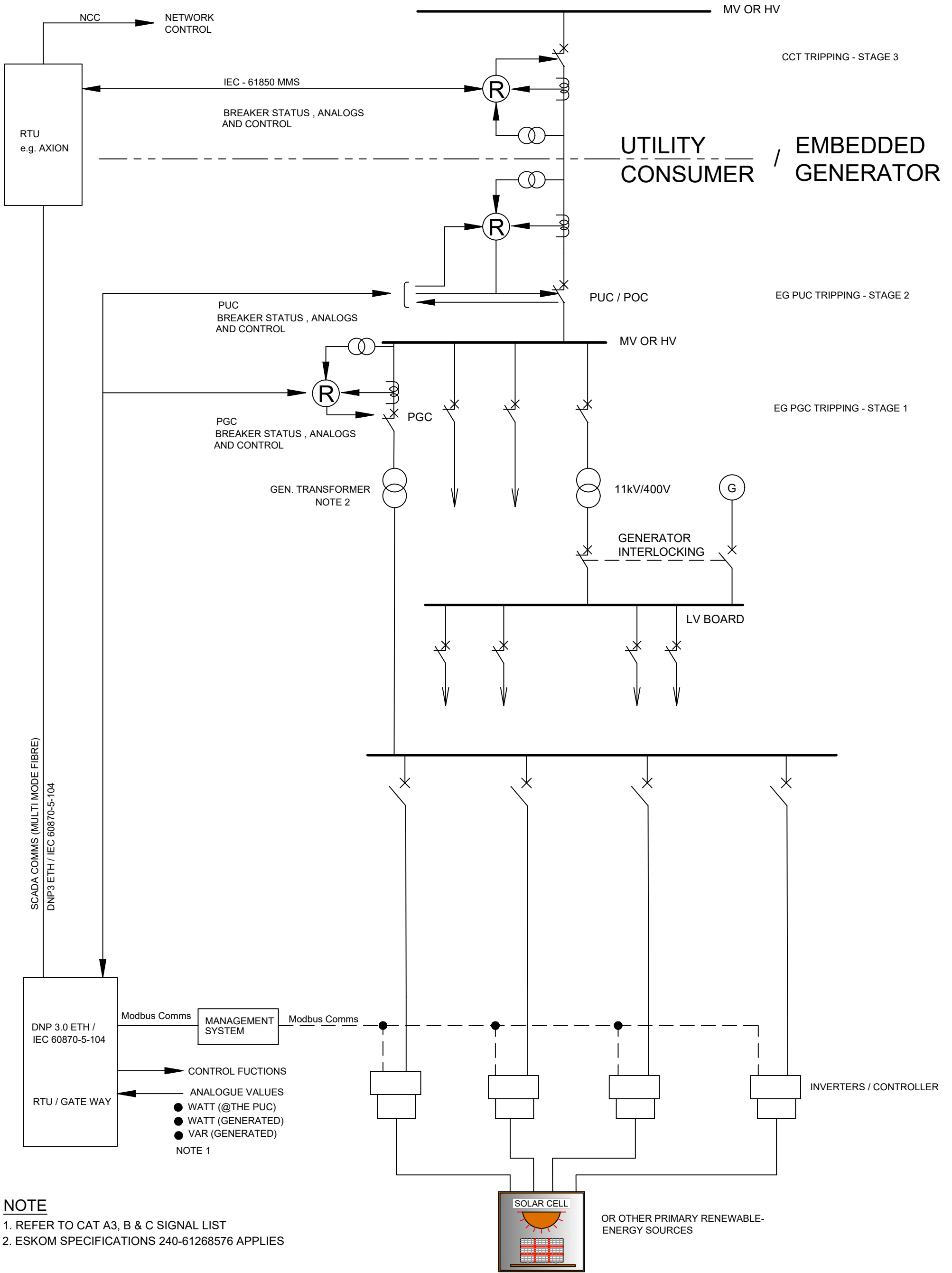
No.	AMENDMENTS	DATE
1	DRAWING NUMBER CHANGED	PT.M 10/11/2019
2	RING MAIN UNIT ADDED	PT.M 10/02/2021
3	DRAWING REVISED	PT.M 12/02/2021
4	XXXXXXXXXX	X.XX 00/00/00
5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00



ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

CATEGORY A2 & A3 - LV OR MV CONNECTED WITH DGSL		
SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	7



NOTE

- REFER TO CAT A3, B & C SIGNAL LIST
- ESKOM SPECIFICATIONS 240-61268576 APPLIES

NOTE 1

No.	AMENDMENTS	DATE
1	DRAWING NUMBER CHANGED	PT.M 10/11/2020
2	DRAWING REVIEWED	PT.M 04/02/2021
3	DRAWING REVIEWED	PT.M 12/02/2021
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5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00

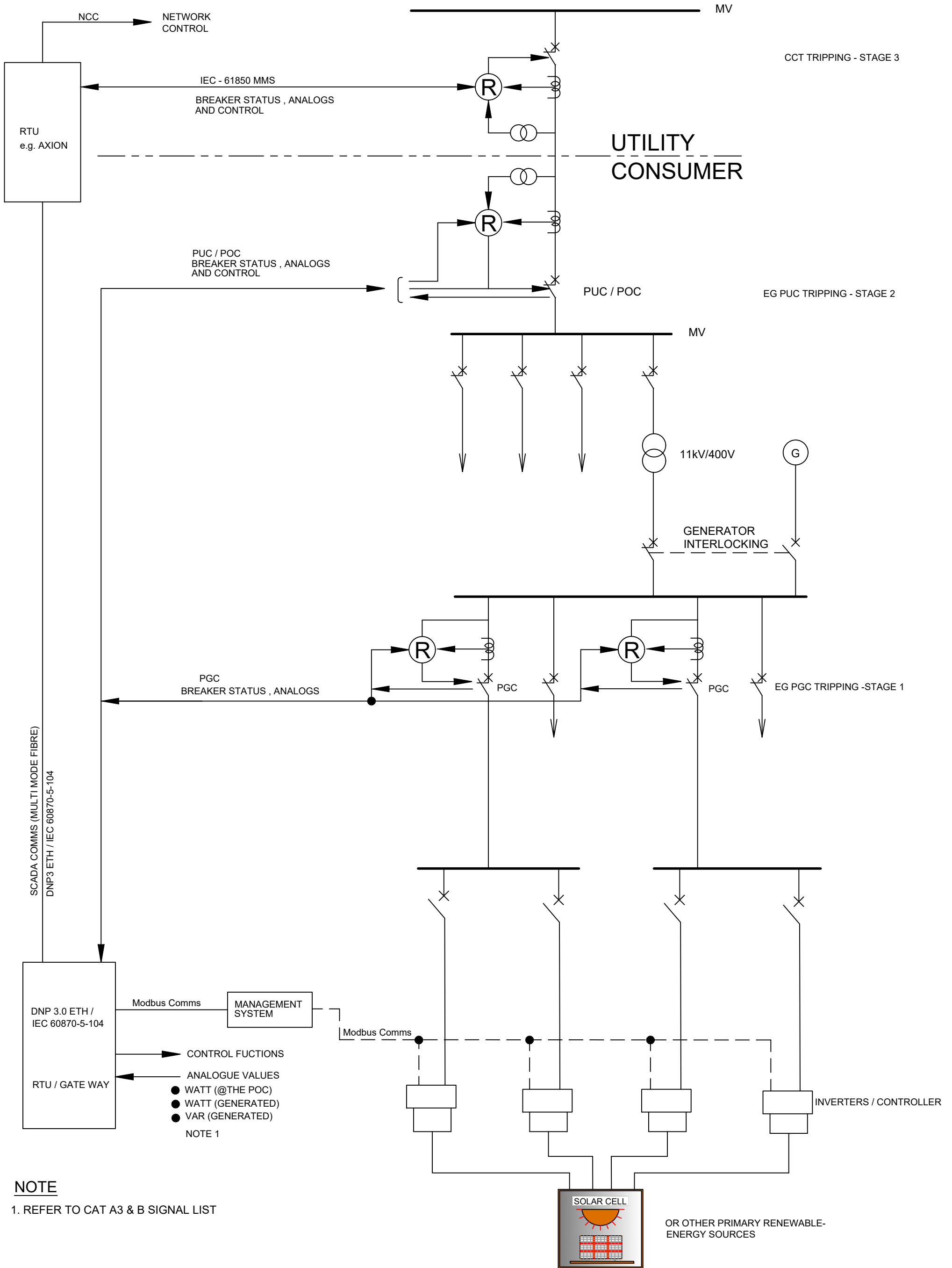


ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

MEDIUM AND HIGH VOLTAGE CONNECTION

SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	8



NOTE
1. REFER TO CAT A3 & B SIGNAL LIST

No.	AMENDMENTS	DATE
1	DRAWING NUMBER CHANGED	PT.M 10/11/2019
2	DRAWING REVIEWED	PT.M 05/02/2021
3	DRAWING REVIEWED	PT.M 12/02/2021
4	XXXXXXXXXX	X.XX 00/00/00
5	XXXXXXXXXX	X.XX 00/00/00
6	XXXXXXXXXX	X.XX 00/00/00



ENERGY GRID DIAGRAMS

COMPILED:	PT MOTEBU
CHECKED:	R. DE KOCK
APPROVED:	A VAN ZYL

CATEGORY A3 & B - MV CONNECTION		
SHEET SIZE	DRAWING No.	SHEET
A3	SK5276	9