BC HYDRO

T&D SYSTEM OPERATIONS

ATTACHMENT 4 OF SYSTEM OPERATING ORDER 7T-13

NORTH OF KLY 500 KV SYSTEM OPERATION

Supersedes SOO 7T-13 Attachment 4 - Peace Gen Shed Tables dated 03 March 2022

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Highlight Denotes Revision

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1.0 General System Information and Requirements

For the general Peace regional area requirements, there are 3 paths from GMS to Peace regional area which consist of:

- 230 kV series path (consisting of 2L308, 2L309, and 2L312)
- 1L361 and 1L349 series path
- 1L364 path

The operational requirements in this System Operating Order (SOO) are based on the following conditions:

- The 230 kV series path in service, and
- One of the two 138 kV paths may be out of service.

If any of (5L1, 5L2, 5L3, 5L4 and 5L7) AND (any one of the three circuits 2L308, 2L309, and 2L312 OR if both 138 kV paths) are out-of-service, the Operators need to use RTCA to confirm sufficient shedding after a TSA-PM template for OO7T35 is applied. Please consult Operations Planning for further operational instructions or guidance.

Notes applicable to all tables in Attachment 4:

1. The GMS/PCN/DKW/QTY/MKL post-contingency gen shed requirements:

- Post-contingency gen shed requirements will be adjusted based on outages in ILM 500 kV subsystem. See Section 5.3.3 of the main body for detailed adjustments.
- Are based on two GMS loading resistors being available. See Section 5.3.4 of the main body for guidelines on the required adjustments.
- Are based on all PSS in-service. See Section 5.3.5 of the main body for required adjustments.
- Are based on 14.2 kV generator terminal voltages. See Section 5.3.6 of the main body for required adjustments.

TSA-PM has implemented all of the adjustments in the same order as above.

2. See Section 4.1.1 of the main body for general procedure for determining output reduction for line switching.

1.1 Line Ratings

Refer to System Operating Order (SOO) 5T-10 for the source of the Amp rating. The MW rating is calculated from the corresponding Amp rating. The MW rating is used in the generation shedding tables in this Attachment and implemented in TSA-PM.

	Veriekle Nerre Head in	Conductor Contin	uous Rating (Amp)	CorrespondingCo (MW = 1.732 * Rating	ntinuous MW Rating in KA * 525 kV * 0.99 pf)
500 kV Circuit	Generation Shedding Tables	Summer (Based on 30° C ambient)	Winter (Based on 10° C ambient)	Summer (Based on 30° C ambient)	Winter (Based on 10° C ambient)
5L1	5L1_Norm_Rating	2150	2300 (KDY limit)	1935	2070 (KDY limit)
5L1_ BypassKDY	5L1_BypassKDY_Norm_Rating	2150	3000 (CT limit)	1935	2701 (CT limit)
5L2	5L2_Norm_Rating	2150	2300 (KDY limit)	1935	2070 (KDY limit)
5L2_ BypassKDY	5L2_BypassKDY_Norm_Rating	2150	3000 (CT limit)	1935	2701 (CT limit)
5L3	5L3_Norm_Rating	2200	3000 (CT limit)	1980	2701 (CT limit)
5L4	5L4_Norm_Rating	2658	3000 (CT limit)	2392	2701 (CT limit)
5L7	5L7_Norm_Rating	2300(KDY limit)	2300(KDY limit)	2070 (KDY limit)	2070 (KDY limit)
5L7_ BypassKDY	5L7_BypassKDY_Norm_Rating	2500	3000 (CT limit)	2251	2701 (CT limit)
5L11	5L11_Norm_Rating	1950(MLS limit)	1950(MLS limit)	1755(MLS limit)	1755(MLS limit)
5L11_ BypassMLS	5L11_BypassMLS_Norm_Rating	2500	3000 (CT limit)	2251	2701 (CT limit)
5L12	5L12_Norm_Rating	1950(MLS limit)	1950(MLS limit)	1755(MLS limit)	1755(MLS limit)
5L12_ BypassMLS	5L12_ BypassMLS 5L12_BypassMLS_Norm_Rating		3000 (CT limit)	2251	2701 (CT limit)
5L13	5L13_Norm_Rating	1950(MLS limit)	1950(MLS limit)	1755(MLS limit)	1755(MLS limit)
5L13_ BypassMLS	5L13_BypassMLS_Norm_Rating	2500 (CT limit)	2500 (CT limit)	2251 (CT limit)	2251 (CT limit)

1.1.1 <u>Continuous Ratings</u>

	Veriekle Nerre Heedin		Conductor Continuous Rating (Amp)		Corresponding Continuous MW Rating (MW = 1.732 * Rating in KA * 235 kV * 0.95 pf)	
230 kV Circuit	Generation Shedding Tables	Summer (Based on 30° C ambient)	Winter (Based on 10° C ambient)	Summer (Based on 30° C ambient)	Winter (Based on 10° C ambient)	
2L96	2L96_Norm_Rating	800 (CT limit)	800 (CT limit)	310 (CT limit)	310 (CT limit)	

1.1.2 Overload Ratings

	Verieble Name Lload in	Conductor Over-Rating (Amp)		Corresponding MW Over-Rating (MW = 1.732 * Rating in KA * 500 kV * 0.99 pf)	
500 kV Circuit	Generation Shedding Tables	Summer (Based on 30° C ambient)	Winter (Based on 10° C ambient)	Summer (Based on 30° C ambient)	Winter (Based on 10° C ambient)
5L1	5L1_Over_Rating	2500	3000 (CT limit)	2143	2572 (CT limit)
5L1_ BypassKDY	5L1_BypassKDY_Over_Rating	2500	3000 (CT limit)	2143	2572 (CT limit)
5L2	5L2_ Over _Rating	2500	3000 (CT limit)	2143	2572 (CT limit)
5L2_ BypassKDY	5L25L2_BypassKDY_Over_Rating		3000 (CT limit)	2143	2572 (CT limit)
5L3	5L3_ Over _Rating	2756	3000 (CT limit)	2362	2572 (CT limit)
5L4	5L4_Over_Rating	3000 (CT limit)	3000 (CT limit)	2572 (CT limit)	2572 (CT limit)
5L7	5L7 5L7_Over_Rating		3000 (CT limit)	2143	2572 (CT limit)
5L7_ BypassKDY	5L7_BypassKDY_Over_Rating	2500	3000 (CT limit)	2143	2572 (CT limit)

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5L11	5L11_Over_Rating	2500	2633 (MLS limit)	2143	2257 (MLS limit)
5L11_ BypassMLS 5L11_BypassMLS_Over_Rating		2500	3000 (CT limit)	2143	2572 (CT limit)
5L12	5L12_Over_Rating	2500	2633 (MLS limit)	2143	2257 (MLS limit)
5L12_ BypassMLS	5L12_BypassMLS_Over_Rating	2500	3000 (CT limit)	2143	2572 (CT limit)
5L13	5L13_Over_Rating	2500 (CT limit)	2500 (CT limit)	2143 (CT limit)	2143 (CT limit)
5L13_ BypassMLS	5L13_BypassMLS_Over_Rating	2500 (CT limit)	2500 (CT limit)	2143 (CT limit)	2143 (CT limit)

Ĩ		Conductor Over-Rating (Amp)		Corresponding MW Over-Rating (MW = 1.732 * Rating in KA * 230 kV * 0.95 pf)		
	230 kV Circuit	Generation Shedding Tables	Summer (Based on 30° C ambient)	Winter (Based on 10° C ambient)	Summer (Based on 30° C ambient)	Winter (Based on 10° C ambient)
ĺ	2L96	2L96_Over_Rating	800 (CT limit)	800 (CT limit)	303 (CT limit)	303 (CT limit)

2.0 <u>General Pre-outage Restrictions for Contingencies</u>

- GMS
 - The following GMS unit output restrictions are applicable to all the tables in Attachment 4:
 - GMS G1, G2, G3, and G4, under system normal configuration, can operate up to 275 MW each. However, if the plant operator(s) observe any associated unit circuit breakers or isolated-phase bus overloaded, then the corresponding generator output shall be reduced until the overload is gone.
 - ✓ GMS G5 shall not exceed 275
 - ✓ GMS G6, G7, and G8 shall not exceed 310 MW each
 - ✓ GMS G9 and G10 shall not exceed 305 MW each.
- Refer to Section 5.5.1, Section 5.5.2, and Attachment 1 of SOO 7T-13 text file for GMS/PCN minimal units on line pre-contingency requirements.

3.0 <u>Generation Shedding Adjustments and Post Gen-Shed Requirements</u>

- Refer to Section 5.5.1, Section 5.5.2, and Attachment 1 of SOO 7T-13 text file for GMS/PCN minimal units on line post gen-shed requirements.
- Definition for P1, P2, and P3 used in generation shedding requirements in Tables of this Attachment 4:
 - ✓ If KMO and/or FKR/VOL/MCY are electrically connected to WSN, then
 - P1 = 2L103 KIT
 P2 = 2L102 BQN

Otherwise,

- > No gen shed required at KMO and/or FKR/MCY/VOL
- ✓ If 5L3 is out of service, then
 > P3 = (5L1 + 5L2) GMS,
 Otherwise,
 > P2 = (5L1 + 5L2) CMS + 5L2

P3 = (5L1 + 5L2) GMS + 5L7 KDS

- Generation shedding sequence for the Combined Multi-phase Contingency (5L1/2/3/4/7/11/12) is as following:
 - ✓ Gen shed requirements for KMO/FKR/VOL/MCY
 - ✓ Gen shed requirements at MKL/DKW/QTY/PCN
 - ➢ for 5L4 MP with 5L3 OOS, or 5L7 OOS
 - ➢ for 5L3 MP, and 5L7 MP with 5L4 OOS

Under these two conditions, gen shed adjustments required at MKL/DKW/QTY/GMS/PCN (refer to Section 5.3 of SOO 7T-13) will not be applied until after subtracting gen shed requirement at MKL/DKW/QTY/PCN.

- ✓ Gen shed requirements for MKL/DKW/QTY
- ✓ Gen shed requirement at GMS for 5L4 MP
- ✓ Gen shed requirements at GMS/PCN for 5L1/2/3/7/11/12 MPs
- Refer to Section 5.3.4 for guidelines for additional gen shed requirements for GMS loading resistors OOS.
- Refer to Section 5.3.5 for additional gen shed requirements for PSS OOS.
- Refer to Section 5.3.6 for additional gen shed requirements for reduced GMS generator terminal voltages (< 14.2 kV).
- For any contingency on 500 kV transmission lines between GMS to WSN: If TSA alarms "VIOLATION_5LXX_NORM_RATING" post-contingency, the BC Hydro Control Centre staff shall take the following actions to bring the flow on 5LXX below its continuous rating within 30 minutes:
 - Reduce GMS or PCN or other generation in Peace area.
- For any contingency on 500 kV transmission lines between WSN to KLY: If TSA alarms "VIOLATION_5LXX_NORM_RATING" post-contingency, the BC Hydro Control Centre staff shall take the following actions to bring the flow on 5LXX below its continuous rating within 30 minutes:
 - Reduce GMS or PCN or other generation in Peace/North Coast area.

4.0 KMO and FKR/MCY/VOL Generation Shedding Application

Available gen-shed functions at KMO/FKR/MCY/VOL for GMS-KLY-ING 500 kV contingencies are listed below:

- Three signals from GMS to KIT to trip predetermined levels of KMO generation amount;
- Three signals from GMS to SKA to trip predetermined levels of FKR/MCY/VOL generation amount.

The signals from GMS to KIT for KMO gen-shedding and those from GMS to SKA for FKR/MCY/VOL gen-shedding, are independent of each other. If no gen-shedding required is an option, the possible combinations of gen shed level at KMO/FKR/MCY/VOL could be 16 (4X4). For example, Signal No.1 to KIT and Signal No.2 to SKA could be chosen for a specific contingency based on operational planning study results.

Currently, gen-shed at KMO has been set to three levels based on 2L103 flow, and gen-shed at FKR/MCY/VOL has been set to three levels based on 2L102 flow, as shown in the following two tables:

Gen-shed Level	Gen-shed Amount Calculation at KMO (MW)
1	2L103 KIT – 125
2	2L103 KIT – 70
3	2L103 KIT

Gen-shed Level	Gen-shed Amount Calculation at FKR/MCY/VOL (MW)
1	2L102 BQN - 220
2	2L102 BQN – 150
3	2L102 BQN - 80

Note: TSA-PM calculates the values in the above tables explicitly on each run of the application. However, arming is only applicable when determined by TSA-PM for the requirements of a topology for an applicable table in Section 5 of this Attachment.

Note: KMO Generation Shedding will be based on SOO 7T-30 Section 12.1.3 for shedding unit preferences.

5.0 <u>Outage Tables (Pre-outage and Shedding Requirements)</u>

5.1 System Normal Condition

Table 5.1.1 – All GMS/PCN - KLY 500 kV Circuits and Series Capacitor Banks In-Service

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

SLG or No Fault Opening 5.1 No generation shedding required SLG or No Fault Opening 5.3 No generation shedding required SLG or No Fault Opening 5.1 No generation shedding required SLT Gen shed at KMOU KWY. Level 1 (Transvert Stability). SLT Particle Stability.	CONTINGENCY		SHEDDING REQUIREMENTS
SLG or Ne Fault Opening SL2 No generation shedding required SL3 No generation shedding required		5L1	No generation shedding required
SLG or No Fault Opening SL3 No generation shedding required SL2 No generation shedding required		5L2	No generation shedding required
Suit Opening No Pault Opening SL4 No generation shedding required SL4 No generation adedding required SL1 No generation adedding required SL1 No generation adedding required SL1 No generation adedding required SL1 No generation adedding required SL1 No generation adedding required SL1 No generation adedding required SL1 No generation adedding required SL1 No generation adedding required SL1 No generation adedding required SL1 Mo generation adedding required Generation adding required Generation adding required SL1 Mo generation adding required Generation adding required Generation adding required SL2 MP Generation adding required Generation adding required Generation adding required SL4 Generation adding required Generation adding required Generation adding required Generation adding required SL4 Multi-phase SL4 MCNC Level 11 Transient Stability Generation adding required Generation adding requirements at MCNC MCY Clevel 11 Transient Stability Generation adding requirements at MCNC Heavel 11 Transien	SIGor	5L3	No generation shedding required
Bit A No generation shedding required Bit T No generation shedding required SL 12 No generation shedding required SL 14 No generation shedding required Gen shed at KKO Level 11 Transient Stability1 and Gen shed at KKO Level 11 Transient Stability1 Gen shed at KKO Level 11 Transient Stability1 Combined Multi- phase Contingency (SL 122)417/11/2 FI P I + 0.60 *P2 >= 300 MW, then Gen shed at KKO Level 11 Transient Stability1 Gen shed requirements at KMORKKVOL/KV: (SL 122)417/11/2 FI P I + 0.67 *P2 >= 300 MW, then Gen shed at KKO Level 11 Transient Stability1 SL 11MP Gen shed requirements at KMORKKVOL/KV: Gen shed at KKO Level 11 Transient Stability1 Gen shed at KKO Level 11 Transient Stability1 Gen shed at KKO Level 11 Transient Stability1 SL 11MP Gen shed at KKO Level 11 Transient Stability1 Gen shed at KKO Level 11 Transient Stability1 Gen shed at KKO Level 11 Transient Stability1 Gen shed at KKO Level 11 Transient Stability1 Gen shed at KKO Level 11 Transient Stability1 Gen shed at KKVO Level 11 Transient Stability1 Gen shed at K	No Fault Opening	5L7	No generation shedding required
Built No generation shedding required BL2 No generation shedding required BL2 DL MP Gen shed requirements at MUCPROVD/MCY: the information of the shed at MUC the shed at MUC the shed information of the shed at MUC the shed information of the shed at MUC the shed at MUC the shed		5L4	No generation shedding required
bit 12 No generative stat MMOP RAVOL MCY: In the statute of the statute		5L11	No generation shedding required
Definition Gen should a Dire 2 = 300 MW and P3 = 500 MW, then Gen should a KKR/ Use H (Transient Stability) and Gen should a KKR/ Use H (Transient Stability) and Sta MP Gen should a KKR/ Use H (Transient Stability) and Gen should a KKR/ Use H (Transient Stability) and Gen should a KKR/ Use H (Transient Stability) and Combined Multi- Gen should a KKR/ Use H (Transient Stability) and Gen should a KKR/ Use H (Transient Stability) and Gen should a KKR/ Use H (Transient Stability) and Gen should a KKR/ Use H (Transient Stability) and Gen should a KKR/ Use H (Transient Stability) and Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Sta MP Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ Use H (Transient Stability) Gen should a KKR/ USE KWR/ Trip - 600 - armed gen-shoul amount at KMO - 0.97 * armed gen-should amount at KKNO - 0.97 * armed gen-should amount at KMO - 0.97 * armed gen-should amount at KKNO - 0.97 * armed gen-should amount at KKNO - 0			No generation shedding required
Bit Shed at KKVD: Level 1 (Transient Stability) Series 25 (LMP) rhits table Stable 22 MP Same as 5(LMP) rhits table Gen shed at KMC: Level 1 (Transient Stability) and Gen shed at KMC) Level 1 (Transient Stability) Stable 22 MP Same as 5(LMP) rhits table Gen shed at KMC: Level 1 (Transient Stability) Gen shed at KRX/CMCY: Level 1 (Transient Stability) Gen shed at KRX/CMCY: Level 1 (Transient Stability) Mith egrates gen shed requirement Stable 22 MP Gen shed requirements at KMOPKRVC/LMCY: If P1 + 0.60 *P2 >= 300 MW and P3 >= 300 MW rhen Gen shed at KRX/CMCY/LMCY: Level 1 (Transient Stability) Gen shed at KMOP Level 1 (Transient Stability)		SETIME	If $P1 + 0.60 \times P2 >= 300 \text{ MW}$ and $P3 >= 600 \text{ MW}$ then
Set PM Cen shed at FKRV02/MCY: Level 1 [Transient Stability] 9:2 PM Same as 5:1 MP In this table 9:3 MP Gen shed requirements at KM07:KRV02/MCY: 18 F1 = 0.60 *P2 > 30 MW, then Gen shed at KKRV02/MCY: Level 1 [Transient Stability] and Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 2 Combined Multi- phase Contingency (51 F12/3/H7111/2) Gen shed requirements at KM07:KRV02/MCY: If P1 = 0.60 *P2 > 30 MW, then Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 2 Gen shed requirements at KM07:KRV02/MCY: If P1 = 0.67 *P2 > 40 MV FRW02/MCY: Level 1 [Transient Stability] Gen shed requirements at KM07:KRV02/MCY: If P1 = 0.17 *P3 > 600 MW of P1 = 0.57 *P2 + 0.07 *P3 > 500 MW, then Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 5 L11 MP Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 6 Gen shed at KKRV02/MCY: Level 1 [Transient Stability] Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 6 Gen shed at KKRV02/MCY: Level 1 [Transient Stability] Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 6 Gen shed at KKRV02/MCY: Level 1 [Transient Stability] Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 6 Gen shed at KKRV02/MCY: Level 1 [Transient Stability] Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 6 Gen shed at KKRV02/MCY: Level 1 [Transient Stability] Gen shed at KKRV02/MCY: Level 1 [Transient Stability] 6 Gen shed at KKRV02/MCY: Level 1 [Transient Stab			Gen shed at KMO: Level 1 [Transient Stability], and
Section Same as 61.1MP in this table 51.3MP Gen shed ar KMO/ERKOU/MCY: If P1 + 0.60 * P2 >= 300 MW, then Gen shed at KKR/VOL/MCY: Level 1 [Transient Stability]. and Gen shed at KKR/VOL/MCY: Level 1 [Transient Stability]. 61.7MP Gen shed at KKR/VOL/MCY: Level 1 [Transient Stability]. 61.7MP Gen shed at KKR/VOL/MCY: Level 1 [Transient Stability]. 61.7MP Gen shed at KKR/VOL/MCY: Level 1 [Transient Stability]. 61.723/4711/11 61.4MP Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]. 61.723/4711/11 61.4MP Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]. 61.723/4711/11 61.4MP Gen shed at MAO/ERKVOL/MCY: 61.723/4711/11 61.4MP Gen shed at MAO/ERKVOL/MCY: 61.71MP Gen shed at MAO/ERKVOL/MCY: FP + 0.07 * P3 >= 500 MW, then Gen shed at MAO/ERKVOL/MCY: Level 1 [Transient Stability] 61.71MP Gen shed at MKU/DKWQT frst and then GMS/PCN, the greater of: • 10.0* [(P1 + 0.97 * P2 + 0.07 * P3) = 500 - armed gen-shed amount at KMO - 0.97 * armed gen- shed and at KRVOL/MCY: Level 1 [Transient Stability] Multi-phase 51.11 MP No generation shedding required Contingency 51.12 No generation shedding required Gen shed at MKU/DKWQTY first, then at GMS/PCN: • 10.0* [(G1 + 52.2) GMS + 51.3 PCN - 51.2 Over Rating] M			Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
51.3 MP Gen shed requirements at KMO/FKRV/OL/MCY: If P1+0.60° P2 >= 00 MW, then Gen shed at KMO/CKRV/OL/MCY: Level 1 [Transient Stability] Combined Multi- phase Contingency [SL12/34/11112] SL7 MP Gen shed at KMO/CKRV/OL/MCY: If P1+0.60° P2 >= 300 MW, then Gen shed at KMO/CKRV/OL/MCY: Level 1 [Transient Stability] Mith Grades SL4 MP Gen shed at KMO/CKRV/OL/MCY: If P1+0.60° P2 >= 300 MW, then Gen shed at KMO/CKRV/OL/MCY: Level 1 [Transient Stability] SL12/34/11123 SL4 MP Gen shed at KMO/CKRV/OL/MCY: If P1+0.60° P2 >= 300 MW and P3 >= 1000 MW, then Gen shed at KMO/CKRV/OL/MCY: Level 1 [Transient Stability] SL11 MP Gen shed at KMO/CKRV/OL/MCY: If P1+0.50° P2 >= 001 P1 => 000 Amw of P1 +0.57° P2 + 0.07° P3 >= 500 MW, then Gen shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient Stability] Gen-shed at KMO/CLEVEL 11 [Transient S		5L2 MP	Same as 5L1 MP in this table
Combined Multi- phase Contingency (SL123/MT/11) 5L7 MP Gen shed at KMO/CLevel 1 [Transient Stability]. and Gen shed at KMO/CLevel 1 [Transient Stability]. Combined Multi- phase Contingency (SL123/MT/11) 5L4 MP Gen shed at KMO/CLevel 1 [Transient Stability]. SL123/MT/111 5L4 MP Gen shed at KMO/CLevel 1 [Transient Stability]. Subscription Gen shed at KMO/CLevel 1 [Transient Stability]. Gen shed at KMO/CLevel 1 [Transient Stability]. Gen shed at KMO/CLevel 1 [Transient Stability]. Subscription Gen shed at KMO/CLEVEL [Transient Stability]. Gen shed at KMO/CLEVEL [Transient Stability]. Multi-phase Subscription Subscription Gen shed at KMO/CLEVEL [Transient Stability]. Subscription Same as SL11MP in this table Gen shed at KMO/CLEVEL [Transient Stability]. Contingency SL61 MP		5L3 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
Combined Multi- Disse Configery (SL 1/23/W1711/2) Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] SL11MP Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: Level 1 [Transient Stability] Gen shed at FKRVOU/MCY: First and then GMS/PCN, the greater of: 0.00 * [[P1 + 0.67 * P2 + 0.01 * P3 - 600 mW at FKRVOU/MCY: [Transient Stability] Gen shed at MKUD/KWOY first and then GMS/PCN, the greater of: 0.00 * [[P1 + 0.67 * P2 + 0.07 * P3 - 600 mwn at KMO - 0.57 * armed gen- shed amount at FKRVOU/MCY: [Transient Stability] Multi-phase SL11MP in this table Contingeny SL11MP in this table </td <td></td> <td></td> <td>If P1 + 0.60 * P2 >= 300 MW, then</td>			If P1 + 0.60 * P2 >= 300 MW, then
Subject SLT MP Gen shed at FKRVOUMAV:Level 11 (Transient Stability) Combined Multi- phase Contingenty Gen shed at FKRVOUMAV:Level 11 (Transient Stability), and Gen shed at FKRVOUMAV:Level 11 (Transient Stability). SL1223/J1111 SL4 MP Gen shed at FKRVOUMAV:Level 11 (Transient Stability). Suprement Gen shed at FKRVOUMAV:Level 11 (Transient Stability). SL1223/J1111 Gen shed at FKRVOUMAV:Level 11 (Transient Stability). Suprement Gen shed at FKRVOUMAV:Level 11 (Transient Stability). Gen shed at FKRVOUMAV:Level 11 (Transient Stability). Gen shed at FKRVOUMAV:Level 11 (Transient Stability). Suprement Gen shed at FKRVOUMAV:Level 11 (Transient Stability). Gen shed at FKRVOUMAV:Level 11 (Transient Stability). Multi-phase SL11 MP Same as SL11 MP in this table Gen shed at KMUD:KWOUMY (Transient Stability). Suprement SL12 MP Same as SL11 MP in this table Gen shed at KKUD:Level 11 (Transient Stability). Multi-phase SL13 MP Same as SL11 MP in this table Gen shed at KKUD:Le			Gen shed at KMO: Level 1 [Iransient Stability], and
Built Provided Multi- Combined Multi- phase Contingency (SL 1223/47/11/12) Subsect Figure 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponents at KMO-Level 1 (Transient Stability). Subsect Provided Texponent Texponent Texponent Texponent Provided Texpone			Gen shed at FKR/VUL/MCY: Level 1 [Iransient Stability]
Combined Multi- phase Contingency Base Contingency Arm the groatest gen shed at FKRV/CU/KY: Level 11Transient Stability] SL4 MP Gen shed at FKRV/CU/KY: Level 11Transient Stability] Sum the groatest gen shed at FKRV/CU/KY: Level 11Transient Stability] SL4 MP Gen shed at FKRV/CU/KY: Level 11Transient Stability] Sum the groatest gen shed requirement SL1 MP Gen shed at FKRV/CU/KY: Level 11Transient Stability] and Gen shed at FKRV/CU/KY: Level 11Transient Stability] SL11 MP Gen shed at FKRV/CU/KY: Level 11Transient Stability] and Gen shed at FKRV/CU/KY: Level 11Transient Stability] Gen-shed at KMU/LKWIOTY first and then GMS/PCN: the greater of: • 10.0* (P1+ 0.97* P2 + 0.07* P3 - 600 – armed gen-shed amount at KMO – 0.97* armed gen- shed an FKRV/CU/MYCY (Transient Stability] and • 14.3* (P1+ 0.97* P2 + 0.07* P3 - 600 – armed gen-shed amount at KMO – 0.97* armed gen- shed an trunk FKRV/CU/MYCY (Transient Stability] Multi-phase SL12 MP Same as SL11 MP in this table Contingency SL12 MP Same as SL11 MP in this table SL12 MP Same as SL11 MP in this table Contingency SL12 If P1+ 0.57* P2 + 0.07* P3 > 600 MW then Gen shed at FKRV/CU/MYCY (Transient Stability) SL1_2 If P1+ 0.57* P2 + 0.07* P3 > 600 MW then Gen shed at KKW/CW/CWY first, then at GMS/PCN: Gontingency SL1.1 If P1 + 0.57* P2 + 0.07* P3 > 600 MW then Gen shed at KKW/CW/WY first, then at GMS/PCN:		SL/ MP	If $P1 + 0.60 \times P2 >= 300 \text{ MW}$ then
Ontse Contingency (St.12/3/3/17/11/2) Gen shed at ERR/VOL/MCY: Level 1 Transient Stability. gen shed gen shed gen shed Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. and Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. 5L11 MP Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. 6G shed at ERR/VOL/MCY: Level 1 Transient Stability]. Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. 6G shed at ERR/VOL/MCY: Level 1 Transient Stability]. Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. 6G shed at ERR/VOL/MCY: Level 1 Transient Stability]. Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. Gen shed at ERR/VOL/MCY: Transient Stability]. Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. Gen shed at ERR/VOL/MCY: Transient Stability]. Gen shed at ERR/VOL/MCY: Usel 1 Transient Stability]. Gen shed at ERR/VOL/MCY: Level 1 Transient Stability]. Multi-phase 5L12 MP Same as 5L11 MP in this table Contingency SL61 MP No generation shedding required Gen shed at KMO: Level 1 (Transient Stability] Gen shed at KMO: Level 1 (Transient Stability] Gen shed at KMO: Level 1 (Transient Stability] Gen shed at KMO: Level 1 (Transient Stability] Gen shed at KMO: Level 1 (Transient Stability] Gen shed a	Combined Multi-		Gen shed at KMO ⁻ Level 1 [Transient Stability] and
ict.1/23/47/11/12) SL4.MP Gen shed requirements at KMO/FKR/VQL/MCY: win the greatest en shed requirement SL4.MP Gen shed at KMO: Level 1 [Transient Stability]. and Gen shed at KKP/VQL/MCY: Level 1 [Transient Stability] SL11 MP Gen shed at KKP/VQL/MCY: Level 1 [Transient Stability]. SL11 MP Gen shed at KKP/VQL/MCY: Level 1 [Transient Stability]. Gen.shed at KKP/VQL/MCY: Level 1 [Transient Stability]. Gen-shed at KKO: Level 1 [Transient Stability]. Gen.shed at KKD: Level 1 [Transient Stability]. Gen-shed at MKLD/KW/QTY first and then GMS/PCN. Level 1 [Transient Stability]. Gen-shed at MKLD/KW/QTY first and then GMS/PCN. Gen-shed at MKLD/KW/QTY first and then GMS/PCN. Sum as SL11 MP Same as SL11 MP in this table Contingency SL12 MP Same as SL11 MP in this table Contingency SL12 If P1 + 0.63 * P2 + 300 MW AND P3 × 800 MW, then Gen shed at KKV/DL/MCY: Level 1 [Transient Stability] Gen shed at KKL/DKW/QTY first, then at GMS/PCN: Gen shed at KKV/DL/MCY: Level 1 [Transient Stability] Gen shed at KKL/DKW/QTY first, then at GMS/PCN: Gen shed at KKV/DL/MCY: Level 1 [Transient Stability] Gen shed at KKV/DL/MCY: Level 1 [Transient Stability] Gen shed at KKV/DL/MCY: Level 1 [Transient Stability] Gen shed at KKV/DL/MCY: Level 1 [Transient Stability] Gen shed at KKV/DL/MCY: Level 1 [Transient Stabi	phase Contingency		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Arm the greatest gen shed requirement If P1 + 0.60 * P2 >= 300 MW and P3 >= 1800 MW, then Gen shed at KMO: Level 1 (Transient Stability), and Gen shed at KMO: Level 1 (Transient Stability). 5L11 MP Gen shed at KMO: Level 1 (Transient Stability). 6Gen shed at KMO: Clovel 1 (Transient Stability). Multi-phase 5L12 MP Same as 5L11 MP in this table Contingency 5L61 MP 5L1.2 If P1 + 0.63 * P2 = 300 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 (Transient Stability). 6Gen shed at KMC: Level 1 ((5L1/2/3/4/7/11/12)	5L4 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
gen shed requirement Gen shed at KM0: Level 1 [Transient Stability] 5L11 MP Gen shed at KK0/CKV. Level 1 [Transient Stability] 6Gen shed at KK0/CKV. Level 1 [Transient Stability] Gen shed at KK0/CKV. Level 1 [Transient Stability] 6Gen shed at KK0/CKV. Gen shed at KK0/CKV. 11 MP Gen shed at KK0/CKV. 6Gen shed at KK0/CLevel 1 [Transient Stability] Gen shed at KK0/CKV 11 MP Gen shed at KK0/CKV/MCY 12 MP Same as 5L11 MP in this table 5L12 MP Same as 5L11 MP in this table 6Contingency SL11 MP 5L12 MP Same as 5L11 MP in this table Contingency SL11 MP 5L12 MP Same as 5L11 MP in this table Contingency SL11 MP 5L12 MP Same as 5L11 MP in this table Contingency SL11 MP 5L12 MP Same as 5L11 MP in this table Contingency SL12 MP SL12 MP Same as 5L11 MP in this table Gen shed at KKU2/KWQY first, then at GMS/PCN: 1.03* ([L1+5L2] GMS + 5L3 PCN - 5L3 Over Rating] MW SL12 If P1+ 0.63* P2 >= 300 MW AND P3 > 800 MW, then <td>Arm the greatest</td> <td></td> <td>If P1 + 0.60 * P2 >= 300 MW and P3 >= 1800 MW, then</td>	Arm the greatest		If P1 + 0.60 * P2 >= 300 MW and P3 >= 1800 MW, then
Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] SL11 MP Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KKD: Level 1 [Transient Stability] Gen shed at KKD: Level 1 [Transient Stability] Multi-phase SL12 MP Same as SL11 MP in this table Same as SL11 MP in this table Contingency SL61 MP Suger at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Multi-phase SL11 MP in this table Sulti MP Same as SL111 MP in this table Sulti MP Same as SL11 MP in this table Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at MKU/DKWQTV first, then at GMS/PCN: 1.03*[(SL1 + SL2)GMS + SL3 PCN - SL2 Over Rating	gen shed		Gen shed at KMO: Level 1 [Transient Stability], and
Built MP Gen shed requirements at XMOP-RXVOL/MCY: If IP 1+ 0.97* P2 + 0.10* P3 >= 600 MW or P1 + 0.57* P2 + 0.07* P3 >= 500 MW, then Gen shed at KRX/OU/MCY: Level 1 [Transient Stability] Gen shed at KRX/OU/MCY: Level 1 [Transient Stability] Gen-shed at KKL/DKWQTY first and then GMS/PCN, the greater of: • 10.0*[(P1 + 0.97* P2 + 0.1* P3) = 600 = armed gen-shed amount at KMO-0.97* armed gen- shed amount at FKRVOL/MCY[Transient Stability], and • 14.3*[(P1 + 0.57* P2 + 0.0* P3) = 500 = armed gen-shed amount at KMO-0.57* armed gen- shed amount at FKRVOL/MCY[Transient Stability] Multi-phase 5L12 MP Same as 5L11 MP in this table Contingency 5L11 MP No generation shedding required Gen shed at KKO: Level 1 [Transient Stability] Gen shed at MKL/DKWQTY first, then at GMS/PCN: 1.03*[(5L1 + 5L2) GMS + 5L3 PCN = 530 0 MW, then Gen shed at KKO: Level 1 [Transient Stability] Gen shed at KKO: Level 1 [Transient Stability] SL1_3 If P1 + 0.63* P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKO: Level 1 [Transient Stability] Gen shed at KKO: Level 1 [Transient Stability] Double 5L1_3 If P1 + 0.63* P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKO: Level 1 [Transient Stability] Gen shed at KKO: Level 1 [Transient Stability] Gen shed at KKU/DKWQTY first, then at GMS/PCN: 1.03*[(5L1 + 5L2) GMS + 5L3 PCN = 5L2 Over Rating] MW Gen shed at KKV/DKWQTY first, then at GMS/PCN: 1.03*[(5L1 + 5L2) GMS + 5L3 PCN = 5L2 Over Rating] MW Gen shed at KKV: Level 1 [Transient Stability]	requirement		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Double 5L1_2 If P1+0.63*P2×0.01 F3×0.00 W/ D1P2*0.01 F3×0.00 W/, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability]. Multi-phase Contingency 5L12 MP Same as 5L11 MP in this table Multi-phase Contingency 5L12 MP Same as 5L11 MP in this table SL12 If P1+0.63*P2×300 W/ NDP3×800 W/, then Gen shed at KK//CU/MCY[Transient Stability] SL12 If P1+0.63*P2×300 W/ AND P3×800 MW, then Gen shed at KK//CU/MCY[Transient Stability] Multi-phase Contingency 5L1_2 If P1+0.63*P2×300 W/ AND P3×800 MW, then Gen shed at KK//CU/MCY; Level 1 [Transient Stability] Gen shed at KKL/DKWQTY first, then at GMS/PCN: 1.03*1(5L1+5L2) GMS+5L3 PCN-5L3 Over Rating] MW Double Contingency (SLG on different phases of two lines) 5L1_7 If P1+0.63*P2×300 W/ AND P3×800 MW, then Gen shed at KKK//DKWQTY first, then at GMS/PCN: 1.03*1(5L1+5L2) GMS+5L3 PCN-5L3 Over Rating] MW 5L1_3 If P1+0.63*P2×300 W/ AND P3×800 MW, then Gen shed at KKK//DKWQTY first, then at GMS/PCN: 1.03*1(5L1+5L2) GMS+5L3 PCN-5L2 Over Rating] MW 6L1_7 If P1+0.63*P2×300 W/ AND P3×800 MW, then Gen shed at KKK//DKWQTY first, then at GMS/PCN: 1.03*1(5L1+5L2) GMS+5L3 PCN-5L2 Over Rating] MW 5L2_3 If P1+0.63*P2×300 W/ AND P3×800 MW, then Gen shed at KKK//DKWQTY first, then at GMS/PCN: 1.03*1(5L1+5L2) GMS+5L3 PCN-5L2 Over Rating] MW 5L2_4 If P1+0.63*P2×300 W/ AND P3×800 MW, then Gen shed at KKK//DKWQTY first, then at GMS/PCN: 1.03*1(5L1+5L2) GMS+5L3 PCN-5L2 Over Rating] MW 5L2_7 I		5L11 MP	Gen sned requirements at KMU/FKK/VUL/MUY: If $P_1 + 0.07 * P_2 + 0.10 * P_2 > -600 MW/or P_1 + 0.57 * P_2 + 0.07 * P_2 > -500 MW/ then$
Double Gen shed at FRRVOL/IACY: Level 1 [Transient Stability] Gen shed at FRRVOL/IACY: Level 1 [Transient Stability] Gen-shed at MKL/DKWQTY first and then GMS/PCN, the greater of: • 10.0*[[P1+0.97*P2+0.1*P3]-600 = armed gen-shed amount at KMO-0.97* armed gen- shed amount at FKRVOL/IACY[[Transient Stability], and • 14.3*[[P1+0.57*P2+0.0*P3]). 500 = armed gen-shed amount at KMO-0.57* armed gen- shed amount at FKRVOL/IACY[[Transient Stability]. Multi-phase SL12 MP Same as SL11 MP in this table Contingency SL61 MP No generation shedding required Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKV/OL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKV/OL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKV/OL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: Level 1 [Transient Stability]. Gen shed at KKV/OL/MCY: Level 1 [Transient Stability]. Gen shed at KKVOL/MCY: L			11 + 1 + 0.97 + 2 + 0.10 + 37 + 000 WW 01 + 1 + 0.57 + 2 + 0.07 + 37 + 500 WW, menGen shed at KMO: Level 1 [Transient Stability] and
Double Contingency Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: • 10.0° 1[(P1 + 0.3° P2 + 0.1° P3) = 600 - armed gen-shed amount at KMO - 0.97 * armed gen- shed amount at FKRVOL/MCY[[Transient Stability] and • 14.3° 1[(P1 + 0.5° P2 + 0.0° P3) = 500 - armed gen-shed amount at KMO - 0.57 * armed gen- shed amount at FKRVOL/MCY][Transient Stability] Multi-phase 5L12 MP Same as 5L11 MP in this table Contingency 5L61 MP No generation shedding required Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KKUDKW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L3 Over Rating] MW SL1_3 If P1 + 0.63 * P2 >= 330 MW AND P3 > 800 MW, then Gen shed at KKUD/LWQY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW SL1_3 If P1 + 0.63 * P2 >= 330 MW AND P3 > 800 MW, then Gen shed at KKUD/LWQY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW SL1_4 If P1 + 0.63 * P2 >= 330 MW AND P3 > 800 MW, then Gen shed at KMC/LEvel 1 [Transient Stability] Gen shed at KMC/DKWQTY first, then at GMS/PCN: 1.04* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW SL1_7 If P1 + 0.63 * P2 >= 330 MW AND P3 > 800 MW, then Gen shed at KMC/DKWQTY first, then at GMS/PCN: 1.04* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] M			Gen shed at FKR/VOI /MCY: Level 1 [Transient Stability]
Gen-shed at MKL/DKWQTY first and then GMS/PCN, the greater of: • 10.0*1 [P1+ 0.97*P2+ 0.1*P3) = 500 = armed gen-shed amount at KMO = 0.97* armed gen-shed amount at FKRVOL/MCY][Transient Stability], and Multi-phase 5L12 MP Same as 5L11 MP in this table Contingency 5L13 MP Same as 5L11 MP in this table Contingency 5L12 MP No generation shedding required 5L12 MP Same as 5L11 MP in this table Same as 5L11 MP in this table Contingency 5L12 If P1 + 0.63*P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at MKL/DKWQUTY first, then at GMS/PCN: 1.03*1[GL1+5L2] GMS + 5L3 PCN - 5L3 Over Rating] MW 5L1_3 If P1 + 0.63*P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC/DKWQUTY first, then at GMS/PCN: 1.03*1[GL1+5L2] GMS + 5L3 PCN - 5L3 Over Rating] MW 5L1_3 If P1 + 0.63*P2 == 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Ouble Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMC/DKWQTY			
Image: Second State Sta			Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
bit d amount at FKR/OL/MCY[[Transient Stability], and witi - P = 0.5* P = 0.0** P = 0.0** P = 0.0** Multi-phase SL12 MP Same as SL11 MP in this table Contingency SL61 MP No generation shedding required SL12 MP Same as SL11 MP in this table SL61 MP Contingency SL61 MP No generation shedding required Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMU/DKW/QTY first, then at GMS/PCN:			 10.0 * [(P1 + 0.97 * P2 + 0.1 * P3) – 600 – armed gen-shed amount at KMO – 0.97 * armed gen-
Image: Provide the system of the system o			shed amount at FKR/VOL/MCY][Transient Stability], and
State amount at FKRVOL/MCY1 [Transfert Stability] Multi-phase 5L12 MP Same as 5L11 MP in this table Contingency 5L61 MP No generation shedding required Status 5L12 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Stat_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Double Stat_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04 * (I6L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW Stat_7 Stat_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC/DKW/QTY first, then at GMS/PCN: 1.04 * (I6L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW Stat_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC/DKW/QTY first, then at GMS/PCN: 1.04 * (I6L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW			 14.3* [(P1 + 0.57 * P2 + 0.07 * P3) – 500 – armed gen-shed amount at KMO - 0.57 * armed gen-
Multi-phase 51 / 2 Win Same as 51.11 MP in this table Contingency 51.61 MP No generation shedding required St.1_2 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] and Gen shed at KMC: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [[GL1 + 5L2] GMS + 5L3 PCN - 5L3 Over Rating] MW 5L1_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMC: DLWW/QTY first, then at GMS/PCN: 1.03 * [[GL1 + 5L2] GMS + 5L3 PCN - 5L2 Over Rating] MW Double SL1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KML/DKW/QTY first, then at GMS/PCN: 1.03 * [[GL1 + 5L2] GMS + 5L3 PCN - 5L2 Over Rating] MW Double SL1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.04 * [[GL1 + 5L2] GMS + 5L7 KDS - 5L2 Over Rating] MW SL1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.04 * [[GL1 + 5L2] GMS + 5L7 KDS - 5L2 Over Rating] MW SL2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KM		5I 12 MD	sned amount at FKR/VOL/MCY [Iransient Stability]
Double Contingency Discretion Double Discretion Shedding required SL61 MP No generation shedding required Gen shed at KMC Level 1 [Transient Stability], and Gen shed at KKU/DLEVel 1 [Transient Stability] Gen shed at ML/DKW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L3 Over Rating] MW SL1_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L3 Over Rating] MW Double Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L3 Over Rating] MW Double Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW Double SL1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKU/DLW/QTY first, then at GMS/PCN: 1.04* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW Double SL1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW SL2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKU/DLW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW SL2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKU/DLW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW SL2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKV/DLW/QTY first, the	Multi-phase	51 13 MP	Same as 5L11 MP in this table
Double SL1_2 If P1+0.63 * P2>= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at KKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03* [(SL1+5L2) GMS + 5L3 PCN - SL3 Over Rating] MW 5L1_3 If P1+0.63 * P2>= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03* [(SL1+5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1+0.63 * P2>= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03* [(SL1+5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1+0.63 * P2>= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04* [(SL1+5L2) GMS + 5L7 KDS - 5L2 Over Rating] MW 5L2_3 If P1+0.63* P2>= 390 MW AND P3 > 800 MW, then Gen shed at KRL/DKW/QTY first, then at GMS/PCN: 1.03* [(SL1+5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_7 If P1+0.63* P2>= 390 MW AND P3 > 800 MW, then Gen shed at KRL/DKW/QTY first, then at GMS/PCN: 1.03* [(SL1+5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_7 If P1+0.63* P2>= 390 MW AND P3 > 800 MW, then Gen shed at KKL/DKW/QTY first, then at GMS/PCN: Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.03* [(SL1+5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW <td>Contingency</td> <td>5I 61 MP</td> <td>No generation shedding required</td>	Contingency	5I 61 MP	No generation shedding required
Double Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2) GMS + 5L3 PCN - 5L3 OVer Rating] MW 5L1_3 If P1+0.63*P2>= 390 MW AND P3> 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1+0.63 *P2>= 390 MW AND P3> 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1+0.63 *P2>= 390 MW AND P3> 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] on different phases of two lines) Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04*[(5L1+5L2) GMS + 5L7 KDS - 5L2 Over Rating] MW 5L2_3 If P1+0.63 *P2>= 390 MW AND P3> 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_3 If P1+0.63 *P2>= 390 MW AND P3> 800 MW, then Gen shed at KKU/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_7 If P1+0.63 *P2>= 390 MW AND P3 > 800 MW, then Gen shed at KKU: Level 1 [Transient Stability] Gen shed at KKU: Level 1 [Transient Stability] Gen shed at KKU: Level 1 [Transient Stability] Gen shed at KK		5L1 2	If P1 + $0.63 \times P2 >= 390 \text{ MW AND P3} > 800 \text{ MW}$, then
Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*1[GL1+5L2) GMS + 5L3 PCN - 5L3 Over Rating] MW 5L1_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*1[GL1+5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW Double Contingency (SLG on different phases of two lines) Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*1[GL1+5L2] GMS + 5L3 PCN - 5L2 Over Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04*[GL1+5L2] GMS + 5L7 KDS - 5L2 Over Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04*[GL1+5L2] GMS + 5L7 KDS - 5L2 Over Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 AW, then Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[GL1+5L2] GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 AW, then Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 0.03 * [GL1+5L2] GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 AW, then Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]		_	Gen shed at KMO: Level 1 [Transient Stability], and
Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2)GMS+5L3PCN-5L3 Over Rating]MW 5L1_3 If P1+0.63*P2>= 390 MW AND P3> 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Double 5L1_3 Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2)GMS+5L3PCN-5L2 Over Rating]MW 5L1_7 St1_7 If P1+0.63*P2>= 390 MW AND P3> 800 MW, then Gen shed at KKL/DKW/QTY first, then at GMS/PCN: Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.04*[(5L1+5L2)GMS+5L7KDS-5L2 Over Rating]MW 5L2_3 If P1+0.63*P2>= 390 MW AND P3> 800 MW, then Gen shed at KMC!/DKW/QTY first, then at GMS/PCN: 1.04*[(5L1+5L2)GMS+5L7KDS-5L2 Over Rating]MW 5L2_3 If P1+0.63*P2>= 390 MW AND P3> 800 MW, then Gen shed at KMC!/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2)GMS+5L3PCN-5L1 Over Rating]MW 5L2_7 If P1+0.63*P2>= 390 MW AND P3> 800 MW, then Gen shed at KMC!/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2)GMS+5L3PCN-5L1 Over Rating]MW 5L2_7 If P1+0.63*P2>= 390 MW AND P3> 800 MW, then Gen shed at KMC!/DKW/QTY first, then at GMS/PCN: Gen shed at KMC!/DKW/QTY first, then at GMS/PCN: Gen shed at			Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Gen shed at MKL/DKW/QIY first, then at GMS/PCN: 1.03* [(5L1+5L2) GMS + 5L3 PCN - 5L3 Over Rating] MW 5L1_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KKVOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QIY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at MKL/DKW/QIY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] and Gen shed at KMC: Level 1 [Transient Stability] and Gen shed at MKL/DKW/QIY first, then at GMS/PCN: 1.04* [(5L1 + 5L2) GMS + 5L2 Over Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at MKL/DKW/QIY first, then at GMS/PCN: 1.04* [(5L1 + 5L2) GMS + 5L2 Over Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability] and Gen shed at KMC/DKW/QIY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability]			
1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L3 OVER Rating] MW 5L1_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMC/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 10.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] and Contingency (SLG on different phases of two lines) 5L1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L7 KDS - 5L2 Over Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L7 KDS - 5L2 Over Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMU/DKW/QTY first, then at GMS/PCN: 1.03 * [(6L1 + 5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC/DKW/QTY first, then at GMS/PCN: 1.03 * [(6L1 + 5L2) GMS + 5L3 PCN - 5L1 Over Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO:			Gen shed at MKL/DKW/QTY first, then at GMS/PCN:
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Double Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[(5L1+5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at MKL/DKW/QTY first, then at GMS/PCN: Gen shed at KR/VOL/MCY: Level 1 [Transient Stability] on different phases Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 0 ftwo lines) 104* [(5L1 + 5L2) GMS + 5L7 KDS - 5L2 Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L7 KDS - 5L2 Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L1 Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability]		5L1_3	Gen shed at KMO: Level 1 [Transient Stability] and
Double Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW 5L1_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability], and Gen shed at KMC: Level 1 [Transient Stability] on different phases of two lines) Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L7 KDS - 5L2 Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] SL2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMC/DKW/QTY first, then at GMS/PCN: 1.03 * [[5L1 + 5L2) GMS + 5L3 PCN - 5L1 Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability]			Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03*[[5L1+5L2) GMS+5L3 PCN - 5L2 Over Rating] MW Double Contingency (SLG on different phases of two lines) 5L2_3 If P1+0.63*P2 >= 390 MW AND P3 > 800 MW, then Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04*[(5L1+5L2) GMS + 5L7 KDS - 5L2_Over_Rating] MW 5L2_3 If P1+0.63*P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMC: Level 1 [Transient Stability], and Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.04*[(5L1+5L2) GMS + 5L3 PCN - 5L1 Over_Rating] MW 5L2_3 If P1+0.63*P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.03*[[5L1+5L2] GMS + 5L3 PCN - 5L1 Over_Rating] MW 5L2_7 If P1+0.63*P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] and Gen shed at KMC/DKW/QTY first, then at GMS/PCN: 1.03*[[5L1+5L2] GMS + 5L3 PCN - 5L1 Over_Rating] MW 5L2_7 If P1+0.63*P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMC/DKW/QTY first, then at GMS/PCN: Gen shed at KMC/DKW/QTY first, then at GMS/			
Double 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L2 Over Rating] MW Double Contingency (SLG on different phases of two lines) 1f P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L7 KDS - 5L2_Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KML/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KML/DKW/QTY first, then at GMS/PCN: Gen shed at KKL/DKW/QTY first, then at GMS/PCN:			Gen shed at MKL/DKW/QTY first, then at GMS/PCN:
Double Contingency (SLG on different phases of two lines) If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L7 KDS - 5L2_Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at KML/DKW/QTY first, then at GMS/PCN:			1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 5L2 Over Rating] MW
Double Gen shed at KMO: Level 1 [Transient Stability], and Contingency (SLG Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] on different phases Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L7 KDS – 5L2_Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KKU: Level 1 [Transient Stability], and Gen shed at KKU: Level 1 [Transient Stability], and Gen shed at KKU: Level 1 [Transient Stability] Gen shed at KKU: Level 1 [Transient Stability] Gen shed at KKU: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMC/DKW/QTY first, then at GMS/PCN:		5L1_7	If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then
Contingency (SLG on different phases of two lines) Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L7 KDS – 5L2_Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]	Double Contingonay (SLC		Gen shed at KMO: Level 1 [Iransient Stability], and
of two lines) Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04* [(5L1 + 5L2) GMS + 5L7 KDS - 5L2_Over_Rating] MW 5L2_3 If P1 + 0.63* P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03* [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63* P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]	on different phases		
1.04 * [(5L1 + 5L2) GMS + 5L7 KDS - 5L2_Over_Rating] MW 5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN:	of two lines)		Gen shed at MKL/DKW/QTY first, then at GMS/PCN:
5L2_3 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]			1.04 * [(5L1 + 5L2) GMS + 5L7 KDS – 5L2 Over Rating] MW
Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN:		5L2_3	If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then
Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN:			Gen shed at KMO: Level 1 [Transient Stability], and
Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN:			Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Series at MKL/DKW/QT1 first, then at GMS/PCN. 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 5L1_Over_Rating] MW 5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN:			Conshed at MKL/DKW/OTX first than at CMS/DCN:
5L2_7 If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN:			$1.03 \times [(51.1 + 51.2)]$ GMS + 51.3 PCN = 51.1 Over Rating MW
Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN:		5L2 7	If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then
Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first, then at GMS/PCN:			Gen shed at KMO: Level 1 [Transient Stability], and
Gen shed at MKL/DKW/QTY first, then at GMS/PCN:			Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Gen shed at MKL/DKW/QTY first, then at GMS/PCN:			
1.04 * [(51.1 + 51.2)] GMS + 51.7 KDS - 51.1 Over Pating M/M			Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.04 * [(5] 1 + 5] 2) GMS + 5] 7 KDS - 5] 1. Over Rating MW/

	5L11_12	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If $4.3 \text{ P}1 + 1.1 \text{ P}2 + P3 >= 3350 \text{ MW OR } 7.9 \text{ P}1 + 6.5 \text{ P}2 + P3 >= 4480 \text{ MW}$, then
		Gen shed at KMO: Level 2 [Iransient Stability], and
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
		• $4.3 \times P1 + 1.1 \times P2 + P3 - 3350 - 4.3 \times armed gen-shed amount at KMO - 1.1 \times armed gen-shed$
		amount at FKR/VOL/MCY1[Transient Stability] and
		• 7.9 * P1 + 6.5 * P2 + P3 – 4480 – 7.9 * armed gen-shed amount at KMO – 6.5 * armed gen-shed
		amount at FKR/VOL/MCY1[Transient Stability] and
		 1.05 * [(5L11 + 5L12 + 5L13) WSN - 5L13 Over Rating] - armed gen-shedding amount at
		KMO/FKR/VOL/MCY
	5L11 13	Gen-shed requirements at KMO/FKR/VOL/MCY:
	_	If 4.3 * P1 + 1.1 * P2 + P3 >= 3350 MW OR 7.9 * P1 + 6.5 * P2 + P3 >= 4480 MW, then
		Gen shed at KMO: Level 2 [Transient Stability], and
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
		 4.3 * P1 + 1.1 * P2 + P3 – 3350 – 4.3 * armed gen-shed amount at KMO – 1.1 * armed gen-shed
		amount at FKR/VOL/MCY] [Transient Stability], and
		 7.9 * P1 + 6.5 * P2 + P3 – 4480 – 7.9 * armed gen-shed amount at KMO – 6.5 * armed gen-shed
		amount at FKR/VOL/MCY] [Transient Stability], and
		 1.05 * [(5L11 + 5L12 + 5L13) WSN – 5L12_Over_Rating] – armed gen-shedding amount at
		KMO/FKR/VOL/MCY
	5L12_13	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If $4.3 \land P1 + 1.1 \land P2 + P3 \ge 3350 \text{ MW OR } 7.9 \land P1 + 6.5 \land P2 + P3 \ge 4480 \text{ MW}$, then
		Gen shed at KMO: Level 2 [Iransient Stability], and
		Gen shed at FKR/VOL/MCY: Level 2 [Translent Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of
		• $4.3 \times P1 + 1.1 \times P2 + P3 - 3350 - 4.3 \times armed gen-shed amount at KMO - 1.1 \times armed gen-shed$
		amount at FKR/VOL/MCY1[Transient Stability], and
		 7.9 * P1 + 6.5 * P2 + P3 – 4480 – 7.9 * armed gen-shed amount at KMO – 6.5 * armed gen-shed
		amount at FKR/VOL/MCY][Transient Stability], and
		 1.05 * [(5L11 + 5L12 + 5L13) WSN – 5L11 Over Rating] – armed gen-shed amount at
		KMO/FKR/VOL/MCY
	KDY 5CX1	No generation shedding required
	KDY 5CX2	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

5.2 One of GMS/PCN - KLY 500 kV Circuits Out of Service

<u> Table 5.2.1 – 5L1 O.O.S.</u>

Pre-outage Restrictions

GMS to WSN transfer limit:

- Summer: 5L2 GMS + 5L3 PCN < 3650 MW
- Winter: No generation restriction

WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 2
		Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * (5L2 GMS + 5L3 PCN – 5L3 Over Rating)
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 3 Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * (5L2 GMS + 5L3 PCN – 5L2 Over Rating)
SLG or No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_7
		Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * (5L2 GMS + 5L7 KDS - 5L2 Over Rating)
	5L4	Gen shed at MKL/DKW/QTY first, then at GMS:
	51.1.1	1.02 * (5L2 GMS + 5L4 GMS – 5L2 Over Rating)
	5L12	No generation shedding required
	5L2 MP	This MP contingency will be covered by double contingency of 5L1_2
	5L3 MP	This MP contingency will be covered by double contingency of 5L1 3
	5L7 MP	This MP contingency will be covered by double contingency of 5L1 7
	5L4 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.60 * P2 >= 300 MW and P3 >= 1800 MW, then
		Gen shed at KMO: Level 1 [Transient Stability], and
		Gen shed at FKR/VOL/MCY: Level 1 [Iransient Stability] Gen shed at MKL/DKW/QTY first, then at GMS:
Combined Multi-		1.03 * (5L2 GMS + 5L4 GMS – 5L2_Over_Rating)
(5L1/2/3/4/7/11/12)	5L11 MP	Gen-shed requirements at KMO/FKR/VOL/MCY:
Arm the greatest		KMO: Level 1 [Transient Stability]
requirement		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of:
		 10.0*[(P1 + 0.98 * P2 + 0.10 * P3) – 600 – armed gen-shed amount at KMO – 0.98 * armed
		 gen-sned amount at FKR/VOL/MCY Transient Stability 11.1 * [(P1 + 0.85 * P2 + 0.09 * P3) – 500 – armed gen-shed amount at KMO - 0.85 * armed
		gen-shed amount at FKR/VOL/MCY] [Transient Stability]
	5I 12 MP	Same as 51 11 MP in this table
Multi-phase	5L13 MP	Same as 5L11 MP in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Gen shed requirements at KMO/FKR/VOL/MCY:
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first, then at GMS/PCN:
		1.03 * (5L2 GMS + 5L3 PCN – 5L3 Over Rating)
	5L1_3	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Translent Stability]
		Gen-shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * (5L2 GMS + 5L3 PCN – 5L2_Over_Rating)
	5L1_7	Gen-shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first, and then GMS/PCN:
Double	5123	 1.04 (5L2 GMS + 5L7 KDS - 5L2_Over_Rating) Islanding - Refer to Attachment 5 of 7T-13
Contingency (SLG	5L2 7	Islanding – Refer to Attachment 5 of 7T-13
on different phases	5L2_4	Gen shed requirements at KMO/FKR/VOL/MCY:
of two lines)		If P1 + 0.71 * P2 >= 200 MW Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at GMS/MKL/DKW/QTY:
		Shed down DKW/MKL/QTY; Shed CMS down to:
		 Shed GMS down to: 540 MW, if Peace Region 3 paths are in service
		> 480 MW, if 1L364 OOS
		 440 MW, if 1L361/1L349 OOS Keep minimum 3 GMS units online post shedding
	5∟11_12	Gen-sned requirements at KMO/FKR/VOL/MCY: If 3.7 * P1 + 1.1 * P2 + P3 >= 3070 MW OR P1 + 1.5 * P2 >= 420 MW
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
		 3.7 * P1 + 1.1 * P2 + P3 – 3070 – 3.7 * armed gen-shed amount at KMO – 1.1 * armed gen-shed amount at EKR///OL/MCY1/Transient Stability1
		 1.08 * [(5L11 + 5L12 + 5L13) WSN - 5L13 Over Rating] - armed gen-shed amount at
		KMO/FKR/VOL/MCY

	5L11_13	Gen-shed requirements at KMO/FKR/VOL/MCY: If 3.7 * P1 + 1.1 * P2 + P3 >= 3070 MW OR P1 + 1.5 * P2 >= 420 MW Gen shed at KMO: Level 2 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		 Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: 3.7 * P1 + 1.1 * P2 + P3 – 3070 – 3.7 * armed gen-shed amount at KMO – 1.1 * armed gen-shed amount at FKR/VOL/MCY] [Transient Stability] 1.08 * [(5L11 + 5L12 + 5L13) WSN – 5L12_Over_Rating] – armed gen-shedding amount at KMO/FKR/VOL/MCY
	5L12_13	Gen-shed requirements at KMO/FKR/VOL/MCY: If 3.7 * P1 + 1.1 * P2 + P3 >= 3070 MW OR P1 + 1.5 * P2 >= 420 MW Gen shed at KMO: Level 2 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		 Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: 3.7 * P1 + 1.1 * P2 + P3 – 3070 – 3.7 * armed gen-shed amount at KMO – 1.1 * armed gen-shed amount at FKR/VOL/MCY] [Transient Stability] 1.08 * [(5L11 + 5L12 + 5L13) WSN – 5L11_Over_Rating] – armed gen-shedding amount at KMO/FKR/VOL/MCY
Series Capacitor Bypass	KDY 5CX2	Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.54 * (0.32 * 5L2 GMS + 5L3 PCN – 5L3 Over Rating)
	KDY 5CX3	Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.54 * (0.32 * 5L3 PCN + 5L2 GMS – 5L2_Over_Rating)
	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.2.2 - 5L2 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L1 GMS + 5L3 PCN < 3650 MW

 - Winter: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * (5L1 GMS + 5L3 PCN – 5L3 Over Rating)
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * (5L1 GMS + 5L3 PCN – 5L1 Over Rating)
No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2 7 Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * (5L1 GMS + 5L7 KDS – 5L1 Over Rating)
	5L4	Gen shed at MKL/DKW/QTY first, then at GMS: 1.02 * (5L1 GMS + 5L4 GMS – 5L1 Over Rating) No generation shedding required
	51 12	No generation shedding required
	5L1 MP	This MP contingency will be covered by double contingency of 5L1 2
	5L3 MP	This MP contingency will be covered by double contingency of 5L2_3
	5L7 MP	This MP contingency will be covered by double contingency of 5L2 7
Combined Multi-	5L4 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
phase Contingency		If P1 + 0.60 * P2 >= 300 MW and P3 >= 1800 MW, then
(5L1/2/3/4/7/11/12)		Gen shed at KMO: Level 1 [Iransient Stability], and
den shed		Gen sheu al FKR/VOL/MCT. Level T [Transient Stability]
requirements		Gen shed at MKL/DKW/QTY first, then at GMS:
requiremente		1.03 * (5L1 GMS + 5L4 GMS - 5L1 Over Rating)
	5L11 MP	Same as Table 5.2.1 - 5L1 OOS
	5L12 MP	Same as 5L11 MP in this table
Multi-phase	5L13 MP	Same as 5L11 MP in this table
Contingency	5L61 MP	No generation shedding required
	DLI_Z	If $P1 + 0.71 * P2 >= 200 MW$
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first, then at GMS/PCN:
		1.03 * (5L3 PCN + 5L1 GMS – 5L3 Over Rating)
	5L1 3	Islanding – Refer to Attachment 5 of 71-13
	5114	Gen shed requirements at KMO/FKR//OL/MCY
	021_4	If $P1 + 0.71 * P2 >= 200 \text{ MW}$
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Care alread at CMC (MI/L /DI/M/OT)/
		Gen sned at GIVIS/IVIKL/DKW/QTY: Shed down DKW/MKL/OTY:
		 Shed GMS down to:
Double		 540 MW if Peace Region 3 paths are in service
Contingency (SLG		> 480 MW, if 1L364 OOS
on different phases		➢ 440 MW, if 1L361/1L349 OOS
of two lines)		Keep minimum 3 GMS units online post shedding.
	5L2_3	Gen shed requirements at KMO/FKR/VOL/MCY:
		IF P1 + 0.71 * P2 >= 200 MVV Con shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOI /MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first, then at GMS/PCN:
		1.03 * (5L1 GMS + 5L3 PCN – 5L1 Over Rating)
	5L2_7	Gen-shed requirements at KMO/FKR/VOL/MCY: If $P_1 + 0.71 * P_2 > -200 MW$
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first, and then GMS/PCN:
		• 1.04 ^ (5L1 GMS + 5L7 KDS - 5L1_Over_Rating)
	51 11 12	Same as Table 5.2.1 - 5L1 005
	<u>5 </u> 12 12	Same as Table 5.2.1 - 5L1 003
	KDY 5CX1	Gen shed at MKI /DKW/QTY first then at GMS/PCN [.]
		1.54 * (0.32 * 5L1 GMS + 5L3 PCN – 5L3 Over Rating)
Sarias Carasit	KDY 5CX3	Gen shed at MKL/DKW/QTY first, then at GMS/PCN:
Series Capacitor		1.54 * (0.32 * 5L3 PCN + 5L1 GMS – 5L1_Over_Rating)
Jypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation sneading required

Table 5.2.3 – 5L3 or 5L7 or (5L3 AND 5L7) O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: (5L1 + 5L2) GMS < 3870 MW
 - Winter: No generation restriction
 - WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 or 5L1_7 Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.03 * ((5L1 + 5L2) GMS – 5L2 Over Rating)
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7 Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.03 * ((5L1 + 5L2) GMS – 5L1 Over Rating)
No Fault Opening	5L4	Gen shed at DKW/MKL/QTY first, then PCN second: GS = 5L4 PCN - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW [Transient Stability]
		Keep at least two PCN units online post shedding.
	5L11	No generation shedding required
	5L12	No generation shedding required
	5L1 MP	This MP contingency will be covered by double contingency of 5L1 3 or 5L1 7
Combined Multi-	5L2 MP	This MP contingency will be covered by double contingency of 5L2 3 or 5L2 7
phase Contingency	5L4 MP	Gen shed at DKW/MKL/QTY first, then PCN second:
(5L1/2/3/4/7/11/12)		GS = 5L4 PCN - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW [Transient Stability]
Arm the greatest gen shed		Keep at least two PCN units online post shedding.
requirement	5L11 MP	Same as Table 5.2.1 - 5L1 OOS
	5L12 MP	Same as 5L11 MP in this table
Multi-phase	5L13 MP	Same as 5L11 MP in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Islanding – Refer to Attachment 5 of 7T-13
	5L1_3	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN: 1.03 * [5L2 GMS + 5L1 GMS – 5L2 Over Rating]
Double	5L1 7	Same as 5L1 3 in this table
Contingency (SLG on different phases	5L2_3	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW
of two lines)		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN: 1.03 * [5L2 GMS + 5L1 GMS – 5L1_Over_Rating]
	5L2_7	Same as 5L2_3 in this table
	5L11_12	Same as Table 5.2.1 - 5L1 OOS
	_5L11_13	Same as Table 5.2.1 - 5L1 OOS
	5L12_13	Same as Table 5.2.1 - 5L1 OOS
	KDY 5CX1	Gen shed at QTY/MKL/DKW first, then GMS/PCN:
		1.53 ^ (0.32 ^ 5L1 GMS + 5L2 GMS - 5L2 Over Rating)
Series Capacitor	KDY 5CX2	Gen sned at QTY/MKL/DKW TIRST, then GMS/PCN: 1.53 * (0.32 * 5L2 GMS + 5L1 GMS - 5L1 Over Pating)
Bypass		$1.55 (0.52 512 61015 \pm 511 61015 \pm 511 61015 \pm 61015 $
		No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.2.4 – 5L4 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction

WSN to KLY transfer limit: No generation restriction

Refer to SOO 7T-13 text file - Section 5.5 and Attachment 1 for GMS/PCN pre-outage min units online requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed at QTY/MKL/DKW first, then GMS: 1.03 * ((5L1 + 5L2) GMS – 5L2 Over Rating)
	5L2	Gen shed at QTY/MKL/DKW first, then GMS: 1.03 * ((5L1 + 5L2) GMS – 5L1 Over Rating)
	5L3	Gen shed at DKW/MKL/QTY first, then PCN second: GS = 5L3 PCN - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW [Transient Stability]
SLG or No Fault Opening		Keep at least two PCN units online post shedding.
	5L7	Gen shed at DKW/MKL/QTY first, then PCN second: S GS = 5L7 KDS - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW [Transient Stability]
		Keep at least two PCN units online post shedding.
	5L11	No generation shedding required
	5L12	No generation shedding required
Combined Multi-	5L1 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.60 * P2 >= 300 MW and P3 >= 600 MW,
phase Contingency $(51,1/2/3/4/7/11/12)$		Gen shed at KMO: Level 1 [Transient Stability]
Arm the greatest		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
gen snea requirement		Gen shed at MKL/DKW/QTY first, then at GMS:
requirement		1.03 * (5L2 GMS + 5L1 GMS – 5L2_Over_Rating) MW

	5L2 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.60 * P2 >= 300 MW and P3 >= 600 MW,
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first, then at GMS:
		1.03 * (5L2 GMS + 5L1 GMS – 5L1 Over Rating) MW
	5L3 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If $P1 + 0.60^{\circ} P2 \ge 300 \text{ MW}$ and $P3 \ge 600 \text{ MW}$, Constant KMO: Lovel 1 [Transient Stability]
		Gen shed at FKR/VOI /MCY evel 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second:
		GS = 5L3 PCN - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW [Transient Stability]
		Keep at least two PCN units online post-shedding.
		Concerned requirements at KNO/EKDA/OL/MOV
		If P1 + 0.60 * P2 >= 300 MW and P3 >= 600 MW
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/OTY first then PCN second:
		➢ GS = 5L7 KDS - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW [Transient Stability]
		Keen at least two DCN units online next chedding
	5I 11 MP	Same as 51 11 MP in Table 5.1.1 – System normal
	5L12 MP	Same as 5L11 MP in this table
Multi-phase	5L13 MP	Same as 5L11 MP in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + $0.63 ^2$ >= 390 MW AND P3 > 800 MW, then, Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY ⁻ Level 1 [Transient Stability]
		Gen shed at GMS/MKL/DKW/QTY:
		Shed down DKW/MKL/QTY: Shed CMS down to:
		 Sheu Givis downto. 540 MW if Peace Region 3 naths are in service.
		\rightarrow 480 MW, if 1L364 OOS
		> 440 MW, if 1L361/1L349 OOS
		Keep minimum 3 GMS units online post shedding.
	5L1_3	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Conched at DKW/WKI (OD) first than DCN accord.
		\Rightarrow GS = 5L3 PCN - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
		Keep at least two PCN units online post shedding.
		1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – Armed GS MW at DKW/MKL/QTY/PCN – 5L2 Over Rating MW
	5L1_7	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then,
		Gen shed at KMO: Level 1 [Iransient Stability]
		Gen shed at FKR/ VOL/MCY. Level 1 [Transleht Stability]
Double		Gen shed at DKW/MKL/QTY first, then PCN second:
Contingency (SLG		GS = 5L7 KDS - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
on different phases		Keep at least two PCN units online post shedding.
or two lines)		Gen shed at GMS:
		1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – Armed GS MW at DKW/MKL/QTY/PCN – 5L2_Over_Rating] MW
	5L2_3	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then, Con shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second: $\sim CS = 51.2 \text{ pCN}$ (2) 208 CMS + 11 261 CMS + 11 264 CMS) 400 MW
		$\sim 63 - 5137 \text{ GW} - (21300 \text{ GW} 3^{-1} \text{ 11307 GW} 3^{-1} \text{ 11304 GW} 3) - 400 \text{ WW}$
		Keep at least two PCN units online post shedding.
		Gen shed at GMS:
		1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – Armed GS MW at DKW/MKL/QTY/PCN – 5L1 Over Rating] MW
	5L2_7	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/OTY first then PCN second:
		\rightarrow GS = 5L7 KDS - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
		Keen at least two PCN units online nost shedding
		Reep at least two roll units online post shedding.
		Gen shed at GMS: 1.02 * [(El 1 + El 2) CMS + El 7 KDS - Armod CS MW at DKM/MKI /OTX/DCN - El 1. Over Beting MM/
	5L11 12	Same as Table 5.1.1 - System Normal
	5L11_13	Same as Table 5.1.1 - System Normal
	5L12 13	Same as Table 5.1.1 - System Normal
	KDY 5CX1	No generation shedding required
Series Canacitor	KDY 50X2	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

<u>Table 5.2.5 – 5L11 O.O.S.</u>

Pre-outage Restrictions
GMS to WSN transfer limit: No generation restriction
WSN to KLY transfer limit:

Summer: (5L12 + 5L13) WSN < 3500 MW
Winter: (5L12 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11 12
		Gen shed requirements at KMO/FKR/VOL/MCY:
SICor		If 1.08 * P1 + 1.06 * P2 + P3 >= 3504 OR 1.68 * P1 + 1.95 * P2 + P3 >= 3753, then
No Foult Opening		Gen shed at KMO: Level 2 [Transient Stability]
No Fault Opening		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/OTV first: and then GMS/PCNL the greatest of:
		• $1.08 \times P1 + 1.06 \times P2 + P3 - 3504 - 1.08 \times armed gen-shed amount at KMO - 1.06 \times armed gen-$
		shed amount at FKR//OL/MCY [Transient Stability]
		• $1.68 \times P1 + 1.95 \times P2 + P3 - 3753 - 1.68 \times armed gen-shed amount at KMO - 1.95 \times armed gen-$
		shed amount at EKRI/OL/MCV [Transient Stability]
		• $1.05 \times [/5]$ 12 ± 51.13 WSN -51.13 Over Rating -3 armed GS amount at KMO/EKR/V/OL/MCV
		Con abod requirements at KMO/EKBA/OL/MCV:
	SET MP	
		[TP1 + 0.42 P2 >= 260 MW,
Combined Multi-		Gen shed at KMO: Level 1 [Iransient Stability]
phase Contingency		Gen shed at FKR/ VOL/MCY: Level 2 [transient Stability]
(5L1/2/3/4/7/11/12)		
Arm the greatest	5L2 MP	Same as 5L1 MP in this table
gen shed	5L3 MP	Same as 5L1 MP in this table
requirement	5L7 MP	Same as 5L1 MP in this table
	5L4 MP	Same as 5L4 MP in Table 5.1.1-System normal
	5L12 MP	This MP contingency will be covered by double contingency of 5L11 12
Multi-phase	5L13 MP	Same as double contingency of 5L11 13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	If P1 + 0.63 * P2 >= 390 MW AND P3 > 400 MW, then,
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN:
		1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 2000] [Voltage Stability]
	5L1_3	Same as above 5L1_2 in this table
	5L1_7	If P1 + 0.63 * P2 >= 390 MW AND P3 > 400 MW, then,
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN:
		1.03 * [(5L1 + 5L2) GMS + 5L7 KDS - 2000] [Voltage Stability]
	5L2_3	Same as above 5L1_2 in this table
	5L2_7	Same as above 5L1_7 in this table
Double	5L11_12	Gen-shed requirements at KMO/FKR/VOL/MCY:
Contingency (SLC		If $P1 + 0.90 * P2 + 0.12 * P3 >= 500 MW$, then
on different phases		Gen shed at KMO: Level 2 [Transient Stability]
of two lines)		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
		 8.33 * [(P1 + 0.90 * P2 + 0.12 * P3) – 500 – armed gen-shed amount at KMO – 0.90 * armed gen-
		shed amount at FKR/VOL/MCY] [Transient Stability]
		 1.05 * [(5L12 + 5L13) WSN – 5L13_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY
	5L11_13	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If $P1 + 0.90 * P2 + 0.12 * P3 >= 500 MW$, then
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]

		 Gen-shed at MKL/DKW/QTY first, and then GMS/PCN, the greater of: 8.33*[(P1 + 0.90 * P2 + 0.12 * P3) – 500 – armed gen-shed amount at KMO – 0.90 * armed gen-shed amount at FKR/VOL/MCY] [Transient Stability] 1.05 * I (EL42 + EL42) WCN = EL42 - Query Deting 1 - greated are shed at KMO/EKEN/QL/MCY.
	51.40.40	• 1.05 "[(5L12 + 5L13) WSIN - 5L12_OVEr_Rating] - armed gen sned at KWO/FKR/VOL/WCY
	5L12_13	Refer to Attachment 5 of SOU 71-13
	KDY 5CX1	No generation shedding required
	KDY 5CX2	No generation shedding required
Series Capacitor Bypass	KDY 5CX3	No generation shedding required
	MLS 5CX2	Gen-shed at MKL/DKW/QTY first, then at GMS/PCN:
		1.71 * (0.32 * 5L12 WSN + 5L13 WSN – 5L13 Over Rating)
	MLS 5CX3	Gen-shed at MKL/DKW/QTY first, then at GMS/PCN:
		1.71 * (0.32 * 5L13 WSN + 5L12 WSN – 5L12 Over Rating)

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L13) WSN < 3500 MW
 Winter: (5L11 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12
		Gen shed requirements at KMO/FKR/VOL/MCY:
SLG or		If $1.08 \times P1 + 1.06 \times P2 + P3 \ge 3504 \text{ OR } 1.68 \times P1 + 1.95 \times P2 + P3 \ge 3753$, then
No Fault Opening		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Iransient Stability]
		Conshed at MKL/DKW/OTV first and then GMS/PCN, the greatest of:
		\sim 1.08 * D1 + 1.06 * D2 + D3 3504 1.08 * armod gap shod amount at KMO 1.06 * armod gap
		 I.00 FT+1.00 FZ+F3-5004-1.00 aimed gen-sned amount at RMO-1.00 aimed gen- shed amount at EKRV/OL/MCV [Transient Stability]
		• $1.68 \times P1 + 1.95 \times P2 + P3 - 3753 - 1.68 \times armed gen-shed amount at KMO - 1.95 \times armed gen-$
		shed amount at EKRV/OL/MCV [Transient Stability]
		• $1.05 * ((51.11 + 51.13) WSN - 51.13) Over Rating) - armed GS amount at KMO/EKR/VOL/MCY$
Combined Multi-	5I 1 MP	Same as 51 1 MP in Table 5.2.5 – 51 11 00S
nhase Contingency	5L2 MP	Same as 51 1 MP in this Table
(5) 1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.2.5 $-$ 51.11.00S
Arm the greatest	5L7 MP	Same as Table 5.2.5 – 51 11 00S
gen shed	5L4 MP	Same as 5L4 MP in Table 5.1.1 - System normal
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11 12
Multi-phase	5L13 MP	Same as double contingency of 5L12 13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.2.5 – 5L11 OOS
	5L1 3	Same as Table 5.2.5 – 5L11 OOS
	5L1 7	Same as Table 5.2.5 – 5L11 OOS
	5L2 3	Same as Table 5.2.5 – 5L11 OOS
	5L2 7	Same as Table 5.2.5 – 5L11 OOS
	5L11_12	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.90 * P2 + 0.12 * P3 >= 500 MW then
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
Double		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
Contingency (SLG		 8.33 "[(PT+0.90 "P2+0.12" P3) – 500 – armed gen-sned amount at KMO – 0.90 " armed gen- shed amount at EKDA (OL (MOV) [Transient Stability]
of two lines)		sned amount at FKR/VOL/MCY [[nansient Stability]
of two lines)	51 11 12	I.05 [(5LTT+5LT5) WSN-5LT5_OVET_Rating] - armed gen sned at RWO/FRR/VOL/MCT Defor to Attachment 5 of 7T 12
	<u>5 12 12</u>	Con shed requirements at KMO/EKBA/OL/MCV:
	5L12_15	If $P1 + 0.90 \times P2 + 0.12 \times P3 >= 500 MW/then$
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
		• 8.33 * [(P1 + 0.90 * P2 + 0.12 * P3) – 500 – armed gen-shed amount at KMO – 0.90 * armed gen-
		shed amount at FKR/VOL/MCY] [Transient Stability]
		 1.05 * [(5L11 + 5L13) WSN – 5L11_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY
	KDY 5CX1	No generation shedding required
	KDY 5CX2	No generation shedding required
Series Canacitor	KDY 5CX3	No generation shedding required
Bynase	MLS 5CX1	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
Dypass		1.71 * (0.32 * 5L11 WSN + 5L13 WSN – 5L13 Over Rating)
	MLS 5CX3	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
		1.71 * (0.32 * 5L13 WSN + 5L11 WSN – 5L11 Over Rating)

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12) WSN < 3500 MW
 Winter: (5L11 + 5L12) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_13
		Gen sned requirements at KMO/FKK/VOL/MOY: If 1.08 * D1 + 1.06 * D2 + D3 >= 3504 OD 1.68 * D1 + 1.05 * D2 + D3 >= 3753, then
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first, then GMS/PCN, the greatest of:
		 1.08 * P1 + 1.06 * P2 + P3 – 3504 – 1.08 * armed gen-shed amount at KMO – 1.06 * armed gen-
SIGor		shed amount at FKR/VOL/MCY [Transient Stability]
No Fault Opening		 1.68 * P1 + 1.95 * P2 + P3 – 3/53 – 1.68 * armed gen-shed amount at KMO – 1.95 * armed gen-
		shed amount at FKR/VOL/MCY [Transient Stability]
	51.40	• 1.05 " ((5L11 + 5L12) WSN - 5L12_OVEr_Rating) - armed GS amount at KMO/FKR/VOL/MCY
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13
		If $1.08 \times P1 + 1.06 \times P2 + P3 >= 3504 \ OR \ 1.68 \times P1 + 1.95 \times P2 + P3 >= 3753 \ \text{then}$
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first, then GMS/PCN, the greatest of:
		 1.08 * P1 + 1.06 * P2 + P3 – 3504 – 1.08 * armed gen-shed amount at KMO – 1.06 * armed gen-
		shed amount at FKR/VOL/MCY [Transient Stability]
		 1.68 ^ P1 + 1.95 ^ P2 + P3 - 3/53 - 1.68 ^ armed gen-shed amount at KMO - 1.95 ^ armed gen- shed amount at EKDA (OL (MOX) Transient Otability)
		sned amount at FKR/VOL/MCY [Iransient Stability]
	5I 1 MD	• 1.05 ((5LTT + 5LT2) WSN - 5LTT_OVEL_Rating) - anneu GS annount at RWO/FRR/ VOL/WCT
Combined Multi-	5L2 MP	Same as 5L1 MP in this Table
phase Contingency	5L3 MP	Same as Table 5.2.5 – 5L11 OOS
(5L1/2/3/4/7/11/12)	5L7 MP	Same as Table 5.2.5 – 5L11 OOS
Arm the greatest	5L4 MP	Same as 5L4 MP in Table 5.1.1-System normal
gen sned roquiromont	5L11 MP	This MP contingency will be covered by double contingency of 5L11_13
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L12_13
Multi-phase	5L61 MP	No generation shedding required
Contingency	-	
	<u>5L1 2</u>	Same as Table 5.2.5 – 5L11 OOS
	5L1 3	Same as Table 5.2.5 – 5L11 00S
		Same as Table 5.2.5 – 5L11 005
	5127	Same as Table 5.2.5 – 5L11 0005
	51 11 12	Refer to Attachment 5 of 7T-13
	5L11 13	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.90 * P2 + 0.12 * P3 >= 500 MW then
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
Double		
Contingency (SLG		Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
of two lines)		 6.55 [(FT+0.50 FZ+0.12 F5)=500 – anneu gen-sneu announcat KWO – 0.90 anneu gen- shed amount at EKRMOL/MCVI [Transient Stability]
		• $1.05 \times [(.51 \times 11 + 51 \times 12) \text{ WSN} = 51 \times 12 \text{ Over Rating} = \text{armed gen shed at KMO/EKR//OL/MCY}$
	5L12 13	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.90 * P2 + 0.12 * P3 >= 500 MW then
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		Can also diet MI(1/DI)/All/OD/ first and then CMC/DONL the superstant of
		Gen shed at MKL/DKW/QTY first and then GWS/PCN, the greater of: $22 \times I/(P1 + 0.00 \times P2 + 0.12 \times P2)$, 500, armod gap shed amount at KMO = 0.00 \times armod gap
		 6.55 [(FT+0.50 FZ+0.12 F5)=500 – amed gen-sned amount at NMO – 0.50 amed gen- shed amount at EKRMOL/MCYI [Transient Stability]
		 1.05 * [(5L11 + 5L12) WSN - 5L11 Over Rating] - armed gen shed at KMO/FKR/VOL/MCY
	KDY 5CX1	No generation shedding required
	KDY 5CX2	No generation shedding required
Sories Conseiter	KDY 5CX3	No generation shedding required
Series Capacitor	MLS 5CX1	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
Dypass		1.71 * (0.32 * 5L11 WSN + 5L12 WSN – 5L12_Over_Rating)
	MLS 5CX2	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
		1.71 ^ (0.32 ^ 5L12 WSN + 5L11 WSN – 5L11_Over_Rating)

5.3 One of GMS/PCN - KLY 500 kV Series Capacitor Banks Out of Service

Table 5.3.1 – KDY 5CX1 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.53 * (0.64 * 5L2 GMS + 5L3 PCN – 5L3 Over Rating)
	5L3	Gen shed at MKL/DKW/QTY first, then at GMS/PCN:
SLG or No Fault Opening	5L7	Gen shed at MKL/DKW/QTY first, then at GMS/PCN:
	51.4	1.53 * (0.64 * 5L7 KDS + 5L2 GMS – 5L2 Over Rating)
	5L4 5L11	No generation shedding required
	5L12	No generation shedding required
	5L1 MP 5L2 MP	Same as Table 5.1.1 - System Normal Gen shed requirements at KMO/FKR//OL/MCY ⁻
		If $P1 + 0.67 * P2 >= 240 \text{ MW}$ and $P3 >= 500 \text{ MW}$, then
		Gen shed at KMO: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.54 * (5L3 PCN + 0.65 * 5L2 GMS – 5L3 Over Rating)
	5L3 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		Gen shed at KMO: Level 1 [Transient Stability]. and
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Combined Multi-		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN: 1.54 * (5L2 GMS + 0.65 * 5L3 PCN – 5L2_Over_Rating)
phase Contingency (5 1/2/3/4/7/11/12)	5L7 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0 67 * P2 >= 240 MW, then
Arm the greatest		Gen shed at KMO: Level 1 [Transient Stability], and
gen shed requirement		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN:
	5L4 MP	Same as Table 5.1.1 - System Normal
	5L11 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: • 10.0 * [(P1 + 0.98 * P2 + 0.10 * P3) – 600 – armed gen-shed amount at KMO – 0.98 * armed gen-
		 shed amount at FKR/VOL/MCY] [Transient Stability], and 12.5 * [(P1 + 0.67 * P2 + 0.08 * P3) - 500 - armed gen-shed amount at KMO - 0.67 * armed gen-
		shed amount at FKR/VOL/MCY] [Transient Stability]
Multi-nhase	5L12 MP	Same as 5L11 MP in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.1.1 - System Normal
	5L1_7	Same as Table 5.1.1 - System Normal
	5L2_3	If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5], 1 + 5], 2) GMS + 5], 3 PCN – 1450] [Voltage Stability]
	5L2_7	If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then
		Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1 04 * [(5] 1 + 5] 2) GMS + 5] 7 KDS – 1450] [Voltage Stability]
	5L11_12	Gen-shed requirements at KMO/FKR/VOL/MCY:
Double		If 4.1 * P1 + 1.4 * P2 + P3 >= 3260 MW OR 7.5 * P1 + 6.4 * P2 + P3 >= 4660 MW, then Gen shed at KMO: Level 2 [Transient Stability], and
on different phases		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
of two lines)		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: • 4.1 * P1 + 1.4 * P2 + P3 – 3260 – 4.1 * armed gen-shed amount at KMO – 1.4 * armed gen-shed
		amount at FKR/VOL/MCY] [Transient Stability], and
		amount at FKR/VOL/MCY] [Transient Stability], and
		 1.05 * [(5L11 + 5L12 + 5L13) WSN – 5L13_Over_Rating] – armed gen-shedding amount at
	5L11 13	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If 4.1 * P1 + 1.4 * P2 + P3 >= 3260 MW OR 7.5 * P1 + 6.4 * P2 + P3 >= 4660 MW, then Gen shed at KMO: Level 2 [Transient Stability], and Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
		 4.1 * P1 + 1.4 * P2 + P3 – 3260 – 4.1 * armed gen-shed amount at KMO – 1.4 * armed gen-shed amount at EK R//OL/MCYLITransient Stability1 and
		• $7.5 * P1 + 6.4 * P2 + P3 - 4660 - 7.5 * armed gen-shed amount at KMO - 6.4 * armed gen-shed$
		amount at FKR/VOL/MCY] [Transient Stability], and

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	_	Fage 20 01
		 1.05 * [(5L11 + 5L12 + 5L13) WSN – 5L12_Over_Rating] – armed gen-shedding amount at
		KMO/FKR/VOL/MCY
	5L12_13	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If 4.1 * P1 + 1.4 * P2 + P3 >= 3260 MW OR 7.5 * P1 + 6.4 * P2 + P3 >= 4660 MW, then
		Gen shed at KMO: Level 2 [Transient Stability], and
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
		• 4.1 * P1 + 1.4 * P2 + P3 – 3260 – 4.1 * armed gen-shed amount at KMO – 1.4 * armed gen-shed
		amount at FKR/VOL/MCY][Transient Stability], and
		 7.5 * P1 + 6.4 * P2 + P3 – 4660 – 7.5 * armed gen-shed amount at KMO – 6.4 * armed gen-shed
		amount at FKR/VOL/MCY] [Transient Stability], and
		 1.05 * [(5L11 + 5L12 + 5L13) WSN – 5L11_Over_Rating] – armed gen-shedding amount at
		KMO/FKR/VOL/MCY
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	KDY 5CX3	No generation shedding required
	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Generation	Shedding	Rea	uirements
Ochiciadori	Uncaaling	1100	

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1 53 * (0 64 * 51 1 GMS + 51 3 PCN – 51 3 Over Bating)
	51.2	No generation shedding required
	51.3	Gen shed at MKL/DKW/QTY first then at GMS/PCN
SLG or	020	1.53 * (0.64 * 5L3 PCN + 5L1 GMS – 5L1 Over Rating)
No Fault Opening	5L7	Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1 53 * (0 64 * 51 7 KDS + 51 1 GMS – 51 1 Over Bating)
	5L4	No generation shedding required
	5L11	No generation shedding required
	5L12	No generation shedding required
	5L1 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.67 * P2 >= 240 MW and P3 >= 500 MW, then
		Gen shed at KMO: Level 1 [Transient Stability], and
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN :
		1.54 * (5L3 PCN + 0.65 * 5L1 GMS – 5L3_Over_Rating)
	5L2 MP	Same as Table 5.1.1 - System Normal
	5L3 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
Combined Multi-		If $P1 + 0.67 * P2 >= 240 \text{ MW}$, then
phase Contingency		Gen shed at KMO: Level 1 [Iransient Stability], and
(5L1/2/3/4/7/11/12)		Gen sned at FKR/VOL/MCY: Level 1 [Transient Stability]
Arm the greatest		Con abod at MKL/DKW/OTX first: and than CMS/DCN:
gen shed		$1.54 \times (51.1 \text{ CMS} \pm 0.65 \times 51.3 \text{ PCN} = 51.1 \text{ Over Pating}$
requirement	5I 7 MP	Gen shed requirements at KMO/EKRA/OL/MCY:
		If $P1 + 0.67 * P2 >= 240 \text{ MW}$ then
		Gen shed at KMO [·] Level 1 [Transient Stability] and
		Gen shed at FKR/VOI /MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN:
		1.54 * (5L1 GMS + 0.65 * 5L7 KDS – 5L1 Over Rating)
	5L4 MP	Same as Table 5.1.1 - System Normal
	5L11 MP	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L12 MP	Same as 5L11 MP in this table
Multi-phase	5L13 MP	Same as 5L11 MP in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.1.1 - System Normal
	5L1_3	If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then
		Gen shed at KMO: Level 3 [Iransient Stability], and
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first and then GMS/PCN:
		1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability]
Double	5L1_7	If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then
Contingency (SLG		Gen shed at KMO: Level 3 [Transient Stability], and
on different phases		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
of two lines)		
		Gen shed at MKL/DKW/QTY first and then GMS/PCN:
		1.04 ° [(5L1 + 5L2) GMS + 5L7 KDS – 1450] [Voltage Stability]
	DL2_3	Same as Table 5.1.1 - System Normal
	<u> </u>	Same as Table 5.1.1 - System Normal
	51 11 13	Same as Table 5.3.1 - KDY 5CX1 003
	5 12 13	Same as Table 5.3.1 - KDY 5CX1.00S
Series Canacitor	KDY 5CX1	No generation shedding required
Bynass	KDY 5CX3	No generation shedding required
-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Gonoration	Shodding	Poquimmonte
Generation	Sneaaina	Requirements

SLG or No Fault Openinia 5L1 Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.48* (0.88* 5L1 CMS - 5L2 Over Rating) SLG or No Fault Openinia 5L2 Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.48* (0.88* 5L1 CMS - 5L1 Over Rating) SLG or No Fault Openinia 5L3 No generation shedding required 5L1 Sen generation shedding required	CONTINGENCY		SHEDDING REQUIREMENTS
SLC or No Fault Opening 5.1.2 Gen shed at OTY/MKLDRW first, then GMS/PCN: 1.4.9 (0.68° 5.12 (GMS + 5.1 GMS -		5L1	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.48 * (0.68 * 5L1 GMS + 5L2 GMS – 5L2_Over_Rating)
SLG or No Fault Opening EL3 No intervation shedding required Bit 7 No generation shedding required Bit 1 No factor (RNOV)/CVC): Level 1 (Transient Stability) Gen shed at KMC:DEVOL/MCY: Level 1 (Transient Stability) Gen shed at FKRVOL/MCY: Level 1 (Transient Stability) <td></td> <td>5L2</td> <td>Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.48 * (0.68 * 5L2 GMS + 5L1 GMS - 5L1 Over Rating)</td>		5L2	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.48 * (0.68 * 5L2 GMS + 5L1 GMS - 5L1 Over Rating)
No Fault Opening EL7 No generation shedding required 6L4 No generation shedding required 5L1 6L11 No generation shedding required 5L12 SL12 No generation shedding required 5L14 SL14 Senethed requirements at KMO/CKRN/OL/MCY: First Stability, and Gen shed at KKD: Level 1 [Transient Stability] 5L2 MP Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] requirement 5L3 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Stability Gen shed at KMO: Level 1 [Transient Stability] Multi-phase 5L12 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal Sch MP Same as Table 5.1.1 - Syste	SLG or	51.3	No generation shedding required
SL4 No generation shedding required SL11 No generation shedding required SL12 No generation shedding required SL14 No generation shedding required SL14 No generation shedding required SL14 No generation shedding required Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] SL1/2/3/J/11/12 Gen shed at KMO: Level 1 [Transient Stability] Arm the greatest gen shed Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Sta MP Same as Table 5.1.1 - System Normal SL12 MP Same as Table 5.1.1 - System Normal SL14 MP Same as 5L11 MP in this table Contingency SL12 MP Same as Table 5.1.1 - System Normal SL12 MP Same as 5L11 MP in this table Contingency SL14 MP Superation shedding required SL12 MP Same as Table 5.1.1 - System Normal SL14 MP Same as Table 5.1.1 -	No Fault Opening	517	No generation shedding required
SL11 No generation shedding required SL12 No generation shedding required SL1 No generation shedding required SL1 Wo generation shedding required SL1 Mo generation shedding required Gen shed requirements at KMO/FKRVOL/MCY: If P1+0.67*P2>=240 MW and P3>=500 MW, then Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability] Gen-shed at KMO: Level 1 [Transient Stability]. Gen-shed at KMO: Level 1 [Transient Stability]. Multi-phase Contingency SL2 MP Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at KMO: Level 1 [Transient Stability]. Gen shed at MKL/DKW/OTY first, and then GMS/PCN: I.54*(SL 1 MP)		5L4	No generation shedding required
BL12 No generation shedding required SL1 MP Gen shed requirements at KMOFKRV/OL/MCY: If P1 + 0.67 * P2 >= 240 MW and P3 >= 500 MW, then Gen shed at KMO.CV: Level 1 [Transient Stability] Combined Multi- phase Contingency Gen-shed at KMC.DKWQTY first, and then GMS/PCN: 1.54 * (5L2 GMS + 0.65 * 5L1 GMS - 5L2 Over Rating) SL1/2/3/47/11/12 Arm the greatest gen shed Gen-shed at MKL.DKWQTY first, and then GMS/PCN: 1.54 * (5L2 GMS + 0.65 * 5L1 GMS - 5L2 Over Rating) Gen-shed at MKU.DEW/OY: Level 1 [Transient Stability], and Gen shed at KMO: Level 1 [Transient Stability]. Gen-shed at MKL/DKW/OTY first; and then GMS/PCN: 1.54 * (5L1 GMS + 0.65 * 5L2 GMS - 5L1 Over Rating) SL3 MP Same as Table 5.1.1 - System Normal SL4 * MP Same as Table 5.1.1 - System Normal SL1 MP Same as Table 5.1.1 - System Normal SL1 MP Same as SL11 MP In this table Contingency SL61 MP SL1 MP Same as SL11 MP In this table Contingency (SLG on different phases of two lines) SL1 2 SL1 2 Same as Table 5.1.1 - System Normal SL1 2 Same as Table 5.1.1 - System Normal SL1 2 </td <td></td> <td>5L11</td> <td>No generation shedding required</td>		5L11	No generation shedding required
Summer Source Summer Source Summer Source Summer Source Combined Mulis- phase Contingency (SL 1/2)/3/4/711/1/2 Gen-shed at KL/DKW/QTY first; and then GMS/PCN: 1.54* (SL 20 Ver Rating) Summer Source Summer Source Summer Source Gen shed at KL/DKW/QTY first; and then GMS/PCN: 1.54* (SL 20 Ver Rating) Arm the greatest gen shed requirement Gen-shed requirements at KMO? KR/VOL/MCY: Level 1 [Transient Stability] and then GMS/PCN: 1.54* (SL 1GMS + 0.65* SL 20 Ver Rating) Summer Source Gen-shed requirements at KMO? KR/VOL/MCY: Level 1 [Transient Stability] and Gen shed at KKL/DKW/QTY first; and then GMS/PCN : 1.54* (SL 1GMS + 0.65* SL 20 MS - SL 10 Ver Rating) Summer Source Same as Table 5.1.1 - System Normal SL 1MP Same as Table 5.1.1 - System Normal SL 1MP Same as Table 5.1.1 - System Normal SL 1MP Sume as Table 5.1.1 - System Normal SL 1MP Same as SL 11MP in this table Contingency (SL 1/2) If P1 + 0.56* P2 >= 280 WW AND P3 > 700 MW, then Gen shed at KMO: Level 3 [Transient Stability] Double Contingency (SLG on different phase of two lines) Sume as Table 5.1.1 - System Normal SL 1 Same as Table 5.1.1 - System Normal SL 1 Same as Table 5.1.1 - System Normal SL 1 Same as Table 5.1.1 - System Normal SL 2 Same as Table 5.1.1 - System Normal SL 1 Sume as Table 5.1.1 - System Normal SL 1 Same a		5L12	No generation shedding required
Combined Multiphase Contingency If P1+0 67 * P2 >= 240 MW and P3 >= 500 MW, then Gen shed at KMC: Level 1 [Transient Stability] Combined Multiphase Contingency Gen-shed at MKL/DKWQTY first, and then GMS/PCN: 1.54* (5L2 GMS + 0.65* 5L1 GMS - 5L2 Over Rating) 5L2 MP Gen shed at KMC: Lovel 1 [Transient Stability] Gen shed at KMC: Lovel 1 [Transient Stability] Gen-shed at MKL/DKWQTY first, and then GMS/PCN: 1.54* (5L1 2GMS + 0.65* 5L1 GMS + 5L2 Over Rating) Gen shed at KMC: Lovel 1 [Transient Stability] Gen shed at KMC: Lovel 1 [Transient Stability], and Gen shed at KKC/UC/MCY: Level 1 [Transient Stability] Gen-shed at MKL/DKWQTY first; and then GMS/PCN : 1.54* (5L1 GMS + 0.65* 5L2 GMS - 5L1 Over Rating) 5L3 MP 5L3 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as 5L1 MP in this table Contingency SL1 MP SL1 MP Same as 5L1 MP in this table Contingency SL1.2 If P1 + 0.56 * P2 >= 280 MW AND P3 >= 700 MW, then Gen shed at KMC./DKWQTY first and then GMS/PCN: 1.04* [SL1 + 5L2] GMS + 5L3 PCN = 14501[V] Double Gen shed at KMC./DKWQTY first and then GMS/PCN: 1.04* [SL1 + 5L2] GMS + 5L3 PCN = 14501[V] Gen shed at KMC./DKWQTY first and then GMS/PCN: 1.04* [SL1 + 5L2] GMS + 5L3 PCN = 14501[V] Gen shed at KMC./DK		5L1 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
Combined Multi- phase Contingency (SL 1/23/4/7/11/1/2) Gen shed at KKU/CVL/MCY: Level 1 [Transient Stability] Size Ammediate Gen shed requirements at KMC/EKRVOL/MCY: (SL 1/23/4/7/11/1/2) Gen shed requirements at KMC/EKRVOL/MCY: If P1 + 0.67 P2 >= 240 Ward P3 >= 500 MW, then Gen shed at KKU/CKY: Level 1 [Transient Stability] and Gen shed at KKU/CKY: Level 1 [Transient Stability] Amm the greatest gen shed requirement Gen-shed at KKU/CW/CYY: Level 1 [Transient Stability] Size Amp Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as SL11 MP in this table Contingency SL61 MP No generation shedding required Contingency SL61 MP No generation shedding required Contingency SL1 Sem as Table 5.1.1 - System Normal SL1 Sem as Table 5.1.1 - System Normal SL1 AS Same as Table 5.1.1 - System Normal SL1 Sem as Table 5.1.1 - System Normal </td <td></td> <td>-</td> <td>If P1 + 0.67 * P2 >= 240 MW and P3 >= 500 MW, then</td>		-	If P1 + 0.67 * P2 >= 240 MW and P3 >= 500 MW, then
Combined Multi- phase Contingency (5L1/2J/3/1/11/12) Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKWQTY first; and then GMS/PCN: -1.54* (5L2 GMS + 0.65* 5L1 GMS - 5L2 OVEr Rating)			Gen shed at KMO: Level 1 [Transient Stability], and
Combined Multi- phase Contingency (SL 1/2)3/4/711/12 Gen-shed at MKL/DKW/QTY first; and then GMS/PCN: 1.54*(SL2 GMS + 0.65*5L1 GMS - 5L2 Over Rating) 5L2 MP Gen shed requirements at KM02/EKRV0L/MCY: IF P1 + 0.67*P2 >= 240 MW and P3 >= 500 MW, then Gen shed at FKR/V0L/MCY: Level 1 [Transient Stability] are shed requirement 6En-shed at MKL/DKW/QTY first; and then GMS/PCN: 1.54*(SL1 GMS + 0.65*5L2 GMS - 5L1 Over Rating) 5L3 MP Same as Table 5.1.1 - System Normal 5L7 MP 5L4 MP Same as Table 5.1.1 - System Normal 5L1 MP 5L4 MP Same as Table 5.1.1 - System Normal 5L1 MP 5L4 MP Same as Table 5.1.1 - System Normal 5L1 MP 5L4 MP Same as Table 5.1.1 - System Normal 5L1 MP 5L4 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as 5L11 MP in this table Gen shed at KKU: Level 3 [Transient Stability] Multi-phase 5L1 MP Contingency 5L1 3 Same as Table 5.1.1 - System Normal 5L1 MP Gen shed at KKU: Level 3 [Transient Stability] or different phases of two lines) 5L1 3 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L1 1 2 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 1			Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Combined Multiphase Contingency Gen-shed at MKL/DKW/QTY first, and then GMS/PCN: 1.54*(5L2 GMS + 0.65*5L1 GMS - 5L2 Over Rating) Combined Multiphase Contingency (5L1/2/3/4/7/11/12) Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.67*P2 >= 240 MW and P3 >= 500 MW, then Gen shed at KMC Level 1 [Transient Stability] Gen shed at KMC/DKW/QTY first; and then GMS/PCN: 1.54*(5L1 GMS + 0.65*5L2 GMS - 5L1 Over Rating) Equirement Gen-shed at MKL/DKW/QTY first; and then GMS/PCN: 1.54*(5L1 GMS + 0.65*5L2 GMS - 5L1 Over Rating) EL3 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.3.1 - KDY SCX1 OOS Gen shed at KMC LORVY CY: Level 3 [Transient Stability] Multi-phase 5L1 MP Contingency SL1 MP Same as SL11 MP in this table Contingency SL12 MP Same as SL11 MP in this table Contingency SL12 MP Sume as Table 5.1.1 - System Normal 5L1 2 If P1 + 0.66*P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KMC LORV/CY: Level 3 [Transient Stability] Double Contingency SL1 MP Same as Table 5.1.1 - System Normal 5L1 2 Sum as Table 5.1.1 - System Normal 5L1 3 Same as Table 5.1.1 - System Normal 5L1 1 Same as Table 5.1.1 - System Normal 5L1 1 Same as Table 5.1.1 - System Normal 5L1 1 Sum as Table 5.1.1 - System Normal 5L1 1 Same as Table 5.3.1 - KDY 5CX1 OO			
Combined Multiphase Contingency 5L2 MP Gen shed requirements at KMO/EKR/VOU/MCY: if P1 + 0.67 * P2 >= 240 MW and P3 >= 500 MW, then Gen shed at KMO/EKR/VOU/MCY: if P1 + 0.67 * P2 >= 240 MW and P3 >= 500 MW, then Gen shed at KMO/EKR/VOU/MCY: Level 1 [Transient Stability] Am the greatest gen shed requirement Gen shed at KMO/EKR/VOU/MCY: Level 1 [Transient Stability] Gen shed at KMU/DKW/QTY first; and then GMS/PCN: 1.54 * (5L1 GMS + 0.65 * 5L2 GMS - 5L1 Over Rating) 5L3 MP Same as Table 5.1.1 - System Normal 5L7 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal SL12 MP Same as SL11 MP in this table Contingency SL1 MP Same as SL11 MP in this table Contingency SL1_2 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KR/VOL/MCY: Level 3 [Transient Stability]. Double Contingency (SLG on different phase of two lines) SL1_2 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KR/VOL/MCY: Level 3 [Transient Stability]. SL1_2 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KR/VOL/MCY: Level 3 [Transient Stability]. SL1_2 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KR/VOL/MCY: Level 3 [Trans			Gen-shed at MKL/DKW/QTY first; and then GMS/PCN:
Combined Wulli- phase Contingency (SL12/3/4/7/11/1/2) Sen bed requirements at KMO/EKR/VOL/MCY: if P1 + 0.67 * P2 = 240 MW and P3 >= 500 MW, then Gen shed at KMO: Level 1 [Transient Stability] Arm the greatest gen shed requirement Gen-shed at KMO: Level 1 [Transient Stability].and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] 5L3 MP Same as Table 5.1.1 - System Normal 5L7 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal Contingency SL61 MP No generation shedding required Contingency SL11 MP in this table SL12 MP Gen shed at KMC/DKW/QTY first and then GMS/PCN: -0.04*1[GL1 + 5L2] GMS + 5L3 PCN - 1450] [Voltage Stability] Gen shed at KMC/DKW/QTY first and then GMS/PCN: -0.04*1[GL1 + 5L2] GMS + 5L3 PCN - 1450] [Voltage Stability] Double Contingency (SLG on different phases of two lines) SL1 3 Same as Table 5.1.1 - System Normal 5L1 1 <td>Course in a d Multi</td> <td></td> <td>1.54 * (5L2 GMS + 0.65 * 5L1 GMS – 5L2 Over Rating)</td>	Course in a d Multi		1.54 * (5L2 GMS + 0.65 * 5L1 GMS – 5L2 Over Rating)
philase Contingency If P1+0.67*P2>= 240 MW and P3 >= 500 MW, then GE1/2/3/47/11/12 Gen shed at KMO: Level 1 [Transient Stability] and gen shed Gen-shed at MKL/DKW/QTY first; and then GMS/PCN : 1.54*(5L1 GMS + 0.65*5L2 GMS - 5L1 Over Rating) 5L3 MP Same as Table 5.1.1 - System Normal 5L4 MP Same as Table 5.1.1 - System Normal 5L1 MP Star MP Same as Table 5.1.1 - System Normal 5L12 MP Same as Table 5.1.1 - System Normal 5L12 MP Same as Table 5.1.1 - System Normal 5L12 MP Same as Table 5.1.1 - System Normal 5L12 MP Same as Stable 5.1.1 - System Normal 5L12 MP Same as Stable 5.1.1 - System Normal 6L12 MP Same as Stable 5.1.1 - System Normal Contingency 5L61 MP No generation shedding required Contingency 5L1 MP No generation shedding required Gen shed at KMC/DKWQTY first and then GMS/PCN: 1.04*([5L1 + 5L2) GMS + 5L3 PCN - 1450] [Voltage Stability] Double Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04*([5L1 + 5L2) GMS + 5L3 PCN - 1450] [Voltage Stability] Sci 13 Same as Table 5.1.1 - System Normal 5L1 7 Same as Table 5.1.1 - System Normal Sci	Complined Wulti-	5L2 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
Ide 1/2/3/4/11/11/21 Gen shed at KMO: Level 1 [Transient Stability] Arm the greatest gen shed requirement Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen-shed at MKL/DKW/QTY first; and then GMS/PCN : 1.54* (SL1 GMS + 0.65* 5L2 GMS - 5L1 Over Rating) 5L3 MP Same as Table 5.1.1 - System Normal 5L7 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 System Normal Contingency 5L61 MP No generation shedding required Contingency 5L11 MP in this table Gen shed at KRV/OL/MCY: Level 3 [Transient Stability], and Gen shed at KRV/OL/MCY: Level 3 [Transient Stability] Double Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04* f(ISL1 + SL2) GMS + 5L3 PCN - 1450] [Voltage Stability] Gon different phases of two lines) 5L1 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 3 5L1 1 2 Same as Table 5.1.1 - System Normal 5L2 1 5L1 1 2 Same			If P1 + 0.67 * P2 >= 240 MW and P3 >= 500 MW, then
All intergreedest requirement Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen-shed at MKL/DKW/QTY first; and then GMS/PCN : 	(3L1/2/3/4/7/11/12)		Gen shed at KMO: Level 1 [Transient Stability], and
gen integration Gen-shed at MKL/DKW/QTY first; and then GMS/PCN :	den shed		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
Double Contingency (SLG on different phases of two lines) Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L3 MP Same as Table 5.1.1 - System Normal 5L4 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as Table 5.1.1 - System Normal 5L1 MP Same as 5L11 MP in this table Contingency SL61 MP No generation shedding required Contingency SL1_2 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MV, then Gen shed at KMC Level 3 [Transient Stability], and Gen shed at KMC Level 3 [Transient Stability] Double Contingency (SLG on different phases of two lines) SL1 3 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal SL2 3 Same as Table 5.1.1 - System Normal 5L2 1 Same as Table 5.1.1 - System Normal SL2 3 Same as Table 5.1.1 - System Normal 5L2 1 Same as Table 5.1.1 - System Normal SL2 3 Same as Table 5.1.1 - System Normal	requirement		
1.54 * (51 GMS + 0.65 * 5L2 GMS - 5L1 Over Rating) 5L3 MP Same as Table 5.1.1 - System Normal 5L7 MP Same as Table 5.1.1 - System Normal 5L4 MP Same as Table 5.1.1 - System Normal 5L12 MP Same as Table 5.1.1 - System Normal 5L12 MP Same as Table 5.1.1 - System Normal 5L12 MP Same as Table 5.1.1 - System Normal SL12 MP Same as Table 5.1.1 - System Normal Contingency 5L61 MP No generation shedding required Contingency SL61 MP No generation shedding required Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at KMO: Level 3 [Transient Stability] Contingency (SLG on different phases of two lines) Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 4 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 4 Same as Table 5.1.1 - System Normal 5L2 5 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.3.1 - KDY 5CX1 0OS 5L11 12 Same as Table 5.3.1 - KDY 5CX1 0OS 5L11 12 Same as Table 5	requirement		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN:
SL3 MP Same as Table 5.1.1 - System Normal SL4 MP Same as Table 5.1.1 - System Normal SL4 MP Same as Table 5.1.1 - System Normal SL1 MP Same as Table 5.1.1 - System Normal SL1 MP Same as Table 5.1.1 - System Normal SL1 MP Same as Table 5.1.1 - System Normal SL1 MP Same as SL11 MP in this table Contingency SL61 MP No generation shedding required Contingency SL1.2 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at KKI/OL/MCY: Level 3 [Transient Stability] Double Gen shed at KKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN - 1450] [Voltage Stability] Stame as Table 5.1.1 - System Normal SL1 7 Same as Table 5.1.1 - System Normal SL1 7 Same as Table 5.1.1 - System Normal SL1 7 Same as Table 5.1.1 - System Normal SL1 7 Same as Table 5.1.1 - System Normal SL1 7 Same as Table 5.1.1 - System Normal SL1 1 Same as Table 5.3.1 - KDY 5CX1 OOS SL1 1 Same as Table 5.3.1 - KDY 5CX1 OOS SL11 13 Same as Table 5.3.1 - KDY 5CX1 OOS			1.54 * (5L1 GMS + 0.65 * 5L2 GMS – 5L1 Over Rating)
SL7 MP Same as Table 5.1.1 - System Normal SL1 MP Same as Table 5.1.1 - System Normal SL11 MP Same as Table 5.1.1 - System Normal SL11 MP Same as Table 5.1.1 - System Normal Multi-phase SL13 MP Same as 5L11 MP in this table Contingency SL61 MP No generation shedding required SL1_2 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at KKV/OL/MCY: Level 3 [Transient Stability] Double Contingency (SLG on different phases of two lines) SL1 3 SL1 7 Same as Table 5.1.1 - System Normal SL1 7 Same as Table 5.1.1 - System Normal SL2 3 Same as Table 5.1.1 - System Normal SL2 3 Same as Table 5.1.1 - System Normal SL2 7 Same as Table 5.1.1 - System Normal SL2 7 Same as Table 5.1.1 - System Normal SL1 13 Same as Table 5.3.1 - KDY 5CX1 OOS SL11 13 Same as Table 5.3.1 - KDY 5CX1 OOS SL11 13 Same as Table 5.3.1 - KDY 5CX1 OOS SL11 13 Same as Table 5.3.1 - KDY 5CX1 OOS SL11 13 Same as Table 5.3.1 - KDY 5CX1 OOS SL1 12 Same as Table 5.3.1 - KDY 5CX1 OOS SL11 13 Same as Table 5.3.1 - KDY 5CX1 OOS SL11 13 Same as Table 5.3.1 - KDY 5CX1 OOS <td></td> <td>5L3 MP</td> <td>Same as Table 5.1.1 - System Normal</td>		5L3 MP	Same as Table 5.1.1 - System Normal
Same as Table 5.1.1 - System Normal 5L11 MP Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 MP Same as 5L11 MP in this table Multi-phase 5L3 MP Contingency 5L61 MP No generation shedding required Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at KMO: Level 3 [Transient Stability] Double Contingency (SLG on different phases of two lines) Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [[5L1 + 5L2] GMS + 5L3 PCN - 1450] [Voltage Stability] Series Capacitor Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L1 2 Series Capacitor Same as Table 5.3.1 - KDY 5CX1 OOS SL11 12 Series Capacitor KDY 5CX1 No generation shedding required MLS 5CX2 Multi S 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2		5L7 MP	Same as Table 5.1.1 - System Normal
Sume as Table 5.3.1 - KDY 5CX1 OOS 5L12 MP Same as 5L11 MP in this table Multi-phase 5L13 MP Same as 5L11 MP in this table Contingency 5L61 MP No generation shedding required SL12 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at KMC! Level 3 [Transient Stability] Double Contingency (SLG on different phases of two lines) Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [[5L1 + 5L2] GMS + 5L3 PCN - 1450] [Voltage Stability] 5L1 3 Same as Table 5.1.1 - System Normal 5L2 4 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L1 112 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L11 12 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 11 3 Same as Table 5.3.1 - KDY 5CX1 OOS 5L11 12 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1		5L4 MP	Same as Table 5.1.1 - System Normal
SL12 MP Same as SL11 MP in this table Multi-phase SL13 MP Same as SL11 MP in this table Contingency SL61 MP No generation shedding required SL12 MP Same as SL11 MP in this table Same as SL11 MP in this table Double SL61 MP No generation shedding required Double SL1_2 If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at KRC/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability] Stare as Table 5.1.1 - System Normal SL1 7 Same as Table 5.1.1 - System Normal SL2 3 Same as Table 5.1.1 - System Normal SL2 7 Same as Table 5.3.1 - KDY 5CX1 0OS SL1 13 Same as Table 5.3.1 - KDY 5CX1 0OS SL1 13 Same as Table 5.3.1 - KDY 5CX1 0OS SL1 13 Same as Table 5.3.1 - KDY 5CX1 0OS SL1 13 Same as Table 5.3.1 - KDY 5CX1 0OS SL1 13 Same as Table 5.3.1 - KDY 5CX1 0OS SL1 2 13 Same as Table 5.3.1 - KDY 5CX1 0OS <		5L11 MP	Same as Table 5.3.1 – KDY 5CX1 OOS
Multi-phase Contingency 5L13 MP Same as 5L11 MP in this table Contingency 5L61 MP No generation shedding required Double Contingency (SLG on different phases of two lines) If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KMC: Level 3 [Transient Stability], and Gen shed at KKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN - 1450] [Voltage Stability] 5L1 3 Same as Table 5.1.1 - System Normal 5L1 7 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L1 12 Same as Table 5.3.1 - KDY SCX1 OOS 5L11 13 Same as Table 5.3.1 - KDY SCX1 OOS 5L12 13 Same as Table 5.3.1 - KDY SCX1 OOS 5L12 13 Same as Table 5.3.1 - KDY SCX1 OOS 5L12 13 Same as Table 5.3.1 - KDY SCX1 OOS 5L12 13 Same as Table 5.3.1 - KDY SCX1 OOS 5L12 13 Same as Table 5.3.1 - KDY SCX1 OOS Series Capacitor Bypass KDY SCX2 No generation shedding required MLS SCX2 No generation shedding required MLS SCX2 No generation shedding required <td></td> <td>5L12 MP</td> <td>Same as 5L11 MP in this table</td>		5L12 MP	Same as 5L11 MP in this table
Contingency SL61 MP No generation shedding required Subject 5L1_2 if P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at KKR/VOL/MCY: Level 3 [Transient Stability] Double Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability] Subject 5L1 3 Same as Table 5.1.1 - System Normal 5L1 7 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 1 Same as Table 5.1.1 - System Normal 5L1 12 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor KDY 5CX1 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5	Multi-phase	5L13 MP	Same as 5L11 MP in this table
Double ft P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then Gen shed at KMO: Level 3 [Transient Stability], and Gen shed at KKP/VOL/MCY: Level 3 [Transient Stability] Double Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability] Series Capacitor Same as Table 5.1.1 - System Normal Series Capacitor Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor KDY 5CX1 Bypass No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required	Contingency	5L61 MP	No generation shedding required
Double Contingency (SLG on different phases of two lines) Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability] Same as Table 5.1.1 - System Normal 5L1 7 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.3.1 - KDY 5CX1 OOS 5L11 12 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor Bypass KDY 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required MLS 5CX3 No generation shedding required MLS 5CX3 No generation shedding required		5L1_2	If $P1 + 0.56 * P2 >= 280 \text{ MW AND } P3 > 700 \text{ MW}$, then
Double Contingency (SLG on different phases of two lines) Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability] 5L1 3 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L1 1 12 Same as Table 5.1.1 - System Normal 5L1 1 12 Same as Table 5.1.1 - System Normal 5L1 1 12 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor Bypass KDY 5CX1 No generation shedding required MLS 5CX2 No generation shedding required			Gen shed at KMO: Level 3 [Iransient Stability], and
Double Contingency (SLG on different phases of two lines)Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability]5L1 3Same as Table 5.1.1 - System Normal5L2 7Same as Table 5.1.1 - System Normal5L2 7Same as Table 5.1.1 - System Normal5L2 7Same as Table 5.1.1 - System Normal5L1 12Same as Table 5.1.1 - System Normal5L2 7Same as Table 5.1.1 - System Normal5L2 13Same as Table 5.3.1 - KDY 5CX1 0OS5L11 13Same as Table 5.3.1 - KDY 5CX1 0OS5L12 13Same as Table 5.3.1 - KDY 5CX1 0OS5L12 13Same as Table 5.3.1 - KDY 5CX1 0OSSeries Capacitor BypassKDY 5CX2No generation shedding requiredMLS 5CX2No generation shedding requiredMLS 5CX3No generation shedding requiredMLS 5CX3No generation shedding required			Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Double Contingency (SLG on different phases of two lines) Image: Second Structure 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1450] [Voltage Stability] 5L1 3 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L1 12 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.3.1 - KDY 5CX1 OOS 5L11 12 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor Bypass KDY 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required MLS 5CX3 No generation shedding required			One shad at MIKI (DIAN/OD) first and than OMO/DONE
Contingency (SLG on different phases of two lines) 5L1 3 Same as Table 5.1.1 - System Normal 5L1 7 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L1 12 Same as Table 5.1.1 - System Normal 5L1 12 Same as Table 5.1.1 - System Normal 5L1 12 Same as Table 5.3.1 - KDY 5CX1 OOS 5L11 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor KDY 5CX1 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required	Double		Gen sned at MKL/DKW/QTY TIRST and then GMS/PUN:
on different phases of two lines) Same as Table 5.1.1 - System Normal 5L1 7 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L1 12 Same as Table 5.1.1 - System Normal 5L1 12 Same as Table 5.3.1 - KDY 5CX1 OOS 5L11 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor Bypass KDY 5CX1 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required	Contingency (SLG	5112	1.04 [(5L1 + 5L2) GIVIS + 5L5 PCIN - 1450] [Voltage Stability]
of two lines) SL1 7 Same as Table 5.1.1 - System Normal 5L2 3 Same as Table 5.1.1 - System Normal 5L2 7 Same as Table 5.1.1 - System Normal 5L11 12 Same as Table 5.3.1 - KDY 5CX1 0OS 5L11 13 Same as Table 5.3.1 - KDY 5CX1 0OS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 0OS 5L12 13 Same as Table 5.3.1 - KDY 5CX1 0OS Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required	on different phases		Same as Table 5.1.1 - System Normal
Series Capacitor Same as Table 5.1.1 - System Normal Series Capacitor Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required MLS 5CX3 No generation shedding required	of two lines)		Same as Table 5.1.1 - System Normal
Series Capacitor Same as Table 5.1.1 - System Normal Series Capacitor 5L11 12 Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor 5L12 13 Same as Table 5.3.1 - KDY 5CX1 OOS Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required	,		Same as Table 5.1.1 - System Normal
Series Capacitor Same as Table 5.3.1 - KDY 5CX1 00S Series Capacitor 5L12 13 Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required		<u>511112</u>	Same as Table 5.2.1. KDV 50V1.00S
Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required		51 11 12	Same as Table 5.3.1 - KDY 50X1 003
Series Capacitor KDY 5CX1 No generation shedding required Bypass KDY 5CX2 No generation shedding required MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required		51 12 12	Same as Table 5.3.1 - KDY 50X1 003
Series Capacitor KDY 5CX2 No generation shedding required Bypass MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required			No depending required
Series Capacitor MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required			No generation shedding required
Bypass MLS 5CX1 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required	Series Capacitor		No generation shedding required
MIS 5CX3 No generation shedding required	Bypass	MIS 50X1	No generation shedding required
		MIS 5CX2	No generation shedding required

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
SLG Or No Fault Opening	5L11	No generation shedding required
	5L12	If 1.59 * P1 + 1.72 * P2 + P3 >= 4616, then Gen-shed at KMO: Level 1 [Transient Stability]
	5I 1 MD	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.72 * (0.63 * 5L12 WSN + 5L13 WSN – 5L13 Over Rating) – armed genshed amount at KMO
	SET MP	If P1 + 0.42 * P2 >= 260 MW and P3 >= 500 MW, Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
	5L2 MP	Same as 5L1 MP in this Table
	5L3 MP	Same as Table 5.2.5 – 5L11 OOS
Combined Multi-	5L7 MP	Same as Table 5.2.5 – 5L11 OOS
$(51 \ 1/2/3/4/7/11/12)$	5L4 MP	Same as 5L4 MP in Table 5.1.1 - System normal
Arm the greatest	5L11 MP	Same as 5L11 MP in table 5.1.1- System normal
gen shed	5L12 MP	Gen-shed requirements at KMO/FKR/VOL/MCY:
requirement		If P1 + 0.71 * P2 + 0.09 * P3 >= 500 MW then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		 Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of: 11.1 * [(P1 + 0.71 * P2 + 0.09 * P3) – 500 – armed gen-shed amount at KMO – 0.71 * armed gen- abad amount at EKPA/OL (MCV) [Transient Stability]
		 1.73 * [(5L13 + 0.64 * 5L12) WSN – 5L13 Over Rating] - armed genshed at KMO/FKR /VOL/MCY
	5L13 MP	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 + 0.09 * P3 >= 500 MW then
Multi-phase		Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
Contingency		Gen-shed at MKL/DKW/QTY first: and then GMS/PCN, the greater of:
		 11.1 * [(P1 + 0.71 * P2 + 0.09 * P3) – 500 – armed gen-shed amount at KMO – 0.71 * armed gen-
		shed amount at FKR/VOL/MCY] [Transient Stability]
		 1.73 * [(5L12 + 0.64 * 5L13) WSN – 5L12_Over_Rating] - armed genshed at KMO/FKR /VOL/MCY
	5L61 MP	No generation shedding required
	5L1_2	If P1 + 0.63 * P2 >= 350 MW AND P3 > 600 MW, then, Gen shed at KMO: Level 1 [Transient Stability] Gen shed at EKB: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: • 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 2350] [Voltage Stability]
	511.2	• 1.03 ^ [(5L1 + 5L2) GMS + 5L3 PCN - 5L3_Over_Rating]
	JE1_5	Gen shed at FKR: Level 1 [Transient Stability] Gen shed at FKR: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: • 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 2350] [Voltage Stability] • 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 5L2 Over Pating]
	5117	• $1.05 [(5L1 + 5L2) GWS + 5L3 PGN - 5L2_OVel_Rating]$ If P1 + 0.63 * P2 >= 350 MW AND P3 > 600 MW then
	5L1_7	Gen shed at FKR: Level 1 [Transient Stability] Gen shed at FKR: Level 1 [Transient Stability]
Dauble		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: • 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – 2350] [Voltage Stability] • 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – 5L2 Over Pating]
Contingency (SLC	5 23	If P1 + 0.63 * P2 >= $350 \text{ MW} \text{ AND P3} > 600 \text{ MW}$ then
on different phases of two lines)	012_0	Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: • 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 2350] [Voltage Stability]
		 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 5L1_Over_Rating]
	5L2_7	If P1 + 0.63 * P2 >= 350 MW AND P3 > 600 MW, then,
		Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: • 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – 2350] [Voltage Stability] • 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – 5L1 Over Bating]
	5L11 12	Same as Table 5.1.1 - System Normal
	5L11 13	Same as Table 5.1.1 - System Normal
	5L12_13	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If 2.9 * P1 + 1.06 * P2 + P3 >= 2000 MW OR 5.2 * P1 + 4.6 * P2 + P3 >= 3000 MW Gen shed at KMO: Level 2 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: • 2.9 * P1 + 1.06 * P2 + P3 – 2000 – 2.9 * armed gen-shed amount at KMO – 1.06 * armed gen-shed

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		amount at FKR/VOL/MCY][Transient Stability]
		 5.2 * P1 + 4.6 * P2 + P3 – 3000 – 5.2 * armed gen-shed amount at KMO – 4.6 * armed gen-shed
		amount at FKR/VOL/MCY] [Transient Stability]
		• 7.74 * [2L96 WSN + 0.13 * (5L12 + 5L13) WSN – 2L96_Over_Rating] – armed gen-shedding amount
		at KMO/FKR/VOL/MCY
	KDY 5CX1	No generation shedding required
Sorios Consoitor	KDY 5CX2	No generation shedding required
	KDY 5CX3	No generation shedding required
Буразз	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
SLG or	5L11	Gen-shed requirements at KMO:
No Fault Opening		If 1.59 * P1 + 1.72 * P2 + P3 >= 4616, then
		Gen-shed at KMO: Level 1 [Transient Stability]
		Gen shed at QTY/MKL/DKW first, then GMS/PCN:
	51.40	1.72 " (0.63 " 5L11 WSN + 5L13 WSN - 5L13 Over Rating) - armed gensned amount at KMO
		No generation shedding required
		Same as 5L1 MP in Table 5.3.4 – MLS 5CX1 005
		Same as 5L1 MP in this Table
		Same as 5L3 MP in Table 5.3.4 – MLS 5CX1 OOS Table
		Same as 5L7 MP III Table 5.3.4 – MLS SCATOUS Table
Combined Multi-		Con shed requirements at KMO/EKPMOL/MCV:
phase Contingency		If $P1 + 0.71 * P2 + 0.09 * P3 >= 500 MW then$
(5L1/2/3/4/7/11/12)		Gen shed at KMO: Level 1 [Transient Stability]
Arm the greatest		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
gen shed		
requirement		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of:
		 11.1 * [(P1 + 0.71 * P2 + 0.09 * P3) – 500 – armed gen-shed amount at KMO – 0.71 * armed gen-
		shed amount at FKR/VOL/MCY] [Transient Stability]
		 1.73 * [(5L13 + 0.64 * 5L11) WSN – 5L13_Over_Rating] - armed genshed at KMO/FKR /VOL/MCY
	5L12 MP	Same as 5L12 MP in table 5.1.1-System normal
	5L13 MP	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If $P1 + 0.71 * P2 + 0.09 * P3 >= 500 \text{ MW then}$
		Gen shed at KMO: Level 1 [Iransient Stability]
Multi phooo		Gen shed at FKR/ VOL/MCT. Level 2 [Transferit Stability]
Multi-phase		Gen-shed at MKL/DKW/OTV first: and then GMS/PCN, the greater of:
Contingency		• $11.1 \times [(P1 + 0.71 \times P2 + 0.09 \times P3) - 500 - armed gen-shed amount at KMO - 0.71 \times armed gen-$
		shed amount at FKR//OL/MCYL[Transient Stability]
		 1.73 * [(5L11 + 0.64 * 5L13) WSN - 5L11 Over Rating] - armed genshed at KMO/FKR /VOL/MCY
	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.3.4 - MLS 5CX1 OOS
	5L1 3	Same as Table 5.3.4 - MLS 5CX1 OOS
	5L1_7	Same as Table 5.3.4 - MLS 5CX1 OOS
	5L2 3	Same as Table 5.3.4 - MLS 5CX1 OOS
	5L2_7	Same as Table 5.3.4 - MLS 5CX1 OOS
	5L11 12	Same as Table 5.1.1 - System Normal
	5L11_13	Gen-shed requirements at KMO/FKR/VOL/MCY:
Double		If $2.9 \degree P1 + 1.06 \degree P2 + P3 >= 2000 MW OK 5.2 \degree P1 + 4.6 \degree P2 + P3 >= 3000 MW$
Contingency (SLG		Gen shed at EKP(//OL/MCY: Lovel 3 [Transient Stability]
on different phases		Gen sheu al FKN/VOL/MCT. Level 3 [Transient Stability]
of two lines)		Gen shed at MKI /DKW/QTY first and then GMS/PCN, the greatest of
		• 2.9 * P1 + 1.06 * P2 + P3 – 2000 – 2.9 * armed gen-shed amount at KMO – 1.06 * armed gen-shed
		amount at FKR/VOL/MCY][Transient Stability]
		• 5.2 * P1 + 4.6 * P2 + P3 – 3000 – 5.2 * armed gen-shed amount at KMO – 4.6 * armed gen-shed
		amount at FKR/VOL/MCY][Transient Stability]
		 7.74 * [2L96 WSN + 0.13 * (5L11 + 5L13) WSN – 2L96_Over_Rating] – armed gen-shedding
		amount at KMO/FKR/VOL/MCY
	5L12 13	Same as Table 5.1.1 - System Normal
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	KDY 5CX3	No generation shedding required
	MLS 5CX1	No generation shedding required
		LINO DEDERATION SPECIALING REQUIRED

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L11	Gen-shed requirements at KMO:
		If $1.59 * P1 + 1.72 * P2 + P3 >= 4616$, then
SLG or		Gen-shed at KMO: Level 1 [Iransient Stability]
No Fault Opening		Conchad at OTV/MKL/DKM/first_than CMS/DCN:
		4.72 * (0.62 * 51.11 WCN + 51.12 WCN - 51.12 Over Beting)) ermed genehod emount at KMO
	51.10	1.72 (0.05 5LTT WSN + 5LT2 WSN - 5LT2 OVer Rating)) - anneu gensneu amount at KMO
	JLIZ	If 1 50 * P1 + 1 72 * P2 + P3 >= 1616 then
		Gen-shed at KMO ⁻ Level 1 [Transient Stability]
		Gen shed at QTY/MKL/DKW first, then GMS/PCN:
		1.72 * (0.63 * 5L12 WSN + 5L11 WSN – 5L11 Over Rating)) – armed genshed amount at KMO
	5L1 MP	Same as 5L1 MP in Table 5.3.4 – MLS 5CX1 OOS
	5L2 MP	Same as 5L1 MP in this Table
	5L3 MP	Same as 5L3 MP MP in Table 5.3.4 – MLS 5CX1 OOS
	5L7 MP	Same as 5L7 MP MP in Table 5.3.4 – MLS 5CX1 OOS
	5L4 MP	Same as 5L4 MP in Table 5.1.1 - System normal
	5L11 MP	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If $P1 + 0.71 * P2 + 0.09 * P3 >= 500 \text{ MW then}$
		Gen shed at KMO: Level 1 [Transient Stability]
Couch in ord Multi		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
Complined Wulti-		
phase Contingency		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of:
(3L1/2/3/4/7/11/12)		 11.1 * [(P1 + 0.71 * P2 + 0.09 * P3) – 500 – armed gen-shed amount at KMO – 0.71 * armed gen-
den shed		shed amount at FKR/VOL/MCY] [Transient Stability]
requirement		 1.73 * [(5L12 + 0.64 * 5L11) WSN – 5L12_Over_Rating] - armed genshed at KMO/FKR /VOL/MCY
	5L12 MP	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 + 0.09 * P3 >= 500 MW then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		One shad at MI(1/DI)M/OD/ first, and then OMO/DON! the sum star of
		Gen-sned at MKL/DKW/QTY TIRST; and then GMS/PCN, the greater of: 11.1 + 1/(P1 + 0.71 + P2 + 0.00 + P2), 500, armod gap shad amount at KMO = 0.71 + armod gap
		 II.1 [(FI+0.71 F2+0.09 F3)=500 - almed gen-sned amount at KWO-0.71 almed gen- shed amount at EKRA/OL/MCVI [Transient Stability]
		sheu amount al FKR/VOL/MCY] [Transient Stability] • 1.72 * [/5] 11 + 0.64 * 5] 12) W/SN - 5] 11 Over Beting] ermed genebed at KMO/EKB (V/OL/MCY
Multi phono		• 1.75 [[5LTT + 0.04 5LT2] WSN - 5LTT_OVEL_Rating] - attried gensiled at RMO/FRR / VOL/MCT
Contingency		Same as 5L15 MP in table 5. 1. 1 - System normal.
Contingency		Some as Table 5.3.4. MLS 5CX1 OOS
		Same as Table 5.3.4 - MLS 50X 1 005
	5117	Same as Table 5.3.4 - MLS 5CX1 005
	5123	Same as Table 5.3.4 - MLS SCAT OOS
	5127	Same as Table 5.3.4 - MLS SCAT COS
	51 11 12	Gen-shed requirements at KMO/FKR//OL/MCV
		If $29 \times P1 + 1.06 \times P2 + P3 >= 2000 \text{ MW} \text{ OR } 5.2 \times P1 + 4.6 \times P2 + P3 >= 3000 \text{ MW}$
		Gen shed at KMO ⁻ Level 2 [Transient Stability]
Double		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Contingency (SLG		
on different phases of two lines)		Gen shed at MKL/DKW/QTY first, and then GMS/PCN, the greatest of:
		 2.9 * P1 + 1.06 * P2 + P3 – 2000 – 2.9 * armed gen-shed amount at KMO – 1.06 * armed gen-shed
		amount at FKR/VOL/MCY][Transient Stability]
		• 5.2 * P1 + 4.6 * P2 + P3 – 3000 – 5.2 * armed gen-shed amount at KMO – 4.6 * armed gen-shed
		amount at FKR/VOL/MCY] [Transient Stability]
		 7.74 * [2L96 WSN + 0.13 * (5L11 + 5L12) WSN – 2L96_Over_Rating] – armed gen-shedding
		amount at KMO/FKR/VOL/MCY
	5L11_13	Same as Table 5.1.1 - System Normal
	5L12_13	Same as Table 5.1.1 - System Normal
	KDY 5CX1	No generation shedding required
Series Canacitor	KDY 5CX2	No generation shedding required
Bynase	KDY 5CX3	No generation shedding required
Dypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

5.4 <u>Two of GMS/PCN - KLY 500 kV Circuits Out of Service (Not on the Same Section of GMS/PCN to WSN or WSN to KLY)</u>

Table 5.4.1 – 5L1 AND 5L4 O.O.S.

Pre-outage Restrictions

GMS to WSN transfer limit:

- Summer: 5L2 GMS < 1935 MW
- Winter: 5L2 GMS < 2100 MW

WSN to KLY transfer limit: No generation restriction

	CONTINGENCY		SHEDDING REQUIREMENTS	
ľ		5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2	
	SLG or		Gen shed at GMS/MKL/DKW/QTY: • Shed down DKW/MKL/QTY; • Shed GMS down to:	
	No Fault Opening	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 3	
			Same as Table 5.2.4 – 5L4 OOS	
		5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_7	
			Same as Table 5.2.4 – 5L4 OOS	
_		5L11	No generation shedding required	
	_	5L12	No generation shedding required	
	Combined Multi-	5L2 MP	This MP contingency will be covered by double contingency of 5L1_2	
	phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L1_3	
	(5L1/2/3/4///11/12)	5L7 MP	I his MP contingency will be covered by double contingency of 5L1_7	
	Arm the greatest gen shed	5L11 MP	No generation shedding required	
	requirement	5L12 MP	No generation shedding required	
	Multi-phase	5L13 MP	No generation shedding required	
	Contingency	5L61 MP	No generation shedding required	
		5L1_2	Same as Table 5.2.4 – 5L4 OOS	
		5L1_3	Same as Table 5.2.4 – 5L4 OOS	
	Double Contingency (SLG	5L1_7	Same as Table 5.2.4 – 5L4 OOS	
	on both lines with	5L2_3	Islanding – Refer to Attachment 5.1 (a) 5L1 or (5L1 AND 5L4) OOS of 7T-13	
	anterent phases)	5L2_7	Islanding – Refer to Attachment 5.1 (a) 5L1 or (5L1 AND 5L4) OOS of 7T-13	
		5L11_12	Same as Table 5.2.1 – 5L1 OOS	
		5L11_13	Same as Table 5.2.1 – 5L1 OOS	
		5L12_13	Same as Table 5.2.1 – 5L1 OOS	
		KDY 5CX2	Gen shed at MKL/DKW/QTY first, then GMS:	
			1.01 * (5L2 GMS – 1600) [Voltage Stability]	
	Series Capacitor	KDY 5CX3	No generation shedding required	
	Bypass	MLS 5CX1	No generation shedding required	
		MLS 5CX2	No generation shedding required	
		MLS 5CX3	No generation shedding required	

Table 5.4.2 - 5L1 AND 5L11 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L2 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction
 - WSN to KLY transfer limit:
 - Summer: (5L12 + 5L13) WSN < 3500 MW
 Winter: (5L12 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS		
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.03 * (5L2 GMS + 5L3 PCN – 2000) [Voltage Stability]		
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 Same as 5L2 contingency in this table		
	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_7 1.03 * (5L2 GMS + 5L7 KDS – 2000) [Voltage Stability]		
	5L4	Gen shed at QTY/MKL/DKW first, then GMS: 1.01 * (5L2 GMS + 5L4 GMS – 5L2 Over Rating)		
SLG or No Fault Opening	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12 Gen shed requirements at FKR/VOL/MCY/KMO: If P1 + P2 + 0.93 * P3 < 3003, no gen shedding is required. If P1 + P2 + 0.93 * P3 >= 3003, then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]		
		 Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of: 1.08 * (P1 + P2 + 0.93 * P3 – 3003 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability] 1.05 * ((5L12 + 5L13) WSN – 5L13 Over Rating) – armed GS amount at KMO/FKR/VOL/MCY 		
Combined Multi-	5L2 MP	This MP contingency will be covered by double contingency of 5L1_2		
phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L1_3		
(5L1/2/3/4/7/11/12)	5L7 MP	This MP contingency will be covered by double contingency of 5L1_7		
Arm the greatest	5L4 MP	Same as Table 5.2.1 – 5L1 OOS		
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L11_12		
Multi-phase	5L13 MP	Same as double contingency of 5L11_13 in this table		
Contingency	5L61 MP	No generation shedding required		
	5L1_2	Gen-shed at MKL/DKW/QTY first, and then GMS/PCN: 1.03 * (5L2 GMS + 5L3 PCN – 2000) [Voltage Stability]		
	5L1_3	Same as 5L1 2 contingency in this table.		
	5L1_7	Gen-shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.63 * P3 < 1929, no gen-shedding is required; If P1 + P2 + 0.63 * P3 >= 1929, Con shed at KMO: Level 1 or		
Double Contingency (SI G		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]		
on both lines with different phases)		 Gen-shed at MKL/DKW/QTY first, and then GMS/PCN, the greater of: 1.59 * (P1 + P2 + 0.63 * P3 – 1929 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] 1.03 * (5L2 GMS + 5L3 PCN – 2000) [Voltage Stability] 		
	5L2 3	Islanding – Refer to Attachment 5 of SOO 7T-13		
	5L2 7	Islanding – Refer to Attachment 5 of SOO 7T-13		
	<u>5L2 4</u>	Same as Table 5.2.1 – 5L1 OOS		
	<u>5111 12</u>	Same as Table 5.2.5 – 5L11 005		
	51 12 13	Refer to Attachment 5 of 7T-13		
	KDY 5CX2	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of:		
		 1.46 * (0.32 * 5L2 GMS + 5L3 PCN – 5L3_Over_Rating) 1.01 * (5L2 GMS + 5L3 PCN – 3287) [Voltage Stability] 		
	KDY 5CX3	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of: • 1.46 * (0.32 * 5L3 PCN + 5L2 GMS – 5L2 Over Rating)		
Series Capacitor		• 1.01 * (5L2 GMS + 5L3 PCN – 3287) [Voltage Stability]		
Bypass	MLS 5CX2	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of: • 1.69 * (0.33 * 5L12 WSN + 5L13 WSN – 5L13 Over Rating)		
	MISECVO	• 1.18 ^ ((5L12 + 5L13) WSN – (-0.08 ^ BCH Load + 3600)) [Voltage Stability]		
		• 1.69 * (0.33 * 5L13 WSN + 5L12 WSN - 5L12_Over_Rating)		
	1	י ו. וס ((כבוב + כבוכ) איכוא – (-ט.טס שלה Load + גאטט) [Voltage Stability]		

Table 5.4.3 - 5L1 AND 5L12 O.O.S.

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- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L2 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction
 - WSN to KLY transfer limit:
 - Summer: (5L11 + 5L13) WSN < 3500 MW
 Winter: (5L11 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.4.2 - 5L1 AND 5L11 OOS
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 3 Same as Table 5.4.2 - 5L1 AND 5L11 OOS
	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_7 Same as Table 5.4.2 - 5L1 AND 5L11 OOS
	5L4	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
SLG or	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12 Gen-shed requirements at FKR/VOL/MCY/KMO:
No Fault Opening		If P1 + $P2$ + 0.93 * P3 < 3003, no gen shedding is required.
		If P1 + P2 + 0.93 * P3 >= 3003, then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of:
		• 1.08 * (P1 + P2 + 0.93 * P3 – 3003 – armed GS amount at KMO/FKR/VOL/MCY) [Transient
		Stability]
		 1.05 * ((5L11 + 5L13) WSN – 5L13 Over Rating) – armed GS amount at KMO/FKR/VOL/MCY
Combined Multi-	5L2 MP	This MP contingency will be covered by double contingency of 5L1_2
phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L1_3
(5L1/2/3/4/7/11/12)	5L7 MP	This MP contingency will be covered by double contingency of 5L1_7
Arm the greatest	5L4 MP	Same as Table 5.2.1 – 5L1 OOS
gen shed	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
requirement		
Multi-phase	5L13 MP	Same as double contingency of 5L12_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
	<u>5L1_3</u>	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
Double	<u>5L1 /</u>	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
Contingency (SLG	5L2 3	Islanding – Refer to Attachment 5 of SOU / I-13
on both lines with	5L2 7	Islanding – Refer to Attachment 5 of SOU / 1-13
different phases)	5LZ 4	Same as Table 5.2.1 – 5L1 005
		Same as Table 5.2.0 – $5L12005$
	<u> </u>	Some as Table 5.2.6 51 12 OOS
		Same as Table 5.2.0 – 5L12 003
		Same as Table 5.4.2 - 5L1 AND 5L11 005
	MIS 5CX1	Con shod at DK/W/OTV/MKL first than GMS/PCNL the greater of:
Series Capacitor	MILS JUX I	• $1.69 * (0.33 * 51.11 \text{ WSN} + 51.13 \text{ WSN} - 51.13 \text{ Over Rating})$
Bypass		• $1.18 * ((51.11 + 51.13) WSN - (-0.08 * BCH Load + 3600)) [Voltage Stability]$
=) =	MLS 5CX3	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of
		• 1.69 * (0.33 * 5L13 WSN + 5L11 WSN – 5L11 Over Rating)
		 1.18 * ((5L11 + 5L13) WSN – (-0.08 * BCH Load + 3600)) [Voltage Stability]

Table 5.4.4 – 5L1 AND 5L13 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L2 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction
 - WSN to KLY transfer limit:
 - Summer: (5L11 + 5L12) WSN < 3500 MW
 Winter: (5L11 + 5L12) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.4.2 - 5L1 AND 5L11 OOS.
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 Same as Table 5.4.2 - 5L1 AND 5L11 OOS.
	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_7 Same as Table 5.4.2 - 5L1 AND 5L11 OOS.
	5L4	Same as Table 5.4.2 - 5L1 AND 5L11 OOS.
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_13 Gen shed requirements at FKR/VOL/MCY/KMO: If P1 + P2 + 0.93 * P3 < 3003, no gen shedding is required. If P1 + P2 + 0.93 * P3 >= 3003, then
SLG or		Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
No Fault Opening		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of: • 1.08 * (P1 + P2 + 0.93 * P3 – 3003 – armed GS amount at KMO/FKR/VOL/MCY) • 1.05 * ((5L11 + 5L12) WSN – 5L12_Over_Rating) – armed GS amount at KMO/FKR/VOL/MCY
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13 Gen shed requirements at FKR/VOL/MCY/KMO: If P1 + P2 + 0.93 * P3 < 3003, no gen shedding is required.
		Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of: • 1.08 * (P1 + P2 + 0.93 * P3 – 3003– armed GS amount at KMO/EKR//OL/MCY)
		• $1.05 * ((51.11 + 51.12) WSN - 51.11 Over Rating) - armed GS amount at KMO/FKR/VOL/MCY$
	5L2 MP	This MP contingency will be covered by double contingency of 5L1 2
Combined Multi-	5L3 MP	This MP contingency will be covered by double contingency of 5L1 3
phase Contingency	5L7 MP	This MP contingency will be covered by double contingency of 5L1 7
(5L1/2/3/4/7/11/12)	5L4 MP	Same as Table 5.2.1 - 5L1 OOS
Arm the greatest	5L11 MP	This MP contingency will be covered by double contingency of 5L11 13
gen shed requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L12_13
Multi-phase Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
	5L1_3	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
Double	5L1_7	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
Contingency (SLG	5L2_3	Islanding – Refer to Attachment 5 of SOO 7T-13
on both lines with	5L2_7	Islanding – Refer to Attachment 5 of SOO 7T-13
different phases)	5L2_4	Same as Table 5.2.1 – 5L1 OOS
	5L11_12	Refer to Attachment 5 of SOO 7T-13
	5L11_13	Same as Table 5.2.7 – 5L13 OOS
	5L12_13	Same as Table 5.2.7 – 5L13 OOS
	KDY 5CX2	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
	KDY 5CX3	Same as Table 5.4.2 - 5L1 AND 5L11 OOS
	MLS 5CX1	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of:
Series Capacitor		• 1.69 * (0.33 * 5L11 WSN + 5L12 WSN – 5L12_Over_Rating)
Bypass		• 1.18 ^ ((5L11 + 5L12) WSN – (-0.08 * BCH Load + 3600)) [Voltage Stability]
	MLS 5CX2	Gen sned at DKW/QTY/MKL first, then GMS/PCN, the greater of: • 1.69 * (0.33 * 5L12 WSN + 5L11 WSN – 5L11_Over_Rating)
		I 1.18 ^ ((5L11 + 5L12) WSN – (-0.08 ^ BCH Load + 3600)) [Voltage Stability]

Table 5.4.5 - 5L2 AND 5L4 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L1 GMS < 1935 MW
 - Winter: 5L1 GMS < 2100 MW

WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2
		Gen shed at GMS/MKL/DKW/QTY: • Shed down DKW/MKL/QTY: • Shed GMS down to:
No Fault Opening	51.3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 51.2.3
		Same as Table 5.2.4 – 5L4 OOS
	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_7
		Same as Table 5.2.4 – 5L4 OOS
	5L11	No generation shedding required
	5L12	No generation shedding required
	5L1 MP	This MP contingency will be covered by double contingency of 5L1_2
phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L2_3
Arm the greatest	5L7 MP	This MP contingency will be covered by double contingency of 5L2_7
gen sneu requirement	5L11 MP	No generation shedding required
requirement	5L12 MP	No generation shedding required
Multi-phase	5L13 MP	No generation shedding required
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.2.4 – 5L4 OOS
	5L1_3	Islanding – Refer to Attachment 5.1 (b) 5L2 or (5L2 AND 5L4) OOS of SOO 7T-13
Double	5L1_7	Islanding – Refer to Attachment 5.1 (b) 5L2 or (5L2 AND 5L4) OOS of SOO 7T-13
Contingency (SLG on both lines with different phases)	5L2_3	Same as Table 5.2.4 – 5L4 OOS
	5L2_7	Same as Table 5.2.4 – 5L4 OOS
	5L11_12	Same as Table 5.2.2 – 5L2 OOS
	5L11_13	Same as Table 5.2.2 – 5L2 OOS
	5L12_13	Same as Table 5.2.2 – 5L2 OOS
	KDY 5CX1	Gen shed at MKL/DKW/QTY first, then GMS:
		1.01 * (5L1 GMS – 1600) [Voltage Stability]
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	1VILS 50X3	I no generation sneuding required

Table 5.4.6 - 5L2 AND 5L11 O.O.S.

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- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L1 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction
 - WSN to KLY transfer limit:
 - Summer: (5L12 + 5L13) WSN < 3500 MW
 Winter: (5L12 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.03 * (5L1 GMS + 5L3 PCN – 2000) [Voltage Stability]
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3
SLG or No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_7 1.03 * (5L1 GMS + 5L7 KDS – 2000) [Voltage Stability]
	5L4	Gen shed at QTY/MKL/DKW first, then GMS: 1.01 * (5L1 GMS + 5L4 GMS – 5L1 Over Rating)
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12 Same as Table 5.4.2 – 5L1 AND 5L11 OOS
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_2
phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L2_3
(5L1/2/3/4/7/11/12)	5L7 MP	This MP contingency will be covered by double contingency of 5L2_7
Arm the greatest	5L4 MP	Same as Table 5.2.2 – 5L2 OOS
gen shed requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L11 13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Gen-shed at MKL/DKW/QTY first, and then GMS/PCN: 1.03 * [5L1 GMS + 5L3 PCN – 2000] [Voltage Stability]
	5L1_3	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1_7	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1_4	Same as Table 5.2.2 – 5L2 OOS
	5L2_3	Same as 5L1_2 contingency in this table
5	5L2_7	Gen-shed requirements at KMO/FKR/VOL/MCY:
Double		If P1 + P2 + 0.63 * P3 < 1929, no gen-shedding is required;
Contingency (SLG		If $P1 + P2 + 0.63 * P3 >= 1929$ then
on both lines with		Gen shed at KMO: Level 1, or
different phases)		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first, and then GMS/PCN, the greater of:
		 1.59 * (P1 + P2 + 0.63 * P3 – 1929 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
		 1.03 * (5L1 GMS + 5L3 PCN – 2000) [Voltage Stability]
	5L11_12	Same as Table 5.2.5 – 5L11 OOS
	5L11_13	Same as Table 5.2.5 – 5L11 OOS
	5L12_13	Refer to Attachment 5 of SOO 7T-13
	KDY 5CX1	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of:
		 1.46 * (0.32 * 5L1 GMS + 5L3 PCN – 5L3_Over_Rating)
		1.01 * (5L1 GMS + 5L3 PCN – 3287) [Voltage Stability]
Series Capacitor	KDY 5CX3	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of:
вураss		• 1.40° (0.32° 5L3 PUN + 5L1 GMS - 5L1_UVer_Kating) • $1.04 \times (5L4 - CMS + 5L3 - DCN - 3297) [V(a) tage States [15]]$
		• I.UI (5LI GIVIS + 5L3 POIN - 3287) [VOItage Stability] Some on Table 5.4.2 EL1 AND EL11 OOS
		$\frac{1}{2} = \frac{1}{2} = \frac{1}$
		I GAILE AS TANE J.H.Z - JET AND JETT OUG

Table 5.4.7 – 5L2 AND 5L12 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit:

- - Summer: 5L1 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction
- WSN to KLY transfer limit:
 - Summer: (5L11 + 5L13) WSN < 3500 MW
 Winter: (5L11 + 5L13) WSN < 3500 MW

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
SLG or No Fault Opening	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_7 Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L4	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12
		Same as Table 5.4.3 - 5L1 AND 5L12 OOS
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1 2
phase Contingency (5L1/2/3/4/7/11/12)	5L3 MP	This MP contingency will be covered by double contingency of 5L2_3
Arm the greatest	5L7 MP	This MP contingency will be covered by double contingency of 5L2 7
gen shed	5L4 MP	Same as Table 5.2.2 – 5L2 OOS
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L12 13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L1_3	Islanding – Refer to Attachment 5 of SOO 7T-13
Double	5L1_7	Islanding – Refer to Attachment 5 of SOO 7T-13
Contingency (SLG	5L1_4	Same as Table 5.2.2 – 5L2 OOS
on both lines with	5L2_3	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
different phases)	5L2 7	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	<u>5L11_12</u>	Same as Table 5.2.6 - 5L12 OOS
	5L11 13	Refer to Attachment 5 of SOO 7T-13
	<u>5L12_13</u>	Same as Table 5.2.6 - 5L12 OOS
Series Capacitor Bypass	KDY 5CX1	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	KDY 5CX3	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	MLS 5CX1	Same as Table 5.4.3 - 5L1 AND 5L12 OOS
	MLS 5CX3	Same as Table 5.4.3 - 5L1 AND 5L12 OOS

Table 5.4.8 - 5L2 AND 5L13 O.O.S.

Pre-outage Restrictions

- GMS to WSN transfer limit:
 - Summer: 5L1 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction
- WSN to KLY transfer limit:
 - Summer: (5L11 + 5L12) WSN < 3500 MW
 - Winter: (5L11 + 5L12) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 Same as Table 5.4.6 - 5L2 AND 5L11 OOS
SLG or No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_7 Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L4	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L11	Same as Table 5.4.4 - 5L1 AND 5L13 OOS
	5L12	Same as Table 5.4.4 - 5L1 AND 5L13 OOS
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_2
phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L2 3
(5L1/2/3/4/7/11/12)	5L7 MP	This MP contingency will be covered by double contingency of 5L2 7
Arm the greatest	5L4 MP	Same as Table 5.2.2 – 5L2 OOS
gen shed	5L11 MP	This MP contingency will be covered by double contingency of 5L11 13
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L12 13
Multi-phase Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	5L1_3	Islanding – Refer to Attachment 5 of SOO 7T-13
Double	5L1 7	Islanding – Refer to Attachment 5 of SOO 7T-13
Contingency (SLG	5L1_4	Same as Table 5.2.2 – 5L2 OOS
on both lines with	5L2 3	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
different phases)	5L2 7	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
	_5L11_12	Refer to Attachment 5 of SOO 7T-13
	_5L11_13	Same as Table 5.2.7 - 5L13 OOS
	5L12_13	Same as Table 5.2.7 - 5L13 OOS
	KDY 5CX1	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
Series Capacitor	KDY 5CX3	Same as Table 5.4.6 - 5L2 AND 5L11 OOS
Bypass	MLS 5CX1	Same as Table 5.4.4 - 5L1 AND 5L13 OOS
	MLS 5CX2	Same as Table 5.4.4 - 5L1 AND 5L13 OOS

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CONTINGENCY		SHEDDING REQUIREMENTS				
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 or 5L1_7 Gen shed at QTY/MKL/DKW first, then GMS: 1.03 * ((5L1 + 5L2) GMS – 5L2 Over Rating)				
SLG or No Fault Opening	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7 Gen shed at QTY/MKL/DKW first, then GMS: 1.03 * ((5L1 + 5L2) GMS – 5L2_Over_Rating)				
	5L11	No generation shedding required				
	5L12	No generation shedding required				
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_3 or 5L1_7				
phase Contingency (5L1/2/3/4/7/11/12)	5L2 MP	This MP contingency will be covered by double contingency of 5L2_3 or 5L2_7				
Arm the greatest	5L11 MP	No generation shedding required				
requirement	5L12 MP	No generation shedding required				
Multi-phase	5L13 MP	No generation shedding required				
Contingency	5L61 MP	No generation shedding required				
	5L1_2	Islanding – Refer to Attachment 5.1 (c) 5L3 or 5L7 or (5L3 AND 5L7) or ((5L3 or 5L7 or (5L3 AND 5L7)) AND 5L4) OOS of 7T-13				
	5L1_3	Gen-shed at MKL/DKW/QTY first and then GMS: 1.03 * [(5L1 + 5L2) GMS – 5L2 Over Rating]				
	5L1_7	Gen-shed at MKL/DKW/QTY first and then GMS: 1.03 * [(5L1 + 5L2) GMS – 5L2_Over_Rating]				
	5L2_3	Gen-shed at MKL/DKW/QTY first and then GMS: 1.03 * [(5L1 + 5L2) GMS – 5L1 Over Rating]				
	5L2_7	Gen-shed at MKL/DKW/QTY first and then GMS: 1.03 * [(5L1 + 5L2) GMS – 5L1 Over Rating]				
	5L11_12	Gen-shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.71 * P3 < 2100 MW, no gen-shedding is required;				
		If P1 + P2 + 0.71 * P3 >= 2100 MW Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]				
		 Gen-shed at MKL/DKW/QTY first; and then GMS, the greater of: 1.4 * [(P1 + P2 + 0.71 * P3) – 2100 – armed gen-shedding amount at KMO/FKR/VOL/MCY] 				
Double		 1.08 * [(5L11 + 5L12 + 5L13) WSN – 5L13_Over_Rating] – armed gen-shedding amount at KMO/FKR/VOL/MCY 				
on both lines with different phases)	5L11_13	Gen-shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.71 * P3 < 2100 MW, no gen-shedding is required;				
		If P1 + P2 + 0.71 * P3 >= 2100 MW Gen shed at KMO: Level 1 [Transient Stability]				
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]				
		Gen-shed at MKL/DKW/QTY first; and then GMS, the greater of: • 1.4 * [(P1 + P2 + 0.71 * P3) – 2100 – armed gen-shedding amount at KMO/FKR/VOL/MCY]				
		 Iransient Stability] 1.08 * [(5L11 + 5L12 + 5L13) WSN – 5L12_Over_Rating] – armed gen-shedding amount at KMO/EKRA/OL/MCY 				
	5L12_13	Gen-shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.71 * P3 < 2100 MW, no gen-shedding is required;				
		If P1 + P2 + 0.71 ^ P3 >= 2100 MW Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOI /MCY: Level 2 [Transient Stability]				
		Gen-shed at MKL/DKW/QTY first; and then GMS, the greater of:				
		 1.4 [(P1+P2+0.71*P3)-2100 - armed gen-snedding amount at KMO/FKR/VOL/MCY] [Transient Stability] 1.08 * [(5L11 + 5L12 + 5L13) WSN - 5L11 Over Rating] - armed gen-shedding amount at 				
		KMO/FKR/VOL/MCY				
	KDY 5CX1	No generation shedding required				
Series Capacitor	KDY 5CX2	No generation shedding required				
Bypass	MIS 5CX1	No generation shedding required				
	MLS 5CX3	No generation shedding required				

Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) AND 5L11 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit:

- - Summer: (5L1 + 5L2) GMS < 3800 MW
 - Winter: No generation restriction
- WSN to KLY transfer limit:
 - Summer: (5L12 + 5L13) WSN < 3500 MW
 Winter: (5L12 + 5L13) WSN < 3500 MW

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS			
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 or 5L1_7 Gen shed at MKL/DKW/QTY first, then at GMS/PCN: 1.03 * ((5L1 + 5L2) GMS – 2000) [Voltage Stability]			
SLG or No Fault Opening	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7 Same as 5L1 SLG contingency in this table			
	5L4	Same as Table 5.2.3. – 5L3 or 5L7 or (5L3 AND 5L7) OOS			
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12 Same as Table 5.4.2. – 5L1 AND 5L11 OOS			
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_3 or 5L1_7			
phase Contingency	5L2 MP	This MP contingency will be covered by double contingency of 5L2_3 or 5L2_7			
(5L1/2/3/4/7/11/12)	5L4 MP	Same as Table 5.2.3. – 5L3 or 5L7 or (5L3 AND 5L7) OOS			
Arm the greatest gen shed	5L12 MP	This MP contingency will be covered by double contingency of 5L11_12			
Multi-phase	5I 13 MP	Same as double contingency of 5I 11, 13 in this table			
Contingency	51.61 MP	No generation shedding required			
	5L1 2	Islanding - Refer to Attachment 5 of SOO 7T-13			
Daubla	5L1_3	Gen-shed at MKL/DKW/QTY first, and then GMS/PCN: 1.03 * [(5L1 + 5L2) GMS – 2000] [Voltage Stability]			
	5L1_7	Same as 5L1_3 in this table.			
contingency (SLG	5L2_3	Same as 5L1_3 in this table.			
different nhases)	5L2_7	Same as 5L1_3 in this table			
	5L11_12	Same as Table 5.2.5 – 5L11 OOS			
	5L11_13	Same as Table 5.2.5 – 5L11 OOS			
	5L12_13	Refer to Attachment 5 of 7T-13			
Series Capacitor Bypass	KDY 5CX1	 Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of: 1.44 * (0.34 * 5L1 GMS + 5L2 GMS – 5L2_Over_Rating) 1.01 * ((5L1 + 5L2) GMS – 3287) [Voltage Stability] 			
	KDY 5CX2	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of:			
		 1.44 * (0.34 * 5L2 GMS + 5L1 GMS – 5L1_Over_Rating) 1.01 * ((5L1 + 5L2) GMS – 3287) [Voltage Stability] 			
	MLS 5CX2	Same as Table 5.4.2 – 5L1 AND 5L11 OOS			
	MLS 5CX3	Same as Table 5.4.2 – 5L1 AND 5L11 OOS			

Table 5.4.11 - (5L3 or 5L7 or (5L3 & 5L7)) AND 5L12 O.O.S.

Pre-outage Restrictions

GMS to WSN transfer limit:

- Summer: (5L1 + 5L2) GMS < 3800 MW
 Winter: No generation restriction
 WSN to KLY transfer limit:

 - - Summer: (5L11 + 5L13) WSN < 3500 MW
 - Winter: (5L11 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 or 5L1_7 Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) AND 5L11 OOS
SLG or	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7 Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) AND 5L11 OOS
No Fault Opening	5L4	Same as Table 5.2.3. – 5L3 or 5L7 or (5L3 AND 5L7) OOS
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12 Same as Table 5.4.3 - 5L1 AND 5L12 OOS
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1 3 or 5L1 7
phase Contingency (5L1/2/3/4/7/11/12)	5L2 MP	This MP contingency will be covered by double contingency of 5L2_3 or 5L2_7
Arm the greatest	5L4 MP	Same as Table 5.2.3. – 5L3 or 5L7 or (5L3 AND 5L7) OOS
gen shed	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
requirement		
Multi-phase	5L13 MP	Same as double contingency of 5L12_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1_3	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
Double Contingency (SLG on both lines with	5L1_7	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
	5L2_3	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
	5L2_7	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
different phases)	<u>5L11_12</u>	Same as Table 5.2.6 – 5L12 OOS
	<u>5L11_13</u>	Refer to Attachment 5 of SOO 7T-13
	5L12_13	Same as Table 5.2.6 – 5L12 OOS
	KDY 5CX1	Same as Table 5.4.10 – (5L3 or 5L7 or (5L3 & 5L7)) AND 5L11 OOS
Series Capacitor	KDY 5CX2	Same as Table 5.4.10 – (5L3 or 5L7 or (5L3 & 5L7)) AND 5L11 OOS
Bypass	MLS 5CX1	Same as Table 5.4.3 – 5L1 AND 5L12 OOS
	MLS 5CX3	Same as Table 5.4.3 – 5L1 AND 5L12 OOS

Table 5.4.12 - (5L3 or 5L7 or (5L3 & 5L7)) AND 5L13 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit:

- - Summer: (5L1 + 5L2) GMS < 3800 MW
 - Winter: No generation restriction
- WSN to KLY transfer limit:
 - Summer: (5L11 + 5L12) WSN < 3500 MW
 Winter: (5L11 + 5L12) WSN < 3500 MW

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 or 5L1_7 Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) AND 5L11 OOS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7 Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) AND 5L11 OOS
SLG OF No Foult Opening	5L4	Same as Table 5.2.3 – 5L3 or 5L7 or (5L3 AND 5L7) OOS
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_13 Same as Table 5.4.4 – 5L1 AND 5L13 OOS
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13 Same as Table 5.4.2 – 5L1 AND 5L11 OOS
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_3 or 5L1_7
phase Contingency (5L1/2/3/4/7/11/12)	5L2 MP	This MP contingency will be covered by double contingency of 5L2_3 or 5L2_7
Arm the greatest	5L4 MP	Same as Table 5.2.3 – 5L3 or 5L7 or (5L3 AND 5L7) OOS
gen shed	5L11 MP	This MP contingency will be covered by double contingency of 5L11_13
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L12_13
Multi-phase Contingency	5L61 MP	No generation shedding required
	5L1 2	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1_3	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
Double Contingency (SLG on both lines with	5L1_7	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
	5L2_3	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
	5L2_7	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
differentphases)	5L11_12	Refer to Attachment 5 of SOO 7T-13
	5L11_13	Same as Table 5.2.7 – 5L13 OOS
	5L12_13	Same as Table 5.2.7 – 5L13 OOS
	KDY 5CX1	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
Series Capacitor Bypass	KDY 5CX2	Same as Table 5.4.10 - (5L3 or 5L7 or (5L3 & 5L7)) and 5L11 OOS
	MLS 5CX1	Same as Table 5.4.4 – 5L1 AND 5L13 OOS
	MLS 5CX2	Same as Table 5.4.4 – 5L1 AND 5L13 OOS

Table 5.4.13 - 5L4 AND 5L11 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction

WSN to KLY transfer limit:

- Summer: (5L12 + 5L13) WSN < 3500 MW
- Winter: (5L12 + 5L13) WSN < 3500 MW •

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.2.4 – 5L4 OOS
	5L2	Same as Table 5.2.4 – 5L4 OOS
SLG or	5L3	Same as Table 5.2.4 – 5L4 OOS
No Fault Opening	5L7	Same as Table 5.2.4 – 5L4 OOS
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12 Same as Table 5.2.5 – 5L11 OOS
Combined Multi-	5L1 MP	Same as Table 5.2.4 – 5L4 OOS
phase Contingency	5L2 MP	Same as Table 5.2.4 – 5L4 OOS
(5L1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.2.4 – 5L4 OOS
Arm the greatest	5L7 MP	Same as Table 5.2.4 – 5L4 OOS
gen shed requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L11_12.
Multi-phase	5L13 MP	Same as double contingency of 5L11 13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.2.4 – 5L4 OOS
	5L1_3	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then,
Double		Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second: ➤ GS = 5L3 PCN - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
		Keep at least two PCN units online post shedding.
on both lines with		Gen-shed at GMS:
different phases)		1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – Armed GS MW at DKW/MKL/QTY/PCN – 2000] [Voltage Stability]
	5L1_7	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then, Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second: → GS = 5L7 KDS - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
		Keep at least two PCN units online post shedding.
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		Gen-shed at GMS: 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – Armed GS MW at DKW/MKL/QTY/PCN – 2000] [Voltage Stability]
	5L2 3	Same as 5L1_3 contingency in this table
	5L2 7	Same as 5L1_7 contingency in this table
	5L11_12	Same as Table 5.2.5 – 5L11 OOS
	5L11_13	Same as Table 5.2.5 – 5L11 OOS
	5L12_13	Refer to Attachment 5 of SOO 7T-13
	KDY 5CX1	No generation shedding required
Series Capacitor Bypass	KDY 5CX2	No generation shedding required
	KDY 5CX3	No generation shedding required
	MLS 5CX2	Same as Table 5.2.5 – 5L11 OOS
	MLS 5CX3	Same as Table 5.2.5 – 5L11 OOS

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L13) WSN < 3500 MW
 Winter: (5L11 + 5L13) WSN < 3500 MW

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.2.4 – 5L4 OOS.
	5L2	Same as Table 5.2.4 – 5L4 OOS.
SLG or	5L3	Same as Table 5.2.4 – 5L4 OOS
No Fault Opening	5L7	Same as Table 5.2.4 – 5L4 OOS
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12
		Same as Table 5.2.6 – 5L12 OOS
Combined Multi-	5L1 MP	Same as Table 5.2.4 – 5L4 OOS
phase Contingency	5L2 MP	Same as Table 5.2.4 – 5L4 OOS
(5L1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.2.4 – 5L4 OOS
Arm the greatest	5L7 MP	Same as Table 5.2.4 – 5L4 OOS
gen shed	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
requirement		
Multi-phase	5L13 MP	Same as double contingency of 5L12 13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.2.4 – 5L4 OOS
	5L1 3	Same as Table 5.4.13 - 5L4 AND 5L11 OOS
Double	5L1 7	Same as Table 5.4.13 - 5L4 AND 5L11 OOS
Contingency (SLG	5L2 3	Same as Table 5.4.13 - 5L4 AND 5L11 OOS
on both lines with	5L2 7	Same as Table 5.4.13 - 5L4 AND 5L11 OOS
different phases)	5L11 12	Same as Table 5.2.6 – 5L12 OOS
	5L11_13	Refer to Attachment 5 of SOO 7T-13
	5L12_13	Same as Table 5.2.6 – 5L12 OOS
Series Capacitor Bypass	KDY 5CX1	No generation shedding required
	KDY 5CX2	No generation shedding required
	KDY 5CX3	No generation shedding required
	MLS 5CX1	Same as Table 5.2.6 – 5L12 OOS
	MLS 5CX3	Same as Table 5.2.6 – 5L12 OOS

Table 5.4.15 - 5L4 AND 5L13 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12) WSN < 3500 MW
 Winter: (5L11 + 5L12) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.2.4 – 5L4 OOS.
	5L2	Same as Table 5.2.4 – 5L4 OOS.
	5L3	Same as Table 5.2.4 – 5L4 OOS
SLG or	5L7	Same as Table 5.2.4 – 5L4 OOS
No Fault Opening	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_13 Same as Table 5.2.7 – 5L13 OOS
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13 Same as Table 5.2.7 – 5L13 OOS
O a male in a al Marité	5L1 MP	Same as Table 5.2.4 – 5L4 OOS
	5L2 MP	Same as Table 5.2.4 – 5L4 OOS
pnase Contingency $(51, 1/2)/2/4/7/11/12)$	5L3 MP	Same as Table 5.2.4 – 5L4 OOS
(3L1/2/3/4/7/11/12)	5L7 MP	Same as Table 5.2.4 – 5L4 OOS
den shed	5L11 MP	This MP contingency will be covered by double contingency of 5L11_13
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L12_13
Multi-phase Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.2.4 – 5L4 OOS
	5L1_3	Same as Table 5.4.13 - 5L4 AND 5L11 OOS
Double	5L1_7	Same as Table 5.4.13 - 5L4 AND 5L11 OOS
Contingency (SLG	5L2_3	Same as Table 5.4.13 - 5L4 AND 5L11 OOS
on both lines with	5L2_7	Same as Table 5.4.13 - 5L4 AND 5L11 OOS
differentphases)	5L11_12	Refer to Attachment 5 of SOO 7T-13
	5L11_13	Same as Table 5.2.7 – 5L13 OOS
	5L12_13	Same as Table 5.2.7 – 5L13 OOS
	KDY 5CX1	No generation shedding required
Sorios Conocitor	KDY 5CX2	No generation shedding required
Bynass	KDY 5CX3	No generation shedding required
Dypass	MLS 5CX1	Same as Table 5.2.7 – 5L13 OOS
	MLS 5CX2	Same as Table 5.2.7 – 5L13 OOS

5.5 One of the 500 kV Circuits and One of the Series Capacitor Banks between GMS/PCN – KLY Out of Service

Table 5.5.1 – 5L1 AND KDY 5CX2 0.0.S.

Pre-outage Restrictions

GMS to WSN transfer limit:

- Summer: 5L2 GMS + 5L3 PCN < 2985 MW
- Winter: 5L2 GMS + 5L3 PCN < 3300 MW

WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.2.1 - 5L1 OOS
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1.03 * (5L2 GMS + 5L3 PCN – (– 0.55 * 2L103 KIT + 1636)) [Voltage Stability]
SLG or No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_7 Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1.03 * (5L2 GMS + 5L7 KDS – (– 0.55 * 2L103 KIT + 1636)) [Voltage Stability]
	5L4	Gen shed at DKW/QTY/MKL first, then GMS: 1.01 * (5L2 GMS + 5L4 GMS – (– 0.19 * 2L103 KIT + 1607)) [Voltage Stability]
	5L11 5L12	No generation shedding required No generation shedding required
	5I 2 MP	This MP contingency will be covered by double contingency of 51.1.2
		This MD contingency will be covered by double contingency of EL1_2
		This MP contingency will be covered by double contingency of 5L1 5
	5L4 MP	Gen-shed at MKL/DKW/QTY first; and then GMS: 1.03 * (5L2 GMS + 5L4 GMS – 1500) [Voltage Stability]
combined Multi- phase Contingency (5L1/2/3/4/7/11/12) Arm the greatest	5L11 MP	Gen-shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.85 * P2 + 0.11 * P3 >= 500 MW Gen shed at KMO: Level 1[Transient Stability] Gen shed at EKR/VOL/MCY: Level 1[Transient Stability]
gen shed requirement		 Gen-shed at MKL/DKW/QTY first; and then GMS/PCN: 9.1 * [(P1 + 0.85 * P2 + 0.11 * P3) – 500 – armed gen-shed amount at KMO - 0.85 * armed gen-shed amount at FKR/VOL/MCY] [Transient Stability]
	5I 12 MD	Sama as 51 11 MP in this table
Multi-nhase	5L13 MP	Same as 5L11 MP in this table
Contingency	51.61 MP	No generation shedding required
- 5 5	5L1 2	Same as Table 5.2.1 - 5L1 OOS
	5L1_3	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then at GMS/PCN:
		1.04 * (5L2 GMS + 5L3 PCN – 1450) [Voltage Stability]
	5L1_7	If P1 + 0.71 * P2 >= 200 MW
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Double Contingency (SLG		Gen shed at MKL/DKW/QTY first and then at GMS/PCN: 1.04 * (5L2 GMS + 5L7 KDS – 1450) [Voltage Stability]
on both lines with	5L2 3	Islanding – Refer to Attachment 5 of SOO 7T-13
different phases)	5L2_7	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L2_4	Same as Table 5.2.1 - 5L1 OOS
	5L11_12	Gen-shed requirements at KMO/FKR/VOL/MCY: If 3.2 * P1 + 1.1 * P2 + P3 >= 2800 MW OR P1 + 1.5 * P2 >= 420 MW
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		 Gen-shed at MKL/DKW/QTY first, and then GMS/PCN, the greater of: 3.2 * P1 + 1.1 * P2 + P3 – 2800 – 3.2 * armed gen-shed amount at KMO – 1.1 * armed gen-shed amount at FKR/VOL/MCY][Transient Stability]
		 1.05 ^ [(5L11 + 5L12 + 5L13) WSN – 1950] – armed gen-shedding amount at KMO/FKR/VOL/MCY [Voltage Stability]

	5L11_13	Same as above 5L11_12 in this table
	5L12_13	Same as above 5L11_12 in this table
Series Capacitor Bypass	KDY 5CX3	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
		1.01 * (5L2 GMS + 5L3 PCN – (– 0.32 * 2L103 KIT + 2788)) [Voltage Stability]
	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.2 – 5L1 AND KDY 5CX3 0.0.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L2 GMS + 5L3 PCN < 2900 MW
 - Winter: 5L2 GMS + 5L3 PCN < 3150 MW
 - WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1.01 * (5L2 GMS + 5L3 PCN – (– 0.55 * 2L103 KIT + 1636)) [Voltage Stability]
SLG or	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 Same as Table 5.2.1 - 5L1 OOS
No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_7 Same as Table 5.2.1 - 5L1 OOS
	5L4	Same as Table 5.2.1 - 5L1 OOS
	5L11	No generation shedding required
	5L12	No generation shedding required
	5L2 MP	This MP contingency will be covered by double contingency of 5L1_2
Combined Multi-	5L3 MP	This MP contingency will be covered by double contingency of 5L1 3
phase Contingency	5L7 MP	This MP contingency will be covered by double contingency of 5L1 7
Arm the greatest	5L4 MP	Gen-shed at MKL/DKW/QTY first; and then GMS: 1.03 * (5L2 GMS + 5L4 GMS – 5L2 Over Rating)
requirement	5L11 MP	Same as Table 5.5.1 - 5L1 and KDY2 OOS
requirement	5L12 MP	Same as 5L11 MP in this table
Multi-phase	5L13 MP	Same as 5L11 MP in this table
Contingency	5L61 MP	No generation shedding required
Double Contingency (SLG on both lines with different phases)	5L1_2 5L1_3 5L1_7	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * (5L2 GMS + 5L7 KDS – 1450) [Voltage Stability] Same as Table 5.2.1 - 5L1 OOS Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at KL/DKW/QTY first and then at GMS/PCN: 1.03 * (5L2 GMS + 5L7 KDS – 5L2 Over Rating) Islanding – Refer to Attachment 5 of SOO 7T-13
	5L2 3	Islanding – Refer to Attachment 5 of SOU / I-13
		Samo as Table 5.2.1 51.1.009
	<u> </u>	Same as Table 5.2.1 - 5L1 005
	<u>5 11 12</u>	Same as Table 5.5.1 - 5L1 and KDY2 005
	51 12 13	Same as Table 5.5.1 - 5L1 and KDY2 005
	KDY 5CX2	Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1.01 * (5L2 GMS + 5L3 PCN - (-0.32 * 2L103 KIT + 2788)) [Voltage Stability]
Series Capacitor	MLS 5CX1	No generation shedding required
Bypass	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.3 – 5L1 AND MLS 5CX1 0.0.S.

Pre-outage Restrictions

- GMS to WSN transfer limit:
 - Summer: 5L2 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction
- WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements CONTINGENCY SHEDDING REQUIREMENTS 5L2 Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.2.1 - 5L1 OOS 5L3 Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 3 Same as Table 5.2.1 - 5L1 OOS Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 7 5L7 Same as Table 5.2.1 - 5L1 OOS 5L4 Same as Table 5.2.1 - 5L1 OOS 5L11 No generation shedding required 5L12 Gen shed requirements at KMO/FKR/VOL/MCY: SLG or If P1 + P2 + 0.9 * P3 < 3685, no gen shed is required. No Fault Opening If P1 + P2 + 0.9 * P3 >= 3685, then Gen shed at KMO: Level 1 [Transient Stability], or Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: 1.11 * (P1 + P2 + 0.9 * P3 – 3685 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability] 1.85 * (0.63 * 5L12 WSN + 5L13 WSN – 5L13_Over_Rating) – armed GS amount at KMO/FKR/VOL/MCY 1.03 * [(5L11 + 5L12 + 5L13) WSN - A] - armed GS amount at KMO/FKR/VOL/MCY, where A = -0.075 * BCH Load + 3578 [Voltage Stability] 5L2 MP This MP contingency will be covered by double contingency of 5L1_2 5L3 MP This MP contingency will be covered by double contingency of 5L1 3 This MP contingency will be covered by double contingency of 5L1 7 5L7 MP 5L4 MP Same as Table 5.2.1 - 5L1 OOS 5L11 MP No generation shedding required 5L12 MP Gen-shed requirements at KMO/FKR/VOL/MCY: Combined Multi-If P1 + P2 + 0.45 * P3 < 1699, no gen-shedding is required; If P1 + P2 + 0.45 * P3 >= 1699 then phase Contingency (5L1/2/3/4/7/11/12) Gen shed at KMO: Level 1 [Transient Stability] Arm the greatest Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability] gen shed requirement Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: 2.22 * [(P1 + P2 + 0.45 * P3) – 1699 – the armed gen-shedding amount at KMO/FKR/VOL/MCY] [Transient Stability] 1.80 * [5L13 WSN + 0.62 * 5L12 WSN – 5L13 Over Rating] - armed genshed at KMO/FKR /VOL/MCY 1.03 * [(5L11 + 5L12 +5L13) WSN - A MW] – armed genshed at KMO/FKR /VOL/MCY, where A = - 0.075 * BCH LOAD + 3619 [Voltage Stability] 5L13 MP Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.45 * P3 < 1699, no gen-shedding is required; If P1 + P2 + 0.45 * P3 >= 1699 then Gen shed at KMO: Level 1[Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability] Multi-phase Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: Contingency 2.22 * [(P1 + P2 + 0.45 * P3) – 1699 – armed gen-shedding amount at KMO/FKR/VOL/MCY] [Transient Stability] 1.80 * [5L12 WSN + 0.62 * 5L13 WSN – 5L12 Over Rating] - armed genshed at KMO/FKR /VOL/MCY 1.03 * [(5L11 + 5L12 + 5L13) WSN - A MW] - armed genshed at KMO/FKR /VOL/MCY, where A = - 0.075 * BCH LOAD + 3619 [Voltage Stability] 5L61 MP No generation shedding required Gen shed at MKL/DKW/QTY first, and then GMS/PCN, the greater of: 5L1 2 1.03 * (5L2 GMS + 5L3 PCN – 2350) [Voltage Stability] 1.03 * [5L2 GMS + 5L3 PCN – 5L3 Over Rating] 5L1 3 Gen shed at MKL/DKW/QTY first, and then GMS/PCN, the greater of:

	5L1_7	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.63 * P3 < 1929, no gen-shedding is required;
		lf P1 + P2 + 0.63 * P3 >= 1929,
		Gen shed at KMO: Level 1 or
		Gen shed at FKR/VOL/MCY: Level 1[Transient Stability]
		Gen shed at MKL/DKW/QTY first, and then GMS/PCN, the greater of:
Daubla		 1.59*(P1 + P2 + 0.63 * P3 – 1929 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
Double Contingonov (SLC		 1.03 * (5L2 GMS + 5L7 KDS – 2350) [Voltage Stability]
on both lines with		 1.03 * [5L2 GMS + 5L7 KDS – 5L2 Over Rating]
different nhases)	5L2 3	Islanding – Refer to Attachment 5 of SOO 7T-13
uniterent phases)	5L2 7	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L2 4	Same as Table 5.2.1 - 5L1 OOS
	5L11_12	Same as Table 5.2.1 - 5L1 OOS
	5L11_13	Same as Table 5.2.1 - 5L1 OOS
	5L12_13	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.58 * P3 < 970 MW, no gen-shedding is required;
		If P1 + P2 + 0.58 * P3 >= 970 MW
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first, and then GMS/PCN, the greatest of:
		 1.72 * [(P1 + P2 + 0.58 * P3) – 970 – armed gen-shed amount at KMO/FKR/VOL/MCY] [Transient Stability]
	J	 8 * [2L96 WSN + 0.13 * (5L12 + 5L13) WSN – 2L96_Over_Rating] – armed gen-shedding amount

1.03 * (5L2 GMS + 5L3 PCN – 2350) [Voltage Stability]
 1.03 * [5L2 GMS + 5L3 PCN – 5L2_Over_Rating]

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		 at KMO/FKR/VOL/MCY 1.09 * [(5L11 + 5L12 + 5L13 + 2L96) WSN – 1600] – armed gen-shed amount at KMO/FKR/VOL/MCY [Voltage Stability] 	
	KDY 5CX2	Same as Table 5.2.1 - 5L1 OOS	
Series Capacitor	KDY 5CX3	Same as Table 5.2.1 - 5L1 OOS	
Bypass	MLS 5CX2	No generation shedding required	
	MLS 5CX3	No generation shedding required	

Table 5.5.4 – 5L1 AND MLS 5CX2 0.0.S.

Pre-outage Restrictions

- GMS to WSN transfer limit:
 - Summer: 5L2 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction

WSN to KLY transfer limit: No generation restriction **Generation Shedding Requirements** CONTINGENCY SHEDDING REQUIREMENTS Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 5L2 Same as Table 5.2.1 - 5L1 OOS Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 3 5L3 Same as Table 5.2.1 - 5L1 OOS 5L7 Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 7 Same as Table 5.2.1 - 5L1 OOS Same as Table 5.2.1 - 5L1 OOS 5L4 5L11 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.9 * P3 < 3685, no GS is required. SLG or If P1 + P2 + 0.9 * P3 >= 3685, then No Fault Opening Gen shed at KMO: Level 1 [Transient Stability], or Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: • 1.11 * (P1 + P2 + 0.9 * P3 – 3685 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability] • 1.85 * (0.63 * 5L11 WSN + 5L13 WSN – 5L13_Over_Rating) – armed GS amount at KMO/FKR/VOL/MCY 1.03 * ((5L11 + 5L12 + 5L13) WSN – A) – armed GS amount at KMO/FKR/VOL/MCY, where A = - 0.075 * BCH Load + 3578 [Voltage Stability] 5L12 No generation shedding required This MP contingency will be covered by double contingency of 5L1_2 5L2 MP 5L3 MP This MP contingency will be covered by double contingency of 5L1_3 5L7 MP This MP contingency will be covered by double contingency of 5L1_7 5L4 MP Same as Table 5.2.1 - 5L1 OOS Gen shed requirements at KMO/FKR/VOL/MCY: 5L11 MP If P1 + P2 + 0.45 * P3 < 1699, no gen-shedding is required; If P1 + P2 + 0.45 * P3 >= 1699 then Combined Multi-Gen shed at KMO: Level 1 [Transient Stability] phase Contingency (5L1/2/3/4/7/11/12) Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability] Arm the greatest gen shed Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: requirement • 2.22 * [(P1 + P2 + 0.45 * P3) - 1699 - the armed gen-shedding amount at KMO/FKR/VOL/MCY] [Transient Stability] 1.80 * [5L13 WSN + 0.62 * 5L11 WSN – 5L13_Over_Rating] - armed genshed at KMO/FKR /VOL/MCY $103 \times [(5] 11 + 5] 12 + 5] 13)$ WSN - A MWI – armed genshed at KMO/FKR (VOI /MCY where A =

		- 0.075 ^ BCH LOAD + 3619 [Voltage Stability]
	5L12 MP	No generation shedding required
	5L13 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If $P1 + P2 + 0.45 * P3 < 1699$, no gen-shedding is required;
		If P1 + P2 + 0.45 * P3 >= 1699 then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
Multi phose		
Multi-priase		Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
Contingency		 2.22 * [(P1 + P2 + 0.45 * P3) – 1699 – the armed gen-shedding amount at KMO/FKR/VOL/MCY]
		[Transient Stability]
		 1.80 * [5L11 WSN + 0.62 * 5L13 WSN – 5L11 Over Rating] - armed genshed at KMO/FKR
		/VOL/MCY
		• 1.03 * [(5L11 + 5L12 + 5L13) WSN - A MWI – armed genshed at KMO/FKR /VOL/MCY, where A =
		- 0.075 * BCH LOAD + 3619 [Voltage Stability]
	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
	5L1 3	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
	5L1 7	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
	5L2 3	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L2 7	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L2 4	Same as Table 5.2.1 - 5L1 OOS
	5L11_12	Same as Table 5.2.1 - 5L1 OOS
	5L11_13	Gen-shed requirements at KMO/FKR/VOL/MCY:
Double	_	If P1 + P2 + 0.58 * P3 < 970 MW, no gen-shedding is required;
Contingency (SLC		If P1 + P2 + 0.58 * P3 >= 970 MW
on both lines with		Gen shed at KMO: Level 1 [Transient Stability]
different nhases)		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
un elenchiases)		
		Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
		 1.72 * [(P1 + P2 + 0.58 * P3) – 970 – armed gen-shed amount at KMO/FKR/VOL/MCY] [Transient
		Stability]
		 8 * [2L96 WSN + 0.13 * (5L11 + 5L13) WSN – 2L96_Over_Rating] – armed gen-shedding amount at
		KMO/FKR/VOL/MCY
		 1.09 * [(5L11 + 5L12 + 5L13 + 2L96) WSN – 1600] – armed gen-shed amount at
		KMO/FKR/VOL/MCY [Voltage Stability]
	5L12 13	Same as Table 5.2.1 - 5L1 OOS
	KDY 5CX2	Same as Table 5.2.1 - 5L1 OOS
Series Capacitor	KDY 5CX3	Same as Table 5.2.1 - 5L1 OOS
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.5 – 5L1 AND MLS 5CX3 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L2 GMS + 5L3 PCN < 3650 MW Winter: No generation restriction

 - WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements		
CONTINGENCY		SHEDDING REQUIREMENTS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.2.1 - 5L1 OOS
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 Same as Table 5.2.1 - 5L1 OOS
	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_7 Same as Table 5.2.1 - 5L1 OOS
	5L4	Same as Table 5.2.1 - 5L1 OOS
	5L11	Gen shed requirements at KMO/FKR/VOL/MCY:
		If $P1 + P2 + 0.9 = P3 < 3083$, the GS is required. If $P1 + P2 + 0.9 = 3685$, then
		Gen shed at KMO: Level 1 [Transient Stability], or Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
SLG or		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: • 1.11 * (P1 + P2 + 0.9 * P3 – 3685 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability] • 1.85 * (0.63 * 5L11 WSN + 5L12 WSN – 5L12 Over Rating) – armed GS amount at
No Fault Opening		KMO/FKR/VOL/MCY • 1.03 * [(5L11 + 5L12 + 5L13) WSN – A] – armed GS amount at KMO/FKR/VOL/MCY, where A =
	5L12	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.9 * P3 < 3685, no GS is required. If P1 + P2 + 0.9 * P3 >= 3685, then
		Gen shed at KMO: Level 1 [Transient Stability], or Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: • 1.11 * (P1 + P2 + 0.9 * P3 – 3685 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability]
		 1.85 * (0.63 * 5L12 WSN + 5L11 WSN – 5L11_Over_Rating) – armed GS amount at KMO/FKR/VOL/MCY
		 1.03 * [(5L11 + 5L12 + 5L13) WSN – A] – armed GS amount at KMO/FKR/VOL/MCY, where A = - 0.075 * BCH Load + 3578 [Voltage Stability]
	5L2 MP	This MP contingency will be covered by double contingency of 5L1 2
	5L3 MP	This MP contingency will be covered by double contingency of 5L1 3
	5L4 MP	Same as Table 5.2.1 - 5L1 OOS
	5L11 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.45 * P3 < 1699, no gen shedding is required; If P1 + P2 + 0.45 * P3 >= 1699 then
		Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
Combined Multi-		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: • 2.22 * [(P1 + P2 + 0.45 * P3) – 1699 – armed gen shedding amount at KMO/FKR/VOL/MCY]
phase Contingency (5L1/2/3/4/7/11/12) Arm the greatest		 1.80 * [5L12 WSN + 0.62 * 5L11 – 5L12_Over_Rating] - armed gen shed at KMO/FKR /VOL/MCY 1.03 * [(5L11 + 5L12 + 5L13) WSN - A MW] – armed gen shed at KMO/FKR /VOL/MCY, where A = -0.075 * BCH LOAD + 3619 [Voltage Stability]
requirement	5L12 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.45 * P3 < 1699, no gen-shedding is required;
		If $P1 + P2 + 0.45 * P3 \ge 1699$ then Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
		 Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: 2.22 * [(P1 + P2 + 0.45 * P3) – 1699 – armed gen-shedding amount at KMO/FKR/VOL/MCY]
		[Transient Stability] • 1.80 * [5L11 WSN + 0.62 * 5L12 WSN – 5L11_Over_Rating] - armed gen shed at KMO/FKR
		 VOL/MCY 1.03 * [(5L11 + 5L12 + 5L13) WSN - A MW] – armed genshed at KMO/FKR /VOL/MCY, where A = 0.075 * BCH LOAD + 3619[Voltage Stability]
Multi-phase	5L13 MP	No generation shedding required
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
	5L1 3	Same as Table 5.5.3 - 5L1 AND MLS 5UX1 OUS
	5L2 3	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L2 7	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L2 4	Same as Table 5.2.1 - 5L1 OOS
	5L11_12	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.58 * P3 < 970 MW, no gen-shedding is required;
Double Contingency (SLG		If P1 + P2 + 0.58 * P3 >= 970 MW Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
differentphases)		Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: • 1.72 * [(P1 + P2 + 0.58 * P3) – 970 – armed gen-shed amount at KMO/FKR/VOL/MCYI ITransient
		Stability] • 8 * [2L96 WSN + 0.13 * (5L11 + 5L12) WSN – 2L96_Over_Rating] – armed gen-shedding amount at
		 KMO/FKR/VOL/MCY 1.09 * [(5L11 + 5L12 + 5L13 + 2L96) WSN – 1600] – armed gen-shed amount at
	51 1 1 1 2	KMO/FKR/VOL/MCY [Voltage Stability]
	5L12 13	Same as Table 5.2.1 - 5L1 OOS

CONTINGENCY		SHEDDING REQUIREMENTS
Series Capacitor Bypass	KDY 5CX2	Same as Table 5.2.1 - 5L1 OOS
	KDY 5CX3	Same as Table 5.2.1 - 5L1 OOS
	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

Table 5.5.6 – 5L2 AND KDY 5CX1 0.0.S.

Pre-outage Restrictions

- GMS to WSN transfer limit:
 - Summer: 5L1 GMS + 5L3 PCN < 2985 MW
- Winter: 5L1 GMS + 5L3 PCN < 3300 MW

WSN to KLY transfer limit: No generation restriction **Generation Shedding Requirements** CONTINGENCY SHEDDING REQUIREMENTS 5L1 Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 2 Same as Table 5.2.2 - 5L2 OOS 5L3 Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1.01 * (5L1 GMS + 5L3 PCN - (-0.55 * 2L103 KIT + 1636)) [Voltage Stability] Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2 7 SLG or 5L7 No Fault Opening Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1.01 * (5L1 GMS + 5L7 KDS - (-0.55 * 2L103 KIT + 1636)) [Voltage Stability] 5L4 Gen shed at DKW/QTY/MKL first, then GMS: 1.01 * (5L1 GMS + 5L4 GMS - (-0.19 * 2L103 KIT + 1607)) [Voltage Stability] 5L11 No generation shedding required 5L12 No generation shedding required 5L1 MP This MP contingency will be covered by double contingency of 5L1_2 Combined Multi-This MP contingency will be covered by double contingency of 5L2_3 5L3 MP phase Contingency 5L7 MP This MP contingency will be covered by double contingency of 5L2_7 (5L1/2/3/4/7/11/12) 5L4 MP Gen-shed at MKL/DKW/QTY first; and then GMS: Arm the greatest 1.03 * [5L1 GMS + 5L4 GMS - 1500] [Voltage Stability] gen shed 5L11 MP Same as Table 5.5.1 - 5L1 and KDY2 OOS requirement Same as 5L11 MP in this table 5L12 MP Same as 5L11 MP in this table Multi-phase 5L13 MP Contingency 5L61 MP No generation shedding required Gen shed requirements at KMO/FKR/VOL/MCY: 5L1 2 If P1 + 0.71 * P2 >= 200 MW Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then at GMS/PCN: 1.03 * (5L1 GMS + 5L3 PCN - 5L3 Over Rating) 5L1 3 Islanding – Refer to Attachment 5 of SOO 7T-13 Islanding – Refer to Attachment 5 of SOO 7T-13 5L1 7 Same as Table 5.2.2 - 5L2 OOS 5L1 4 Gen shed requirements at KMO/FKR/VOL/MCY: 5L2 3 If P1 + 0.71 * P2 >= 200 MW Double Gen shed at KMO: Level 3 [Transient Stability] Contingency (SLG Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] on both lines with different phases) Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.04 * (5L1 GMS + 5L3 PCN - 1450) [Voltage Stability] 5L2_7 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]

Gen shed at MKL/DKW/QTY first and then GMS/PCN:

Same as Table 5.5.1 – 5L1 AND KDY 5CX2 OOS

Same as Table 5.5.1 – 5L1 AND KDY 5CX2 OOS Same as Table 5.5.1 – 5L1 AND KDY 5CX2 OOS

Gen shed at DKW/QTY/MKL first, then GMS/PCN:

1.04 * (5L1 GMS + 5L7 KDS – 1450) [Voltage Stability]

1.01 * (5L1 GMS + 5L3 PCN - (-0.32 * 2L103 KIT + 2788)) [Voltage Stability]

Table 5.5.7 – 5L2 AND KDY 5CX3 O.O.S.

5L11_12 5L11_13

5L12_13

Series Capacitor

Bypass

KDY 5CX3

MLS 5CX1 No generation shedding required

MLS 5CX2 No generation shedding required MLS 5CX3 No generation shedding required

Winter: 5L1 GMS + 5L3 PCN < 3150 MW

WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
SLG or No Fault Opening	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1.01 * (5 1.GMS + 5 3.PCN - (-0.55 * 2 103 KIT + 1636)) [Voltage Stability]
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 Same as Table 5.2.2 - 5L2 OOS
	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_7 Same as Table 5.2.2 - 5L2 OOS
	5L4	Same as Table 5.2.2 - 5L2 OOS
	5L11	No generation shedding required
	5L12	No generation shedding required
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_2
phase Contingency (5L1/2/3/4/7/11/12)	5L3 MP	This MP contingency will be covered by double contingency of 5L2_3
	5L7 MP	This MP contingency will be covered by double contingency of 5L2_7
Arm the greatest	5L4 MP	Same as Table 5.2.2 – 5L2 OOS
gen shed	5L11 MP	Same as Table 5.5.1 - 5L1 and KDY2 OOS
requirement	5L12 MP	Same as 5L11 MP in this Table

Multi-phase	5L13 MP	Same as 5L11 MP in this Table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first and then GMS/PCN:
Double		1.04 * (5L1 GMS + 5L7 KDS – 1450) [Voltage Stability]
Contingency (SLG	5L1 3	Islanding – Refer to Attachment 5 of SOO 7T-13
on both lines with	5L1 7	Islanding – Refer to Attachment 5 of SOO 7T-13
unrerent phases)	5L1 4	Same as Table 5.2.2 - 5L2 OOS
	5L2 3	Same as Table 5.2.2 – 5L2 OOS
	5L2 7	Same as Table 5.2.2 – 5L2 OOS
	5L11_12	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 OOS
	5L11_13	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 OOS
	5L12_13	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 OOS
	KDY 5CX1	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
Series Capacitor		1.01 * (5L1 GMS + 5L3 PCN – (– 0.32 * 2L103 KIT + 2788)) [Voltage Stability]
	MLS 5CX1	No generation shedding required
Буразэ	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.8 – 5L2 AND MLS 5CX1 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L1 GMS + 5L3 PCN < 3650 MW

 - Winter: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.2.2 - 5L2 OOS
SI C or	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 Same as Table 5.2.2 - 5L2 OOS
No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_7 Same as Table 5.2.2 - 5L2 OOS
	5L4	Same as Table 5.2.2 - 5L2 OOS
	5L11	No generation shedding required
	5L12	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_2
phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L2_3
(5L1/2/3/4/7/11/12)	5L7 MP	This MP contingency will be covered by double contingency of 5L2_7
Arm the greatest	5L4 MP	Same as Table 5.2.2 - 5L2 OOS
gen shed	5L11 MP	No generation shedding required
requirement	5L12 MP	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
Multi-phase	5L13 MP	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Gen-shed at MKL/DKW/QTY first, then at GMS/PCN:
		1.03 * (5L1 GMS + 5L3 PCN – 5L3_Over_Rating)
	5L1 3	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1 7	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1 4	Same as Table 5.2.2 - 5L2 OOS
	5L2_3	Gen-shed at MKL/DKW/QTY first, then at GMS/PCN, the greater of :
		 1.03 * (5L1 GMS + 5L3 PCN – 2350) [Voltage Stability]
		 1.03 * (5L1 GMS + 5L3 PCN – 5L1_Over_Rating)
Double	5L2_7	Gen-shed requirements at KMO/FKR/VOL/MCY:
Contingency (SLG		If P1 + P2 + 0.63 * P3 < 1929, no gen-shedding is required;
on both lines with		If $P1 + P2 + 0.63 * P3 >= 1929$,
different phases)		Gen shed at KMO: Level 1 or
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first, and then GMS/PCN, the greater of:
		 1.59*(P1 + P2 + 0.63 * P3 – 1929 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
		 1.03 * (5L1 GMS + 5L7 KDS – 2350) [Voltage Stability]
		• 1.03 * (5L1 GMS + 5L7 KDS – 5L1_Over_Rating)
	5L11 12	Same as Table 5.2.2 - 5L2 OOS
	5L11 13	Same as Table 5.2.2 - 5L2 OOS
	5L12 13	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
	KDY 5CX1	Same as Table 5.2.2 - 5L2 OOS
Series Capacitor	KDY 5CX3	Same as Table 5.2.2 - 5L2 OOS
Bypass	MLS 5CX2	No generation shedding required
	I MLS 5CX3	I No generation shedding required

Table 5.5.9 – 5L2 AND MLS 5CX2 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L1 GMS + 5L3 PCN < 3650 MW
 - Winter: No generation restriction
 - WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.2.2 - 5L2 OOS
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 Same as Table 5.2.2 - 5L2 OOS
No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_7 Same as Table 5.2.2 - 5L2 OOS
	5L4	Same as Table 5.2.2 - 5L2 OOS
	5L11	Same as Table 5.5.4 - 5L1 AND MLS 5CX2 OOS
	5L12	No generation shedding required
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_2
phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L2_3
(5L1/2/3/4/7/11/12)	5L7 MP	This MP contingency will be covered by double contingency of 5L2_7
Arm the greatest	5L4 MP	Same as Table 5.2.2 - 5L2 OOS
gen shed	5L11 MP	Same as Table 5.5.4 - 5L1 AND MLS 5CX2 OOS
requirement	5L12 MP	No generation shedding required
Multi-phase	5L13 MP	Same as Table 5.5.4 - 5L1 AND MLS 5CX2 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.5.8 - 5L2 AND MLS 5CX1 OOS
	5L1_3	Islanding – Refer to Attachment 5 of SOO 71-13
Double	5L1_/	Islanding – Refer to Attachment 5 of SOO 71-13
Contingency (SLG	5L1_4	Same as Table 5.2.2 - 5L2 OOS
on both lines with	5L2_3	Same as Table 5.5.8 – 5L2 AND MLS 5CX1 0.0.5.
different phases)	5L2_7	Same as Table 5.5.8 – 5L2 AND MLS 5CX1 0.0.5.
, ,	5L11_12	Same as Table 5.2.2 - 5L2 OOS
	5L11_13	Same as Table 5.5.4 - 5L1 AND MLS 5CX2 OOS
	5L12_13	Same as Table 5.2.2 - 5L2 OOS
	KDY 5CX1	Same as Table 5.2.2 - 5L2 OOS
Series Capacitor	KDY 50X3	Same as Table 5.2.2 - 5L2 UUS
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.10 – 5L2 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit:

- Summer: 5L1 GMS + 5L3 PCN < 3650 MW
- Winter: No generation restriction
- WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_2 Same as Table 5.2.2 - 5L2 OOS
	5L3	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 Same as Table 5.2.2 - 5L2 OOS
No Fault Opening	5L7	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_7 Same as Table 5.2.2 - 5L2 OOS
	5L4	Same as Table 5.2.2 - 5L2 OOS
	5L11	Same as Table 5.5.5 - 5L1 AND MLS 5CX3 OOS
	5L12	Same as Table 5.5.5 - 5L1 AND MLS 5CX3 OOS
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_2
phase Contingency	5L3 MP	This MP contingency will be covered by double contingency of 5L2 3
(5L1/2/3/4/7/11/12)	5L7 MP	This MP contingency will be covered by double contingency of 5L2 7
Arm the greatest	5L4 MP	Same as Table 5.2.2 - 5L2 OOS
gen shed	5L11 MP	Same as Table 5.5.5 - 5L1 AND MLS 5CX3 OOS
requirement	5L12 MP	Same as Table 5.5.5 - 5L1 AND MLS 5CX3 OOS
Multi-phase	5L13 MP	No generation shedding required
Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.5.8 - 5L2 AND MLS 5CX1 OOS
	5L1 3	Islanding – Refer to Attachment 5 of SOO 7T-13
Double	5L1 7	Islanding – Refer to Attachment 5 of SOO 7T-13
Contingonov (SLC	5L1 4	Same as Table 5.2.2 - 5L2 OOS
on both lines with	5L2 3	Same as Table 5.5.8 – 5L2 AND MLS 5CX1 O.O.S.
different phases)	5L2 7	Same as Table 5.5.8 – 5L2 AND MLS 5CX1 O.O.S.
amoronephaoooj	5L11 12	Same as Table 5.5.5 - 5L1 AND MLS 5CX3 OOS
	5L11 13	Same as Table 5.2.2 - 5L2 OOS
	5L12 13	Same as Table 5.2.2 - 5L2 OOS
	KDY 5CX1	Same as Table 5.2.2 - 5L2 OOS
Series Capacitor	KDY 5CX3	Same as Table 5.2.2 - 5L2 OOS
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

Table 5.5.11 - (5L3 or 5L7 or (5L3 & 5L7)) AND KDY 5CX1 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit:

- Summer: 5L1 GMS + 5L2 GMS < 2900 MW
- Winter: 5L1 GMS + 5L2 GMS < 3150 MW
- WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 or 5L1_7
	-	Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7
SLG or		Gen shed at DKW/QTY/MKL first, then GMS/PCN:
No Fault Opening		1.03° ((5L1 + 5L2) GMS - (-0.55 $^{\circ}$ 2L103 KIT + 1636)) [Voltage Stability]
	5L4	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
	5L11	No generation shedding required
	5L12	No generation shedding required
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1 3 or 5L1 7
phase Contingency	5L2 MP	This MP contingency will be covered by double contingency of 5L2 3 or 5L2 7
(5L1/2/3/4/7/11/12)	5L4 MP	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
Arm the greatest		
gen shed	5L11 MP	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 0.0.SS
requirement	5L12 MP	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 0.0.SS
Multi-phase	5L13 MP	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 0.0.SS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1_3	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
	5L1 7	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
	5L2_3	Gen shed requirements at KMO/FKR/VOL/MCY:
	_	If P1 + 0.71 * P2 >= 200 MW
Double		Gen shed at KMO: Level 3 [Transient Stability]
Contingency (SLG		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
on both lines with		
different phases)		Gen shed at MKL/DKW/QTY first; and then GMS/PCN:
		1.04 * [(5L1 + 5L2) GMS – 1450] [Voltage Stability]
	5L2 7	Same as 5L2 3 in this table.
	5L11_12	Same as Table 5.5.1 - 5L1 AND KDY 5CX2 OOS
	5L11_13	Same as Table 5.5.1 - 5L1 AND KDY 5CX2 OOS
	5L12_13	Same as Table 5.5.1 - 5L1 AND KDY 5CX2 OOS
	KDY 5CX2	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
Sorios Consoitor		1.01 * ((5L1 + 5L2) GMS – (– 0.32 * 2L103 KIT + 2788)) [Voltage Stability]
	MLS 5CX1	No generation shedding required
руразз	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.12 – (5L3 or 5L7 or (5L3 & 5L7)) AND KDY 5CX2 O.O.S. Pre-outage Restrictions

- GMS to WSN transfer limit:
 - Summer: 5L1 GMS + 5L2 GMS < 2900 MW
 - Winter: 5L1 GMS + 5L2 GMS < 3150 MW

WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 or 5L1_7 Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1 03 * ((5I 1 + 5I 2) GMS - (-0.55 * 2I 103 KIT + 1636)) [Voltage Stability]
SLG or No Fault Opening	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7 Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
no ruan opening	5L4	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
	5L11	No generation shedding required
	5L12	No generation shedding required
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_3 or 5L1_7
phase Contingency	5L2 MP	This MP contingency will be covered by double contingency of 5L2_3 or 5L2_7
(5L1/2/3/4/7/11/12) Arm the greatest	5L4 MP	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
gen shed	5L11 MP	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 O.O.S
requirement	5L12 MP	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 O.O.S
Multi-phase	5L13 MP	Same as Table 5.5.1 – 5L1 AND KDY 5CX2 0.0.S
Contingency	5L61 MP	No generation shedding required
	5L1 2	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1_3	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Double		
Contingency (SLG		Gen shed at MKL/DKW/QTY first and then GMS/PCN:
on both lines with		1.04 * [(5L1 + 5L2) GMS - 1450] [Voltage Stability]
different phases)	5L1_7	Same as 5L1_3 in this table.
	5L2_3	Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) 005
	DL2_7	Same as 5L2_3 in this table
	DL11_12	Same as Table 5.5.1 - 5L1 AND KDY 5CX2 005
	5L12 13	Same as Table 5.5.1 - 5L1 AND KDY 5CX2 005
		Gen shed at DKW/OTV/MKL first then GMS/PCN [.]
Series Canacitor		1.01 * ((5L1 + 5L2) GMS – (– 0.32 * 2L103 KIT + 2788)) [Voltage Stability]
Bynass	MLS 5CX1	No generation shedding required
Dypass	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.13 - (5L3 or 5L7 or (5L3 & 5L7)) AND MLS 5CX1 O.O.S.

Pre-outage Restrictions

GMS to WSN transfer limit:

5L2 7

5L11 12

5L11 13

5L12_13

Series Capacitor

Bypass

KDY 5CX1

KDY 5CX2

MLS 5CX2

MLS 5CX3

- Summer: 5L1 GMS + 5L2 GMS < 3870 MW
- Winter: No generation restriction

WSN to KLY transfer limit: No generation restriction

Generation	Shedding Re	quirements
CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1_3 or 5L1_7 Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7 Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
	5L4	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5Ĺ7) OOS
	5L11	No generation shedding required
SLG or No Fault Opening	5L12	Gen-shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.9 * P3 < 3685, no gen-shedding is required If P1 + P2 + 0.9 * P3 >= 3685, then Gen shed at KMO: Level 1 [Transient Stability], or Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		 Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: 1.11* (P1 + P2 + 0.9*P3 – 3685 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability] 1.74* (0.61*5L12 WSN + 5L13 WSN – 5L13_Over_Rating) – armed GS amount at KMO/FKR/VOL/MCY 1.03* ((5L11 + 5L12 + 5L13) WSN – A MW) – armed GS amount at KMO/FKR/VOL/MCY, where A = -0.075* BCH Load + 3578 [Voltage Stability]
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1_3 or 5L1_7
phase Contingency	5L2 MP	This MP contingency will be covered by double contingency of 5L2_3 or 5L2_7
(5L1/2/3/4/7/11/12)	5L4 MP	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
Arm the greatest	5L11 MP	No generation shedding required
gen shed requirement	5L12 MP	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
Multi-phase	5L13 MP	Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1_3	Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
		 1.03 (5L1 GMS + 5L2 GMS - 2350) [Voltage Stability]; 1.03 * [5L1 GMS + 5L2 GMS - 5L2_Over_Rating]
Double	5L1 7	Same as 5L1 3 in this table.
Contingency (SLG on both lines with different phases)	5L2_3	 Gen-shed at MKL/DKW/QTY first and then GMS/PCN, the greater of: 1.03 * (5L1 GMS + 5L2 GMS – 2350) [Voltage Stability]; 1.03 * [5L1 GMS + 5L2 GMS – 5L1 Over Rating]

Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS

Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS

Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS

Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS

Same as Table 5.5.3 - 5L1 AND MLS 5CX1 OOS

Same as 5L2_3 in this table.

No generation shedding required

No generation shedding required

Table 5.5.14 - (5L3 or 5L7 or (5L3 & 5L7)) AND MLS 5CX2 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L1 GMS + 5L2 GMS < 3870 MW

 - Winter: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L1 3 or 5L1 7
		Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
	5L2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L2_3 or 5L1_7
		Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
	5L4	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
	5L11	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.9 * P3 < 3685, no GS is required.
		If $P1 + P2 + 0.9 * P3 >= 3685$, then
SLG or		Gen shed at KMO: Level 1 [Transient Stability], or
No Fault Opening		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-sned at MKL/DKW/QTY first, and then GMS/PCN, the greatest of:
		• 1.11 ^ (P1 + P2 + 0.9 ^ P3 – 3685 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability]
		• 1.74 ^ (0.61 ^ 5L11 WSN + 5L13 WSN - 5L13_OVer_Rating) - armed GS amount at
		 1.03 "((5L11 + 5L12 + 5L13) WSN - A) - armed GS amount at KMO/FKK/VOL/MCY, where A = 0.075 * DOLL and + 2578 D/othere Stability)
	EL 10	- 0.075 BCH LOad + 3576 [Voliage Stability]
Combined Multi		This MD contingency will be covered by double contingency of 51.1.2 or 51.1.7
complined Mulu-		This MP contingency will be covered by double contingency of 5L1 3 of 5L1 7
		This MP contingency will be covered by double contingency of 5L2 3 of 5L2 7
(JL 1/2/3/4/7/11/12)		Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) 005
den shed		Same as Table 5.5.4 - 5LT AND MLS 5CX2 005
requirement	SE IZ MP	No generation shedding required
Multi-phase	5L13 MP	Same as Table 5.5.4 - 5L1 AND MLS 5CX2 OOS
Contingency	5L61 MP	No generation shedding required
	5L1 2	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1 3	Same as Table 5.5.13 - (5L3 or 5L7 or (5L3 & 5L7)) and MLS 5CX1 OOS
Double	5L1 7	Same as Table 5.5.13 - (5L3 or 5L7 or (5L3 & 5L7)) and MLS 5CX1 OOS
Contingency (SLG	5L2 3	Same as Table 5.5.13 - (5L3 or 5L7 or (5L3 & 5L7)) and MLS 5CX1 OOS
on both lines with	5L2 7	Same as Table 5.5.13 - (5L3 or 5L7 or (5L3 & 5L7)) and MLS 5CX1 OOS
different phases)	5L11 12	Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
	5L11 13	Same as Table 5.5.4 - 5L1 AND MLS 5CX2 OOS
	5L12 13	Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
	KDY 5CX1	Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
Series Capacitor	KDY 5CX2	Same as Table 5.2.3 - 5L3 or 5L7 or (5L3 AND 5L7) OOS
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.15 - (5L3 or 5L7 or (5L3 & 5L7)) AND MLS 5CX3 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L1 GMS + 5L2 GMS < 3870 MW
 - Winter: No generation restriction
 - WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	511	Gen shed arming for this requirement shall be sub-set of gen shed arming for 51,1,3 or 51,1,7
	021	Same as Table 5.2.3 - 51.3 or 51.7 or (51.3 AND 51.7) OOS
	51.2	Gen shed arming for this requirement shall be sub-set of gen shed arming for 51.2.3 or 51.1.7
		Same as Table 5.2.3 - 51.3 or 51.7 or (51.3 AND 51.7) OOS
	51.4	Same as Table 5.2.3 - 51.3 OR 51.7 OR (51.3 AND 51.7) OOS
	51 1 1	Con shed requirements at KMO/EKRA/OL/MCV:
		If $P1 + P2 + 0.0 \times P3 < 3685$, po gop shodding is required
		If $P1 + P2 + 0.9 + P3 > 3685$ then
		Gen shed at KMO: Level 1 [Transient Stability] or
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKI /DKW/QTY first and then GMS/PCN, the greatest of
		• 1 11 * (P1 + P2 + 0.9 * P3 – 3685– armed GS amount at KMO/FKR//OL/MCY) [Transient Stability]
		• $1.74 \times (0.61 \times 5L11 \text{ WSN} + 5L12 \text{ WSN} - 5L12 \text{ Over Rating}) - armed GS amount at$
SLG or		KMO/FKR/VOL/MCY
No Fault Opening		 1.03 * ((5L11 + 5L12 + 5L13) WSN – A) – armed GS amount at KMO/FKR/VOL/MCY, where A =
		- 0.075 * BCH Load + 3578 [Voltage Stability]
	5L12	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.9 * P3 < 3685, no gen-shedding is required
		If P1 + P2 + 0.9 * P3 >= 3685, then
		Gen shed at KMO: Level 1 [Transient Stability], or
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
		 1.11 * (P1 + P2 + 0.69 * P3 – 3685 – armed GS amount at KMO/FKR/VOL/MCY) [Transient
		Stability]
		 1.74 * (0.61 * 5L12 WSN + 5L11 WSN – 5L11_Over_Rating) – armed GS amount at
		KMO/FKR/VOL/MCY
		 1.03 * ((5L11 + 5L12 + 5L13) WSN – A) – armed GS amount at KMO/FKR/VOL/MCY, where A =
-		- 0.075 * BCH Load + 3578 [Voltage Stability]
Combined Multi-	5L1 MP	This MP contingency will be covered by double contingency of 5L1 3 or 5L1 7
phase Contingency	5L2 MP	This MP contingency will be covered by double contingency of 5L2 3 or 5L2 7
(5L1/2/3/4///11/12)	5L4 MP	Same as Table 5.2.3 - 5L3 OR 5L7 OR (5L3 AND 5L7) OOS
Arm the greatest	5L11 MP	Same as Table 5.5.5 - 5L1 AND MLS 5CX3 OOS
gen sned requirement	5L12 MP	Same as Table 5.5.5 - 5L1 AND MLS 5CX3 OOS
Multi-phase	5I 13 MP	No generation shedding required
Contingency	51.61 MP	No generation shedding required
<u>eennigeney</u>	5112	Islanding – Refer to Attachment 5 of SOO 7T-13
	5113	Same as Table 5.5.13 - (51.3 or 51.7 or (51.3 & 51.7)) and MLS 5CX1 OOS
Double Contingency (SLG on both lines with	5117	Same as Table 5.5.13 - (51.3 or 51.7 or (51.3 & 51.7)) and MLS 5CX1 OOS
	5123	Same as Table 5.5.13 - (51.3 or 51.7 or (51.3 & 51.7)) and MLS 5CX1.00S
	5127	Same as Table 5.5.13 - (51.3 or 51.7 or (51.3 & 51.7)) and MLS 5CX1 OOS
different phases)	51 11 12	Same as Table 5.5.5.51 1 AND MI \$ 5CX3 OOS
anterent pridocoj	51 11 13	Same as Table 5.2.3 - 51.3 or 51.7 or (51.3 AND 51.7) OOS
	51 12 13	Same as Table 5.2.3 - 51.3 or 51.7 or (51.3 AND 51.7) 0005
		Same as Table 5.2.3 - 51.3 or 51.7 or (51.3 AND 51.7) 000
Series Canacitor	KDY 5CY2	Same as Table 5.2.3 - 51.3 or 51.7 or (51.3 AND 51.7) OOS
Bynass	MLS 5CX1	No generation shedding required
Dypass	MLS 5CX2	No generation shedding required
		The generator enduling required

Table 5.5.16 – 5L4 AND KDY 5CX1 0.0.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: 5L1 GMS + 5L2 GMS < 2900 MW
 - Winter: 5L1 GMS + 5L2 GMS < 3150 MW
 - WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.2.4 - 5L4 OOS
	5L2	Gen shed at DKW/QTY/MKL first, then GMS:
SIGor		1.01 * ((5L1 + 5L2) GMS – (– 0.10 * 2L103 KIT + 1434)) [Voltage Stability]
No Fault Opening	5L3	Same as Table 5.2.4 - 5L4 OOS
No Fault Opening	5L7	Same as Table 5.2.4 - 5L4 OOS
	5L11	No generation shedding required
	5L12	No generation shedding required
	5L1 MP	Same as Table 5.2.4 - 5L4 OOS
	5L2 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If $P1 + 0.67 * P2 >= 240 \text{ MW}$
Combined Multi-		Gen shed at KMO: Level 2 [Iransient Stability]
phase Contingency		Gen shed at FKR/VOL/MCY. Level 2 [Transfert Stability]
(3L1/2/3/4/7/11/12)		Gen shed at DKW/OTV/MKL first then GMS:
den shed		1.02 * ((51.1 + 51.2) GMS - 1460) [V/oltage Stability]
requirement	5I.3 MP	Same as Table 5.2.4 - 51.4 OOS
requirement	5L7 MP	Same as Table 5.2.4 - 51.4 OOS
	5L11 MP	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L12 MP	Same as Table 5.3.1 – KDY 5CX1 OOS
Multi-phase	5L13 MP	Same as Table 5.3.1 – KDY 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.2.4 - 5L4 OOS
	5L1 3	Same as Table 5.2.4 - 5L4 OOS
	5L1 7	Same as Table 5.2.4 - 5L4 OOS
	5L2 3	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then,
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second: ➤ GS = 5L3 PCN - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
		Keep at least two PCN units online post shedding.
		Gen shed at GMS ¹
Double		1 04 * [(5 1 + 5 2) GMS + 5 3 PCN – Armed GS MW at DKW/MKI /OTY/PCN – 1450] [Voltage
Contingency (SLG		Stability]
on both lines with	5L2 7	Gen shed requirements at KMO/FKR/VOL/MCY:
different phases)	_	If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then,
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second:
		GS = 5L7 KDS - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
		Keep at least two PCN units online post shedding.
		Gen shed at GMS:
		1.04 * [(5L1 + 5L2) GMS + 5L7 KDS – Armed GS MW at DKW/MKL/QTY/PCN – 1450] [Voltage Stability]
	5L11_12	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L11_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L12 13	Same as Table 5.3.1 – KDY 5CX1 OOS
	KDY 5CX2	No generation shedding required
Series Canacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.17 – 5L4 AND KDY 5CX2 0.0.S.

Pre-outage Restrictions GMS to WSN transfer limit:

- - Summer: 5L1 GMS + 5L2 GMS < 2900 MW
- Winter: 5L1 GMS + 5L2 GMS < 3150 MW
- WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed at DKW/QTY/MKL first, then GMS:
	51.2	$\frac{1.01}{(0.11 + 0.12)} = \frac{-0.10}{2103} \times \frac{1404}{11 + 1404} = \frac{100}{100} \times \frac{100}{100} \times \frac{100}{100} = \frac{100}{100} \times \frac{100}{100} \times \frac{100}{100} = \frac{100}{100} \times \frac{100}{$
SLG or	513	Same as Table 5.2.4 - 514 003
No Fault Opening	51.7	Same as Table 5.2.4 - 51.4 00S
	5 11	No generation shedding required
	5 12	No generation shedding required
	5L1 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
Combined Multi-		Gen shed at KMO: Level 2 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
(5L1/2/3/4/7/11/12)		Gen shed at DKW/QTY/MKL first, then GMS: 1.02 * ((5L1 + 5L2) GMS - 1460) [Voltage Stability]
den shed	5L2 MP	Same as Table 5.2.4 - 5L4 OOS
requirement	5L3 MP	Same as Table 5.2.4 - 5L4 OOS
	5L7 MP	Same as Table 5.2.4 - 5L4 OOS
	5L11 MP	Same as Table 5.3.2 – KDY 5CX2 OOS
	5L12 MP	Same as Table 5.3.2 – KDY 5CX2 OOS
Multi-phase	5L13 MP	Same as Table 5.3.2 – KDY 5CX2 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.2.4 - 5L4 OOS
	5L1_3	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then, Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second:
		Keep at least two PCN units online post shedding.
		Gen shed at GMS: 1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – Armed GS MW at DKW/MKL/QTY/PCN – 1450] MW [Transient Stability]
Double Contingency (SLG	5L1_7	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.56 * P2 >= 280 MW AND P3 > 700 MW, then,
on both lines with different phases)		Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second:
		Keep at least two PCN units online post shedding.
		Gen shed at GMS:
		1.04 * [(5L1 + 5L2) GMS + 5L7 KDS – Armed GS MW at DKW/MKL/QTY/PCN – 1450] MW [Transient Stability]
	5L2_3	Same as Table 5.2.4 - 5L4 OOS
	5L2 7	Same as Table 5.2.4 - 5L4 OOS
	<u>5L11 12</u>	Same as Table 5.3.2 – KDY 5CX2 OOS
	5L11 13	Same as Table 5.3.2 – KDY 50X2 00S
<u> </u>		Same as Table 5.3.2 – KDY 50.3.2 UUS
		No generation shedding required
Series Capacitor	MIS50Y1	No generation shedding required
Bypass	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.18 - 5L4 AND KDY 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit:

- Summer: No generation restriction
- Winter: No generation restriction

WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.2.4 - 5L4 OOS
	5L2	Same as Table 5.2.4 - 5L4 OOS
SLG or	5L3	Same as Table 5.2.4 - 5L4 OOS
No Fault Opening	5L7	Same as Table 5.2.4 - 5L4 OOS
	5L11	No generation shedding required
	5L12	No generation shedding required
Combined Multi-	5L1 MP	Same as Table 5.2.4 - 5L4 OOS
phase Contingency	5L2 MP	Same as Table 5.2.4 - 5L4 OOS
(5L1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.2.4 - 5L4 OOS
Arm the greatest	5L7 MP	Same as Table 5.2.4 - 5L4 OOS
gen shed	5L11 MP	Same as Table 5.3.3 – KDY 5CX3 OOS

requirement	5L12 MP	Same as Table 5.3.3 – KDY 5CX3 OOS
Multi-phase	5L13 MP	Same as Table 5.3.3 – KDY 5CX3 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Islanding – Refer to Attachment 5 of SOO 7T-13
	5L1_3	Same as Table 5.2.4 - 5L4 OOS
Double	5L1_7	Same as Table 5.2.4 - 5L4 OOS
Contingency (SLG	5L2_3	Same as Table 5.2.4 - 5L4 OOS
on both lines with	5L2_7	Same as Table 5.2.4 - 5L4 OOS
different phases)	5L11_12	Same as Table 5.3.3 – KDY 5CX3 OOS
	5L11_13	Same as Table 5.3.3 – KDY 5CX3 OOS
	5L12_13	Same as Table 5.3.3 – KDY 5CX3 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor Bypass	KDY 5CX2	No generation shedding required
	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.19 – 5L4 AND MLS 5CX1 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: • Summer: No generation restriction • Winter: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.2.4 - 5L4 OOS
	5L2	Same as Table 5.2.4 - 5L4 OOS
SLG or	5L3	Same as Table 5.2.4 - 5L4 OOS
No Fault Opening	5L7	Same as Table 5.2.4 - 5L4 OOS
	5L11	No generation shedding required
	5L12	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L1 MP	Same as Table 5.2.4 - 5L4 OOS
	5L2 MP	Same as Table 5.2.4 - 5L4 UOS
	SL3 MP	If P1 + P2 + 0.24 * P3 < 1296, no gen-shedding is required; If P1 + P2 + 0.24 * P3 >= 1296, then Gen shed at KMO: Level 1, and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second:
		Keep at least two PCN units online post shedding.
Combined Multi- phase Contingency (5L1/2/3/4/7/11/12)		Gen-shed at GMS: 4.17 * [(P1 + P2 + 0.24 * P3) – 1296 – the armed gen-shedding amount at KMO/FKR/VOL/MCY/DKW/MKL/QTY/PCN] [Transient Stability]
Arm the greatest gen shed requirement	5L7 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.24 * P3 < 1296, no gen shedding is required; If P1 + P2 + 0.24 * P3 >= 1296, then Gen shed at KMO: Level 1, and Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second: ➤ GS = 5L7 KDS - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW Keep at least two PCN units online post shedding.
		Gen shed at GMS: 4.17 * [(P1 + P2 + 0.24 * P3) – 1296 – the armed gen shedding amount at KMO/FKR/VOL/MCY/DKW/MKL/QTY/PCN] [Transient Stability]
	5L11 MP	No generation shedding required
	5L12 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Multi-phase	5L13 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
	<u>5L1_2</u>	Same as Table 5.2.4 - 5L4 OOS
	5L1_3	If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then, Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second:
Double		Keep at least two PCN units online post-shedding.
on both lines with different phases)		 Gen shed at GMS, the greater of: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – Armed GS MW at DKW/MKL/QTY/PCN – 2350] [Voltage Stability] 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – Armed GS MW at DKW/MKL/QTY/PCN – 5L3 Quere Dating]
	5117	I.U3 [[3L1 + 3L2] GIVI3 + 3L3 FUN - Armed G3 IVIW at DKW/IMKL/QTY/PUN - 5L2_UVer_Rating] Gen shed requirements at KMO/EKRA/OL/MCV:
	JLI_/	If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then, Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second:

	-	rage 57 0
		Keep at least two PCN units online post-shedding.
		Gen-shed at GMS, the greater of
		 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – Armed GS MW at DKW/MKL/QTY/PCN – 2350] [Voltage
		Stability]
		 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – Armed GS MW at DKW/MKL/QTY/PCN – 5L2 Over Rating]
	5L2 3	Gen shed requirements at KMO/FKR/VOL/MCY:
	_	If P1 + 0.63 * P2 >= 390 MW AND P3 > 800 MW, then,
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at DKW/MKL/QTY first, then PCN second:
		GS = 5L3 PCN - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
		Keep at least two PCN units online post-shedding.
		Gen shed at GMS, the greater of:
		 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – Armed GS MW at DKW/MKL/QTY/PCN – 2350] [Voltage
		Stability]
		 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – Armed GS MW at DKW/MKL/QTY/PCN – 5L1_Over_Rating]
	5L2_7	Gen shed requirements at KMO/FKR/VOL/MCY:
		If $P1 + 0.63 * P2 >= 390 \text{ MW AND } P3 > 800 \text{ MW}$, then,
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Iransient Stability]
		Gen shed at DKW/MKI /QTY first then PCN second
		➢ GS = 5L7 KDS - (2L308 GMS + 1L361 GMS + 1L364 GMS) – 400 MW
		Keep at least two PCN units online post shedding.
		Gen shed at GMS, the greater of:
		 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – Armed GS MW at DKW/MKL/QTY/PCN – 2350] [Voltage
		Stability]
		 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – Armed GS MW at DKW/MKL/QTY/PCN – 5L1_Over_Rating]
	5L11 12	Same as Table 5.1.1 – System Normal
	5L11 13	Same as Table 5.1.1 – System Normal
	5L12 13	Same as Table 5.3.4 – MLS 5CX1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	KDY 5CX3	No generation shedding required
51	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.20 – 5L4 AND MLS 5CX2 O.O.S.

- Pre-outage Restrictions GMS to WSN transfer limit: Summer: No generation restriction Winter: No generation restriction

 - WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.2.4 - 5L4 OOS
	5L2	Same as Table 5.2.4 - 5L4 OOS
SLG or	5L3	Same as Table 5.2.4 - 5L4 OOS
No Fault Opening	5L7	Same as Table 5.2.4 - 5L4 OOS
	5L11	Same as Table 5.3.5 – MLS 5CX2 OOS
	5L12	No generation shedding required
Combined Multi-	5L1 MP	Same as Table 5.2.4 - 5L4 OOS
phase Contingency	5L2 MP	Same as Table 5.2.4 - 5L4 OOS
(5L1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
Arm the greatest	5L7 MP	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
gen shed	5L11 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
requirement	5L12 MP	No generation shedding required
Multi-phase	5L13 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.2.4 - 5L4 OOS
	5L1 3	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
Double	5L1 7	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
Contingency (SLG	5L2 3	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
on both lines with	5L2 7	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
differentphases)	5L11 12	Same as Table 5.1.1 - System Normal
	5L11 13	Same as Table 5.3.5 – MLS 5CX2 OOS
	5L12 13	Same as Table 5.1.1 - System Normal
Series Capacitor Bypass	KDY 5CX1	No generation shedding required
	KDY 5CX2	No generation shedding required
	KDY 5CX3	No generation shedding required
	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.21 – 5L4 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit:

- Summer: No generation restriction
- Winter: No generation restriction

WSN to KLY transfer limit: No generation restriction

Generation	Sheuung Ke	
CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.2.4 - 5L4 OOS
	5L2	Same as Table 5.2.4 - 5L4 OOS
SLG or	5L3	Same as Table 5.2.4 - 5L4 OOS
No Fault Opening	5L7	Same as Table 5.2.4 - 5L4 OOS
	5L11	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L12	Same as Table 5.3.6 – MLS 5CX3 OOS
Combined Multi-	5L1 MP	Same as Table 5.2.4 - 5L4 OOS
phase Contingency (5L1/2/3/4/7/11/12) Arm the greatest gen shed requirement	5L2 MP	Same as Table 5.2.4 - 5L4 OOS
	5L3 MP	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
	5L7 MP	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
	5L11 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L12 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
Multi-phase Contingency	5L13 MP	No generation shedding required
	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.2.4 - 5L4 OOS
	5L1 3	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS

Double	5L1_7	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
Contingency (SLG	5L2 3	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
on both lines with	5L2 7	Same as Table 5.5.19 - 5L4 AND MLS 5CX1 OOS
different phases)	5L11_12	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L11_13	Same as Table 5.1.1 - System Normal
	5L12_13	Same as Table 5.1.1 - System Normal
	KDY 5CX1	No generation shedding required
Series Capacitor Bypass	KDY 5CX2	No generation shedding required
	KDY 5CX3	No generation shedding required
	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L12 + 5L13) WSN < 3500 MW
 Winter: (5L12 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of:
		 1.53 * (0.64 * 5L2 GMS + 5L3 PCN – 5L3_Over_Rating)
	51.0	• 1.01 * (5L1 GMS + 5L2 GMS + 5L3 PCN – (– 0.19 * 2L103 KIT + 2983)) [Voltage Stability]
	5L3	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of: 1 53 * (0 64 * 51 3 PCN + 51 2 GMS - 51 2 Over Rating)
		 1.01 * (5L1 GMS + 5L2 GMS + 5L3 PCN - (-0.19 * 2L103 KIT + 2983)) [Voltage Stability]
	5L7	Gen shed at DKW/QTY/MKL first, then GMS/PCN, the greater of:
		 1.53 * (0.64 * 5L7 KDS + 5L2 GMS – 5L2_Over_Rating)
		• 1.01 * (5L1 GMS + 5L2 GMS + 5L7 KDS – (– 0.19 * 2L103 KIT + 2983)) [Voltage Stability]
SLG or	5L4	No generation shedding required
No Fault Opening	JLIZ	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If 1.08 * P1 + 1.06 * P2 + P3 >= 3354 OR 1.68 * P1 + 1.95 * P2 + P3 >= 3604, then
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
		• 1.08 * P1 + 1.06 * P2 + P3 – 3354 – 1.08 * armed GS amount at KMO – 1.06 * armed GS amount at
		FKR/VOL/MCY [Transient Stability]
		 1.68 ^ P1 + 1.95 ^ P2 + P3 - 3604 - 1.68 ^ armed GS amount at KMO - 1.95 ^ armed GS amount at EKR/VOL/MCY [Transient Stability]
		 1.05 *((5L12 + 5L13) WSN - 5L13 Over Rating) - armed GS amount at KMO/FKR/VOL/MCY
	5L1 MP	Same as Table 5.2.5 - 5L11 OOS
	5L2 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 ^ P2 >= 200 MW Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of:
		 1.54 ^ [5L3 PCN + 0.65 ^ 5L2 GMS - 5L3 OVer_Rating] 1.03 * (5L1 GMS + 5L2 GMS + 5L3 PCN - 3000) [Voltage Stability]
	5L3 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability]
Combined Multi-		Gen shed at FKR/VOL/MCY: Level 3 [Translent Stability]
phase Contingency		Gen shed at MKL/DKW/QTY first; and then GMS/PCN; the greater of:
(5L1/2/3/4/7/11/12)		 1.54 * [5L2 GMS + 0.65 * 5L3PCN – 5L2_Over_Rating]
den shed		 1.03 * (5L1 GMS + 5L2 GMS + 5L3 PCN – 3000) [Voltage Stability]
requirement	5L7 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		Gen shed at KMO ⁻ Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN; the greater of: • 1.54 * [5] 2 GMS + 0.65 * 51 7 KDS - 51 2 Over Bating]
		 1.03 * (5L1 GMS + 5L2 GMS + 5L7 KDS - 3000) [Voltage Stability]
	5L4 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.60 * P2 >= 280 MW and P3 >= 1400 MW,
		Gen shed at KMO: Level 1 [Iransient Stability] Gen shed at EKR/VOL/MCY: Level 1 [Transient Stability]
	5L12 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L11_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1 3	Same as Table 5.2.5 - 5L11 OOS
	5L1_7	Same as Table 5.2.5 - 5L11 OOS
	5L2_3	Gen shed at MKL/DKW/QTY first and then GMS/PCN:
Double Contingency (SLG on both lines with different phases)		1.01 * [(5L1 + 5L2) GMS + 5L3 PCN – 1200] [Voltage Stability]
		If P1 + 0.63 * P2 >= 280 MW AND P3 > 100 MW, then,
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
	5L2_7	Gen sned at MKL/DKW/QTY TIRST and then GMS/PCN: 1.01 * [/5] 1 + 5] 2) GMS + 5] 7 KDS - 1200] [\/oltage Stability]
		If P1 + 0.63 * P2 >= 280 MW AND P3 > 100 MW, then,
		Gen shed at KMO: Level 3 [Transient Stability]
	5 11 12	Same as Table 5 2 5 - 51 11 00S
	5L11 13	Same as Table 5.2.5 - 5L11 OOS
	5L12_13	Refer to Attachment 5 of SOO 7T-13
	KDY 5CX2	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
буразз	MLS 5CX3	No generation shedding required

Table 5.5.23 – 5L11 AND KDY 5CX2 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:
 Summer: (5L12 + 5L13) WSN < 3500 MW
 Winter: (5L12 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed at DKW/QTY/MKL first, then GMS/PCN: • 1.53 * (0.64 * 5L1 GMS + 5L3 PCN – 5L3 Over_Rating) • 1.01 * (5L1 CMS + 5L3 CMS + 5L3 PCN – (-0.10 * 2L102 K/T + 2082)) [Voltage Stability]
	51.2	• 1.01 (511 GMS + 512 GMS + 515 PCN - (- 0.19 21105 KTT + 2965)) [V01(age Stability] No depending required
	513	Gen shed at DKW/OTV/MKL first then GMS/PCN:
SLG or	JLJ	 1.53 * (0.64 * 5L3 PCN + 5L1 GMS - 5L1_Over_Rating) 1.01 * (5L1 GMS + 5L2 GMS + 5L3 PCN - (-0.10 * 2L103 KIT + 2083)) [Voltage Stability]
No Fault Opening	51.7	$\frac{1.01}{(5110MS+5120MS+512FCN-(-0.19-21105KT+2965))[V0Rage Stability]}{(5610MCTV/MKL first then GMS/PCN)}$
	JL7	 1.53 * (0.64 * 5L7 KDS + 5L1 GMS - 5L1_Over_Rating) 1.01 * (5L4 CMS + 5L2 CMS + 5L2 CMS + 5L2 KDS - (-0.40 * 2L402 K/T + 2082)) [Veltage Stability]
	<u> </u>	• 1.01 (5L1 GMS + 5L2 GMS + 5L7 KDS - (- 0.19 2L103 K11 + 2983)) [Voltage Stability]
	51.12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 51.11.12
		Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
	5L1 MP	Gen-sned requirements at KMO/FKR/VOL/MCY:
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of :
		• 1.54 ^ [5L3 PCN + 0.65 ^ 5L1 GMS - 5L3_OVer_Rating]
	5I 2 MP	• 1.05 (5L1 GMS + 5L2 GMS + 5L3 PCN - 3000)[Voltage Stability]
	5L3 MP	Gen-shed requirements at KMO/FKR//OL/MCY ⁻
Combined Multi-		If $P1 + 0.71 * P2 >= 200 \text{ MW}$
phase Contingency (5L1/2/3/4/7/11/12)		Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Arm the greatest gen shed		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN; the greater of:
requirement		 1.54 [5L1 GMS + 0.05 SL3 PCN - 5L1_0Vel_Kaling] 1.03 * (5L1 GMS + 5L2 GMS + 5L3 PCN - 3000) [Voltage Stability]
	5L7 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN; the greater of: • 154 * [5] 1 GMS + 0.65 * 5] 3 PCN – 5] 1 Over Rating]
		• $1.03 * (5L1 \text{ GMS} + 5L2 \text{ GMS} + 5L7 \text{ KDS} - 3000) [Voltage Stability]$
	5L4 MP	Same as Table 5.5.22 – 5L11 AND KDY 5CX1
	5L12 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L11_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.2.5 - 5L11 OOS
	561_3	1.01 * [(5L1 + 5L2) GMS + 5L3 PCN - 1200] [Voltage Stability]
		If P1 + 0.63 * P2 >= 280 MW AND P3 > 100 MW, then,
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Double Contingency (SLG	5L1_7	Gen shed at MKL/DKW/QTY first and then GMS/PCN: 1.01 * [(5L1 + 5L2) GMS + 5L7 KDS – 1200] [Voltage Stability]
different phases)		If P1 + 0.63 * P2 >= 280 MW AND P3 > 100 MW then
different phases)		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
	5L2_3	Same as Table 5.2.5 - 5L11 OOS
	5L2 7	Same as Table 5.2.5 - 5L11 OOS
	<u>5L11_12</u>	Same as Table 5.2.5 - 5L11 OOS
	<u>⊃∟11_13</u> 5 12_12	Same as Table 5.2.5 - 5LTT 005 Refer to Attachment 5 of SOO 7T-13
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX2	No generation shedding required
· , ,	MLS 5CX3	No generation shedding required

Table 5.5.24 – 5L11 AND KDY 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L12 + 5L13) WSN < 3500 MW
 Winter: (5L12 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
	-	 1.53 * (0.64 * 5L1 GMS + 5L2 GMS – 5L2 Over Rating)
		 1.01 * (5L1 GMS + 5L2 GMS + 5L3 PCN – (– 0.19 * 2L103 KIT + 2983)) [Voltage Stability]
	5L2	Gen shed at DKW/QTY/MKL first, then GMS/PCN:
SIGor		 1.53 * (0.64 * 5L2 GMS + 5L1 GMS – 5L1_Over_Rating)
No Fault Opening		 1.01 * (5L1 GMS + 5L2 GMS + 5L3 PCN – (– 0.19 * 2L103 KIT + 2983)) [Voltage Stability]
no r dait oponing	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L12	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
	5L1 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Iransient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Con shad at MKL/DKW//OTV first: and than CMS/PCN, the greater of :
		• $1.54 \times [51.2 \text{ GMS} + 0.65 \times 51.1 \text{ GMS} - 51.2 \text{ Over Rating}$
Combined Multi-		 1.03 * (5L1 GMS + 5L2 GMS + 5L3 PCN – 3000) [Voltage Stability]
phase Contingency	5L2 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
(5L1/2/3/4/7/11/12)	-	If P1 + 0.71 * P2 >= 200 MW
Arm the greatest		Gen shed at KMO: Level 3 [Transient Stability]
gen shed		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
requirement		
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of :
		 1.54 * [5L1 GMS + 0.65 * 5L2GMS – 5L1_Over_Rating]
		• 1.03 * (5L1 GMS + 5L2 GMS + 5L3 PCN – 3000) [Voltage Stability]
	5L3 MP	Same as Table 5.2.5 - 5L11 OOS
	5L7 MP	Same as Table 5.2.5 - 5L11 UUS
		Same as Table 5.5.22 – 5L11 AND KDY 5CX1 UUS
Multi phaga		Inis MP contingency will be covered by double contingency of 5L11 12
		No departies chedding required
Contingency		Gen shed at MKL/DKW/OTY first and then GMS/PCN:
		1.01 * [(51.1 + 51.2) GMS + 51.3 PCN - 1200] [Voltage Stability]
		If P1 + 0.63 * P2 >= 280 MW AND P3 >100 MW, then,
		Gen shed at KMO: Level 3 [Transient Stability]
Double Continuonau (CLC		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
contingency (SLG	5L1 3	Same as Table 5.2.5 - 5L11 OOS
different phases)	5L1 7	Same as Table 5.2.5 - 5L11 OOS
different phases)	5L2_3	Same as Table 5.2.5 - 5L11 OOS
	5L2_7	Same as Table 5.2.5 - 5L11 OOS
	5L11 12	Same as Table 5.2.5 - 5L11 OOS
	5L11 13	Same as Table 5.2.5 - 5L11 OOS
	<u>5L12_13</u>	Refer to Attachment 5 of SOO / I-13
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation snedding required
вураss	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.25 – 5L11 AND MLS 5CX2 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L12 + 5L13) WSN < 2600 MW
 Winter: (5L12 + 5L13) WSN < 2600 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
SLG or	5L7	No generation shedding required
No Fault Opening	5L4	No generation shedding required
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12
		Gen shed at DKW/QTY/MKL first, then GMS/PCN:
		1.01 * [(5L12 + 5L13) WSN – 5L13_Over_Rating]
Combined Multi-	5L1 MP	No generation shedding required
phase Contingency	5L2 MP	No generation shedding required
(5L1/2/3/4/7/11/12)	5L3 MP	No generation shedding required
Arm the greatest	5L7 MP	No generation shedding required
gen shed	5L4 MP	No generation shedding required
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L11_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Gen shed at MKL/DKW/QTY first and then GMS/PCN:
	_	1.01 * [(5L1 + 5L2) GMS + 5L3 PCN – 1880] [Voltage Stability]
	5L1_3	Same as above 5L1 2 contingency
	5L1_7	Gen shed at MKL/DKW/QTY first and then GMS/PCN:
		1.01 * [(5L1 + 5L2) GMS + 5L7 KDS – 1880] [Voltage Stability]
	5L2_3	Same as above 5L1 2 contingency
	5L2 7	Same as above 5L1 7 contingency
	5L11 12	Same as Table 5.2.5 – 5L11 OOS
Double	5L11_13	Gen shed requirements at KMO/FKR/VOL/MCY:
Contingency (SLG		If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required;
on both lines with		If P1 + P2 + 0.51 * P3 >= 1083 then
different phases)		Gen shed at KMO: Level 1[Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3[Transient Stability]
		Gen shed at MKL/DKW/QTY first and then GMS/PCN_the greatest of
		• 1 96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/EKR/VOL/MCY) [Transient Stability]
		 1.03 * [(5L13 + 5L12) WSN - 5L12 BypassMLS Over Rating] – armed gen shed at
		KMO/FKR/VOL/MCY
		 7.14 * (2L96 WSN + 0.14 * 5L13WSN – 2L96 Over Rating) – armed gen shed at
		KMO/FKR/VOL/MCY
	5L12 13	Refer to Attachment 5 of SOO 7T-13
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	KDY 5CX3	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.26 – 5L11 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L12 + 5L13) WSN < 2600 MW
 Winter: (5L12 + 5L13) WSN < 2600 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11 12
		Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.86 * P3 < 1941, no GS is required.
SLG or		If P1 + P2 + 0.86 * P3 >= 1941, then
No Fault Opening		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
		• 1.16 ^ (P1 + P2 + 0.86 ^ P3 – 1941 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability]
		 1.05 * [(5L12 + 5L13) WSN – 5L13_BypassMLS_Over_Rating] – armed GS amount at
		KMU/FKK/VUL/MCY
		• 7.26 "(0.13 " 5L12 WSN + 2L96 WSN - 2L96_OVer_Rating) - armed GS amount at
O a walk in a d Madti		KMU/FKR/VUL/MUY
Complined Multi-		No generation shedding required
pnase Contingency $(51, 1/2)/2/4/7/11/12)$		No generation shedding required
(3L1/2/3/4/7/11/12) Arm the groatest		No generation shedding required
Ann the greatest		No generation shedding required
requirement		This MD contingency will be accured by double contingency of 51 11, 12
Multiphooo		I mis MP contingency will be covered by double contingency of 5LTT_T2
Contingency		No generation shedding required
Contingency		Same as Table 5.5.25. 51.11 AND MISSERV2.009
	5113	Same as Table 5.5.25 - 51.11 AND MIS 5CX2 000
	5117	Same as Table 5.5.25-56111 AND ME030X2 000
	5123	Same as Table 5.5.25 - 5L11 AND MLC 5CX2 COC
	5127	Same as Table 5.5.25 - 5L11 AND MLC 5CX2 COC
	51 11 12	Gen shed requirements at KMO/EKR//OL/MCY
		If $P1 + P2 + 0.51 * P3 < 1083$ no gen shedding is required
		If $P1 + P2 + 0.51 * P3 >= 1083$ then
		Gen shed at KMO: Level 1 [Transient Stability]
on both lines with		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
different nhases)		
anterentpriceos		Gen shed t at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
		 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
		 1.03 * [(5L13 + 5L12) WSN - 5L13 BypassMLS_Over_Rating] – armed gen shed at
		 7.14 ^ [2L96 WSN + 0.14 ^ 5L12 WSN - 2L96_Over_Rating] - armed gen shed at
	5L11_13	Same as Table 5.2.5 – 5L11 OUS
	5L12 13	Keier to Attachment 5 of SUU / 1-13
		No generation shedding required
Series Capacitor		No generation shedding required
Bypass		No generation shedding required

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L13) WSN < 3500 MW
 Winter: (5L11 + 5L13) WSN < 3500 MW

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
	5L3	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
	5L7	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12
		Gen shed requirements at KMO/FKR/VOL/MCY:
SIGor		If 1.08 * P1 + 1.06 * P2 + P3 >= 3354 OR 1.68 * P1 + 1.95 * P2 + P3 >= 3604, then
No Fault Opening		Gen shed at KMO: Level 2 [Transient Stability]
i to i dall op offing		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
		• 1.08 * P1 + 1.06 * P2 + P3 – 3354 – 1.08 * armed GS amount at KMO – 1.06 * armed GS amount at
		FKR/VOL/MCY [Transient Stability]
		 1.68 * P1 + 1.95 * P2 + P3 – 3604 – 1.68 * armed GS amount at KMO – 1.95 * armed GS amount at
		FKR/VOL/MCY [Transient Stability]
		 1.05 * [(5L11 + 5L13) WSN – 5L13_Over_Rating] – armed GS amount at KMO/FKR/VOL/MCY
Combined Multi-	5L1 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
phase Contingency	5L2 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
(5L1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
Arm the greatest	5L7 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
gen shed	5L4 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L12_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.2.5 - 5L11 OOS
	5L1_3	Same as Table 5.2.5 - 5L11 OOS
Double	5L1_7	Same as Table 5.2.5 - 5L11 OOS
Contingency (SLG	5L2_3	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
on both lines with	5L2_7	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
different phases)	5L11_12	Same as Table 5.2.6 - 5L12 OOS
	5L11_13	Refer to Attachment 5 of SOO 7T-13
	5L12_13	Same as Table 5.2.6 - 5L12 OOS
	KDY 5CX2	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.28 – 5L12 AND KDY 5CX2 O.O.S.

Pre-outage Restrictions

GMS to WSN transfer limit: No generation restriction

- WSN to KLY transfer limit:
 - Summer: (5L11 + 5L13) WSN < 3500 MW
 Winter: (5L11 + 5L13) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
	5L2	No generation shedding required
SIGor	5L3	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
No Fault Opening	5L7	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12 Same as Table 5.5.27 - 5L12 and KDY 5CX1 OOS.
Combined Multi-	5L1 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
phase Contingency	5L2 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
(5L1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
Arm the greatest	5L7 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
gen shed	5L4 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L12_13 in this table
Contingency	5L61 MP	No generation shedding required
Double Contingency (SLG on both lines with different phases)	5L1_2	Same as Table 5.2.5 - 5L11 OOS
	5L1_3	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
	5L1_7	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
	5L2_3	Same as Table 5.2.5 - 5L11 OOS
	5L2_7	Same as Table 5.2.5 - 5L11 OOS
	5L11_12	Same as Table 5.2.6 - 5L12 OOS
	5L11_13	Refer to Attachment 5 of SOO 7T-13
	5L12_13	Same as Table 5.2.6 - 5L12 OOS
Series Capacitor Bypass	KDY 5CX1	No generation shedding required
	KDY 5CX3	No generation shedding required
	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.29 – 5L12 AND KDY 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L13) WSN < 3500 MW
- Winter: (5L11 + 5L13) WSN < 3500 MW •

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
	5L2	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
SIGor	5L3	No generation shedding required
No Fault Opening	5L7	No generation shedding required
No radit Opening	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12
		Same as Table 5.5.27 - 5L12 and KDY 5CX1 OOS
Combined Multi-	5L1 MP	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
phase Contingency	5L2 MP	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
(5L1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.2.5 - 5L11 OOS
Arm the greatest	5L7 MP	Same as Table 5.2.5 - 5L11 OOS
gen shed	5L4 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L12_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
	5L1_3	Same as Table 5.2.5 - 5L11 OOS
Double	5L1 7	Same as Table 5.2.5 - 5L11 OOS
Contingency (SLG	5L2_3	Same as Table 5.2.5 - 5L11 OOS
on both lines with	5L2 7	Same as Table 5.2.5 - 5L11 OOS
different phases)	5L11_12	Same as Table 5.2.6 - 5L12 OOS
	5L11_13	Refer to Attachment 5 of SOO 7T-13
	5L12_13	Same as Table 5.2.6 - 5L12 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor Bypass	KDY 5CX2	No generation shedding required
	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.30 – 5L12 AND MLS 5CX1 O.O.S.

Pre-outage Restrictions

GMS to WSN transfer limit: No generation restriction

- WSN to KLY transfer limit:
 - Summer: (5L11 + 5L13) WSN < 2600 MW
 - Winter: (5L11 + 5L13) WSN < 2600 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
SLG or	5L7	No generation shedding required
No Fault Opening	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12
		Gen shed at DKW/QTY/MKL first, then GMS/PCN: 1.01 * [(5L11 + 5L13) WSN – 5L13_Over_Rating]
Combined Multi-	5L1 MP	No generation shedding required
phase Contingency	5L2 MP	No generation shedding required
(5L1/2/3/4/7/11/12)	5L3 MP	No generation shedding required
Arm the greatest	5L7 MP	No generation shedding required
gen shed	5L4 MP	No generation shedding required
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L12_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L1_3	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L1_7	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L2 3	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L2 7	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L11_12	Same as Table 5.2.6 - 5L12 OOS
	5L11_13	Refer to Attachment 5 of SOO 7T-13
Double	5L12_13	Gen shed requirements at KMO/FKR/VOL/MCY:
Contingency (SLG		If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required;
on both lines with		If P1 + P2 + 0.51 * P3 >= 1083 then
different phases)		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
		 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
		 1.03 * [(5L11 + 5L13) WSN - 5L11 BypassMLS Over Rating] – armed gen shed at
		KMO/FKR/VOL/MCY
		 7.14 * [2L96 WSN + 0.14 * 5L13 WSN – 2L96_Over_Rating] – armed gen shed at
		KMO/FKR/VOL/MCY
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	KDY 5CX3	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.5.31 – 5L12 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L13) WSN < 2600 MW
 Winter: (5L11 + 5L13) WSN < 2600 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_12
		Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.86 * P3 < 1941, no GS is required.
SLG or		If P1 + P2 + 0.86 * P3 >= 1941, then
No Fault Opening		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
		 1.16 * (P1 + P2 + 0.86 * P3 – 1941 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability]
		 1.05 *((5L11 + 5L13) WSN – 5L13_BypassMLS_Over_Rating) – armed GS amount at
		• 7.26 * (0.13 * 5L11 WSN + 2L96 WSN – 2L96_Over_Rating) – armed GS amount at
		KMO/FKR/VOL/MCY
Combined Multi-	5L1 MP	No generation shedding required
phase Contingency	5L2 MP	No generation shedding required
(5L1/2/3/4/7/11/12)	5L3 MP	No generation shedding required
Ann the greatest	5L7 MP	No generation shedding required
requirement	5L4 MP	No generation shedding required
	5L11 MP	This MP contingency will be covered by double contingency of 5L11_12
Multi-phase	5L13 MP	Same as double contingency of 5L12_13 in this table
Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.5.25 - 5L11 AND MLS 5UX2 OUS
	5L1 3	Same as Table 5.5.25 - 5L11 AND MLS 5UX2 OUS
		Same as Table 5.5.25 - 5L11 AND MLS 5UX2 OUS
	5L2 3	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 005
		Can ale as Table 5.5.25 - 5LTT AND MLS 5UX2 UUS
	5L11_12	Gen sned requirements at KMO/FKK/VOL/MCY:
		If $P1 + P2 + 0.51$ $P3 < 1003$, no gen-sneuding is required, If $P1 + P2 + 0.51 + P3 < -1082$ then
Double		[I + I + F + 2 + 0.51 + F - 7 + 0.05 I +
Contingency (SLG		Gen shed at FKR/\/OL/MCV: Level 3 [Transient Stability]
on both lines with		
different phases)		Gen shed at MKI /DKW/OTY first and then GMS/PCN, the greatest of
		• 1 96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/EKR/VOL/MCY) [Transient Stability]
		 1.03 * [(5L11 + 5L13) WSN – 5L13 BypassMLS Over Rating] – armed gen shed at
		KMO/FKR/VOL/MCY
		 7.14 * [2L96 WSN + 0.14 * 5L11 WSN – 2L96 Over Rating] – armed gen shed at
		KMO/FKR/VOL/MCY
	5L11 13	Refer to Attachment 5 of SOO 7T-13
	5L12 13	Same as Table 5.2.6 - 5L12 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	KDY 5CX3	No generation shedding required
	MLS 5CX2	No generation shedding required

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12) WSN < 3500 MW
 Winter: (5L11 + 5L12) WSN < 3500 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
	5L3	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
	5L7	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11 13
		Gen shed requirements at KMO/FKR/VOL/MCY:
		If 1.08 * P1 + 1.06 * P2 + P3 >= 3354 OR 1.68 * P1 + 1.95 * P2 + P3 >= 3604, then
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen-shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
		 1.08 * P1 + 1.06 * P2 + P3 – 3354 – 1.08 * armed GS amount at KMO – 1.06 * armed GS amount at FKR/VOL/MCY [Transient Stability]
SLG or		• 1.68 * P1 + 1.95 * P2 + P3 – 3604 – 1.68 * armed GS amount at KMO – 1.95 * armed GS amount at
No Fault Opening		FKR/VOL/MCY [Transient Stability]
		 1.05 * [(5L11 + 5L12) WSN – 5L12_Over_Rating] – armed GS amount at KMO/FKR/VOL/MCY
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13
		Gen shed requirements at KMO/FKR/VOL/MCY:
		If 1.08 * P1 + 1.06 * P2 + P3 >= 3354 OR 1.68 * P1 + 1.95 * P2 + P3 >= 3604, then
		Gen shed at KMO: Level 2 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
		 1.08 * P1 + 1.06 * P2 + P3 – 3354 – 1.08 * armed GS amount at KMO – 1.06 * armed GS amount at EKR/VOL/MCY [Transient Stability]
		• $1.68 \times P1 + 1.95 \times P2 + P3 - 3604 - 1.68 \times armed GS amount at KMO - 1.95 \times armed GS amount at$
		FKR/VOL/MCY [Transient Stability]
		 1.05 * [(5L11 + 5L12) WSN – 5L11 Over Rating] – armed GS amount at KMO/FKR/VOL/MCY
	5L1 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
Combined Multi-	5L2 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
phase Contingency	5L3 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
(5L1/2/3/4/7/11/12)	5L7 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
Arm the greatest	5L4 MP	Same as Table 5.5.22 - 5L11 and KDY 5CX1 OOS
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11_13
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L12_13
Multi-phase	5L61 MP	No generation shedding required
Contingency	5112	Same as Table 5 2 5 - 5l 11 OOS
	5113	Same as Table 5 2 5 - 51 11 00S
Double Contingency (SLG on both lines with different phases)	5117	Same as Table 5 2 5 - 51 11 00S
	5123	Same as Table 5.5.22 - 51.11 and KDY 5CX1.00S
	5127	Same as Table 5.5.22 - 51.11 and KDY 5CX1.00S
	5 11 12	Refer to Attachment 5 of SOO 7T-13
	5L11 13	Same as Table 5.2.7 - 5L13 OOS
	5L12 13	Same as Table 5.2.7 - 5L13 OOS
	KDY 5CX2	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MIS 5CX1	No generation shedding required
7 F	MLS 5CX2	No generation shedding required

Table 5.5.33 – 5L13 AND KDY 5CX2 0.0.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12) WSN < 3500 MW
 Winter: (5L11 + 5L12) WSN < 3500 MW

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
	5L2	No generation shedding required
	5L3	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
SIGor	5L7	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
No Fault Opening	5L4	No generation shedding required
No radit Opening	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_13
		Same as Table 5.5.32 - 5L13 and KDY 5CX1 OOS
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13
		Same as Table 5.5.32 - 5L13 and KDY 5CX1 OOS
Combined Multi	5L1 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
nhase Contingency	5L2 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
(5 1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
Arm the greatest	5L7 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
den shed	5L4 MP	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11 13
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L12 13
Multi-phase	5L61 MP	No generation shedding required
Contingency	5L1 2	Same as Table 5.2.5 - 5L11 OOS
	5L1 3	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
Double	5L1 7	Same as Table 5.5.23 - 5L11 and KDY 5CX2 OOS
Contingency (SLG on both lines with different phases)	5L2 3	Same as Table 5.2.5 - 5L11 OOS
	5L2 7	Same as Table 5.2.5 - 5L11 OOS
	5L11 12	Refer to Attachment 5 of SOO 7T-13
	5L11 13	Same as Table 5.2.7 - 5L13 OOS
	5L12 13	Same as Table 5.2.7 - 5L13 OOS
Series Capacitor Bypass	KDY 5CX1	No generation shedding required
	KDY 5CX3	No generation shedding required
	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

Table 5.5.34 – 5L13 AND KDY 5CX3 0.0.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12) WSN < 3500 MW
- Winter: (5L11 + 5L12) WSN < 3500 MW ٠

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
	5L2	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
	5L3	No generation shedding required
SIGor	5L7	No generation shedding required
No Fault Opening	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_13 Same as Table 5.5.32 - 5L13 and KDY 5CX1 OOS
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13 Same as Table 5.5.32 - 5L13 and KDY 5CX1 OOS
	5L1 MP	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
Combined Multi-	5L2 MP	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
phase Contingency	5L3 MP	Same as Table 5.2.5 - 5L11 OOS
(3L1/2/3/4/7/11/12)	5L7 MP	Same as Table 5.2.5 - 5L11 OOS
Ann the greatest	5L4 MP	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11_13
requirement	5L12 MP	This MP contingency will be covered by double contingency of 5L12_13
Multi-phase Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.5.24 - 5L11 and KDY 5CX3 OOS
	5L1_3	Same as Table 5.2.5 - 5L11 OOS
Double	5L1_7	Same as Table 5.2.5 - 5L11 OOS
Contingency (SLG	5L2_3	Same as Table 5.2.5 - 5L11 OOS
on both lines with	5L2 7	Same as Table 5.2.5 - 5L11 OOS
different phases)	5L11_12	Refer to Attachment 5 of SOO 7T-13
	5L11_13	Same as Table 5.2.7 - 5L13 OOS
	5L12 13	Same as Table 5.2.7 - 5L13 OOS
Series Capacitor Bypass	KDY 5CX1	No generation shedding required
	KDY 5CX2	No generation shedding required
	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

Table 5.5.35 – 5L13 AND MLS 5CX1 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12) WSN < 2600 MW
 Winter: (5L11 + 5L12) WSN < 2600 MW

SLC or No Series and the standing required SLG or No Fault Opening SLT No generation shedding required SLG or No Fault Opening SLT Gen shed arming for this requirement shall be sub-set of gen shed arming for SL11_13 Gen shed at DKWOTYMKL first, then GMSPCN: 1.01*(SL11+5,L12)WSN-SL12 Over Rating) SLG or No Fault Opening SL12 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12_13 Gen shed at DKWOTYMKL first, then GMSPCN: 1.01*(SL1+5,L12)WSN-SL12 Over Rating) SL2 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12_13 Gen shed at KMOTKRVOLMCY: Use over Rating) Gen shed at MKUDKWOTY first; and then GMS/PCN, the greatest of: 1.16*(P1+P2+0.86*P3-1941) Transient Stability] Gen shed at MKUDKWOTY first; and then GMS/PCN, the greatest of: 1.16*(P1+P2+0.86*P3-1941) Transient Stability] Gen shed at MKUDKWOTY first; and then GMS/PCN, the greatest of: 1.16*(P1+P2+0.86*P3-1941) Transient Stability] Gen shed at MKUDKWOTY first; and then GMS/PCN, the greatest of: 1.16*(P1+P2+0.86*P3-1941) Transient Stability] Gen shed at MKUDKWOTY first; and then GMS/PCN, the greatest of: 1.10*(P1+P2+0.86*P3-1941) From CR Guitagenery Statup Statup No generation shedding required Buitagenery Statup Statup No generation shedding required duirement Statup	CONTINGENCY		SHEDDING REQUIREMENTS
SL2 No generation shedding required SL3 No generation shedding required SL4 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12 13 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12 13 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12 13 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12 13 Gen shed at FKRVOL/MCY: Level 1 [Transient Stability] Gen shed at FKRVOL/MCY: Level 1 [Transient Stability] Gen shed at KUL/DKWOT fist; and then GMS/PCN, the greatest of: • 1.16* (P1 + P2 + 0.86* P3 - 1941 - armed GS amount at KMO/FKRVOL/MCY) Prave Arming For Strate Stability Gen shed at KUL/DKWOT fist; and then GMS/PCN, the greatest of: • 1.16* (P1 + P2 + 0.86* P3 - 1941 - armed GS amount at KMO/FKRVOL/MCY) More FKRVOL/MCY No generation shedding required State Multi- State MV No generation shedding required State MV No generation shedding required		5L1	No generation shedding required
SL3 No generation shedding required SL4 Cen shed at DKWOTY/MKL first, then GMSPCN: 1.011 Cen shed at DKWOTY/MKL first, then GMSPCN: SL2 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12 13 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12 13 Gen shed at KMOTEKAVOL/MCV: If P1 + P2 + 0.80 * P3 = 1941, then Gen shed at KKU/DKWCITY first; and then GMS/PCN, the greatest of: * 1.161* (P1 + P2 + 0.80 * P3 = 1941, then Gen shed at KKU/DKWCITY first; and then GMS/PCN, the greatest of: * 1.161* (P1 + P2 + 0.80 * P3 = 1941, then Gen shed at KKU/DKWCITY first; and then GMS/PCN, the greatest of: * 1.181* (P1 + P2 + 0.80 * P3 = 1941, then Gen shed at KKU/DKWCITY first; and then GMS/PCN, the greatest of: * 1.181* (P1 + P2 + 0.80 * P3 = 1941, then Gen shed at KWD/FKNVOL/MCY Transient Stability Combined Multiphase SL1MP No generation shedding re		5L2	No generation shedding required
SL7 No generation shedding required SL4 No generation shedding required SL4 No generation shedding required SL4 Cen shed arming for this requirement shall be sub-set of gen shed arming for SL11_13 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12_13 SL6 or No Fault Opening SL12 SL6 or Information Subding required No Fault Opening If P1 + P2 + 0.80 * P3 >= 1941, no S0 is required. If P1 + P2 + 0.80 * P3 >= 1941, no S0 is required. If P1 + P2 + 0.80 * P3 >= 1941, no S0 is required. Gen shed at KKUDKWO Level 1 [Transient Stability] Gen shed at KKUDKWO.Level 1 [Transient Stability] Gen shed at KKUDKWO.KOCK Stat MP No generation shedding required Stat MP No generation shedding required Stat MP No generation shedding required Stat MP No generation		5L3	No generation shedding required
SL4 No generation shedding required SL1 Cen shed arming for this requirement shall be sub-set of gen shed arming for SL11_13 Gen shed at DKWDTY/MKL first, then GMS/PCN: 1.01* (SL11+SL12)/WSN-SL12 Over Rating) SLG or No Fault Opening SL12 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12_13 Gen shed at KMO/EKRVOL/MCY: If P1+P2+0.86 'P3 < 1941, no G5 is required. If P1+P2+0.86 'P3 >= 1941, then Gen shed at KMO/EKRVOL/MCY: Level 1 [Transient Stability] Gen shed at KKU/DKWQITY first; and then GMS/PCN, the greatest of: • 1.16* (P1+P2+0.86 'P3 = 1941 - armod G5 amount at KMO/FKRVOL/MCY) [Transient Stability] Gen shed at KKU/DKWQITY first; and then GMS/PCN, the greatest of: • 1.16* (P1+P2+0.86 'P3 = 1941 - armod G5 amount at KMO/FKRVOL/MCY) [Transient Stability] Combined Multi- phase Contingency (SL12/34/1711/12) SL1MP No generation shedding required SL1MP No generation shedding required SL1MP No generation shedding required SL1MP No generation shedding required SL1MP No generation shedding required SL1MP No generation shedding required SL1MP No generation shedding required SL1MP No generation shedding required SL1MP No generation shedding required SL1MP No generation shedding required SL111_13 St111_13 Set 1 <td< td=""><td></td><td>5L7</td><td>No generation shedding required</td></td<>		5L7	No generation shedding required
SLG or No Fault Opening SL11 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL11_13 Gen shed a DKWQCT/WAK_first, then GMSPCN: 1.01*((SL11+5L12)WSN-5L12 Over Rating) SLG or No Fault Opening SL12 Gen shed arming for this requirement shall be sub-set of gen shed arming for SL12_13 Gen shed requirements at KMO/FKRVOL/MCY: If P1+P2+0.86 P3 >= 1941, no SGIs required. If P1+P2+0.86 P3 >= 1941, then Gen shed at KKU/DKW/QTY first; and then GMS/PCN, the greatest of: • 1.16*(P1+P2+0.86 P3 >= 1941 - armed G5 amount at KMO/FKRVOL/MCY)[Transient Stability] Gen shed at KKL/DKW/QTY first; and then GMS/PCN, the greatest of: • 1.16*(P1+P2+0.86 P3 = 1941 - armed G5 amount at KMO/FKRVOL/MCY) • 1.05*((SL11+5L12)/WSN-5L11_BypassMLS_Over_Rating) - armed GS amount at KMO/FKRVOL/MCY Combined Multi- hase Contingency (SL1/2/34/7/11/12) SL1 MP No generation shedding required SL1 MP No generation shedding required SL3 MP No generation shedding required SL1 MP No generation shedding required SL4 MP No generation shedding required SL1 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required SL1 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required		5L4	No generation shedding required
SLG or No Fault Opening 5.12 Gen shed at DKWQTY/MkL first, then GMSPCN: 1.01/12 (SL11 + SL12) WSN - SL12 Over Rating) SLG or No Fault Opening 5.12 Gen shed atming for this requirement shall be sub-set of gen shed arming for 5L12 13 Gen shed at KMOC/REVO/LMCY: If P1 + P2 + 0.86 P3 > 1941, no GS is required. If P1 + P2 + 0.86 P3 > 1941, then Gen shed at KMOC/LEVeN1 [Transient Stability] Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: - 1.16* (P1 + P2 + 0.86 P3 > 1941 - armed GS amount at KMOP/RR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of: - 1.16* (P1 + P2 + 0.86 P3 - 1941 - armed GS amount at KMOP/RR/VOL/MCY) [Transient Stability] Combined Multi- phase Contingency 5.11 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP		5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_13
SLG or No Fault Opening 5L12 Gen shed arming for this requirements hall be sub-set of gen shed arming for 5L12. 13 Gen shed arming for this requirements at KMO/FKRVOL/MCY: If P1 + P2 + 0.86 P3 = 1941, one GS is required. If P1 + P2 + 0.86 P3 = 1941, one GS is required. If P1 + P2 + 0.86 P3 = 1941, one GS is required. If P1 + P2 + 0.86 P3 = 1941, one GS is required. If P1 + P2 + 0.86 P3 = 1941, one GS is required. If P1 + P2 + 0.86 P3 = 1941, and GS amount at KMO/FKRVOL/MCY)[Transient Stability] Gen shed at MKL/DKW/OTY first; and then GMS/PCN, the greatest of: • 1.05 *(GL11 + 5L12) WSN = 5L11_BypassMLS_Over_Rating) – armed GS amount at KMO/FKRVOL/MCY Combined Multi- phase Contingency (5L129/34/71112) Gen shed at MKL/DKW/OL/MCY • No generation shedding required SL1.MP No generation shedding required SL1.112 Same as Table 5.5.25 - SL11 AND MLS SCX2 OOS SL1.12 Same as Table 5.5.25 - SL11 AND MLS SCX2 OOS <td< td=""><td></td><td></td><td>Gen shed at DKW/QTY/MKL first, then GMS/PCN:</td></td<>			Gen shed at DKW/QTY/MKL first, then GMS/PCN:
SLG or No Fault Opening 5.12 Cen shed atmining for this requirement shall be sub-set or gen shed atmining for 5.12 * 13 Gen shed at Requirements at KMOFRKNOU/LMCY: If P1 + P2 + 0.86 * P3 - 1941, then Gen shed at KMO2 (Level 1 [Transient Stability] Gen shed at KMO2 (Level 1 [Transient Stability] Gen shed at MKLD/EWOYT first, and then GMS/PCN, the greatest of: • 1.16* (P1 + P2 + 0.86 * P3 - 1941 - armed GS amount at KMOFRKNOU/MCY) [Transient Stability] Gen shed at KMO2 (Level 1 [Transient Stability] Combined Multi- phase Contingency SL1 MP No generation shedding required SL3 MP No generation shedding required SL4 MP No generation shedding required		51.40	1.01 ^ ((5L11 + 5L12) WSN - 5L12 Over Rating)
SLG or No Fault Opening Get Site 1 FQ 1 (Bits * R KUCP KNOVCMCY : I (F) + P2 + 0.86 * P3 > 1941, then Gen shed at KMC: Level 1 (Transient Stability) Gen shed at KMC: Devel 1 (Transient Stability) Gen shed at KMC: Level 1 (Transient Stability) Gen shed at KMC: Level 1 (Transient Stability) Gen shed at KMC: Level 1 (Transient Stability) Combined Multi- phase Contingency 5L1 MP No generation shedding required SL1 VP No generation shedding required Gen shed at MC: Level 1 (Transient Stability) Combined Multi- phase Contingency 5L1 MP No generation shedding required GL1 V2/3VT1112 GL2 MP No generation shedding required GL1 V2/3VT1112 GL3 MP No generation shedding required GL1 VP No generation shedding required GL4 VP SL1 MP No generation shedding required GL1 V2/3VT1112 GL3 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required GL1 V2/3VT1112 GL3 MP No generation shedding required SL1 X Same as Table 5.5.25 - 5.111 AND MLS 5CX2 OOS SL1 3 Same as Table 5.5.25 - 5.111 AND MLS 5CX2 OOS SL1 3 Same as Table 5.5.25 - 5.111 AND MLS 5CX2 OOS <td></td> <td>5L12</td> <td>Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13</td>		5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13
No Fault Opening III + 1 + 2 + 0.06 + 52 + 194 1, 100 Gbis Regulated. III + 1 + P2 + 0.06 + P3 = 1941 1, then Gen shed at KMO. Level 1 [Transient Stability] Gen shed at KR/VOLMCY. Level 1 [Transient Stability] Gen shed at KR/VOLMCY. Level 1 [Transient Stability] Gen shed at KR/VOLMCY. Level 1 [Transient Stability] Gen shed at KR/VOLMCY. Level 1 [Transient Stability] Combined Multi- St.1 MP No generation shedding required Fig. 2 MP No generation shedding required St.1 MP Mit to generate stability St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP Mo generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP St.1 MP No generation shedding required St.1 NO MLS 5CX2 OOS St.1 MP No generation shedding required St.1 NO MLS 5CX2 OOS St.1 1 Same as Table 5.525 - St.11 AND MLS 5CX2 OOS St.1 Same	SLG or		Gen shed requirements at KMO/FKR/VOL/MCY:
Import 2 F000 Figure 2 F000 Figure 2 F000 Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] Gen shed at KMC: Level 1 [Transient Stability] - 1.16 * (PI + 2 + 0.86 * P3 - 1941 - amed GS amount at KMO/FKRVOL/MCY) [Transient Stability] Combined Multiphase Contingency - 1.16 * (PI + 2P + 0.86 * P3 - 1941 - amed GS amount at KMO/FKRVOL/MCY) Combined Multiphase Contingency 5L1 MP No generation shedding required St.1 MP No generation shedding required	No Fault Opening		If $P1 + P2 + 0.86 \times P3 \times 1941$, no GS is required.
Combined Multi- phase Contingency State at KRRVOU/MCY: Level 1 [Transient Stability] Combined Multi- phase Contingency Gen shed at KRRVOU/MCY: Level 1 [Transient Stability] Combined Multi- phase Contingency St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required St.1 MP No generation shedding required Contingency St.1 2 Same as Table 5.25 - 5t.1 1 AND MLS 5CX2 OOS St.1 2 Same as Table 5.25 - 5t.1 1 AND MLS 5CX2 OOS St.1 1 St.1 1 Same as Table 5.25 - 5t.1 1 AND MLS 5CX2 OOS St.1 1 Same as Table 5.25 - 5t.1 1 AND MLS 5CX2 OOS St.1 1 Same as Table 5.25 - 5t.1 1 AND MLS 5CX2 OOS St.1 2 Same as Table 5.25 - 5t.1 1 AND ML			Gen shed at KMO: Level 1 [Transient Stability]
Combined Multi- phase Contingency Gen shed at MKL/DKWQTY first; and then GMS/PCN, the greatest of:			Gen shed at FKR/V/OL/MCV: Level 1 [Transient Stability]
Gen shed at MKL/DKW0TY first; and then GMS/PCN, the greatest of:			
Notice 1.16* (*P1 + P2 + 0.86* P3 - 1941 - armed GS amount at KMO/FKRVOL/MCY) [Transient Stability] • 1.05* (*GL1 + 5L12) WSN - 5L11_BypassMLS_Over_Rating) - armed GS amount at KMO/FKRVOL/MCY • 7.26* (0.13* 5L12 WSN - 2L96 WSN - 2L96 Over_Rating) - armed GS amount at KMO/FKRVOL/MCY • 7.26* (0.13* 5L12 WSN + 2L96 WSN - 2L96 Over_Rating) - armed GS amount at KMO/FKRVOL/MCY • 7.26* (0.13* 5L12 WSN + 2L96 WSN - 2L96 Over_Rating) - armed GS amount at KMO/FKRVOL/MCY • 65.110P No generation shedding required • 51.10P No generation shedding required • 51.12P No generation shedding required • 51.12P No generation shedding required • 51.14P No generation shedding required • 51.13 Same as Table 5.5.25 - 51.11 AND MLS 5CX2 OOS • 51.12 Same as Table 5.5.25 - 51.11 AND MLS 5CX2 OOS • 51.11 Same as Table 5.2.5 - 51.11 AND MLS 5CX2 OOS <			Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
 			• 1.16 * (P1 + P2 + 0.86 * P3 – 1941 – armed GS amount at KMO/FKR/VOL/MCY) [Transient Stability]
KMO/FKRVOL/MCY End of the second			 1.05 *((5L11 + 5L12) WSN – 5L11 BypassMLS Over Rating) – armed GS amount at
Series Capacitor SL1 MP No generation shedding required Combined Multi- phase Contingency (SL1223/4/7/11/12) SL1 MP No generation shedding required SL2 MP No generation shedding required SL3 MP No generation shedding required SL1 MP No generation shedding required SL3 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required SL4 MP No generation shedding required Sum to greation shedding required SL1 MP This MP contingency will be covered by double contingency of 5L12_13 Multi-phase SL1 MP No generation shedding required SL2 MP Contingency SL1 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL2 T Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL2 T Same as Table 5.2.7 - SL13 AOD Double Sum as Table 5.2.7 - SL13 ADD MLS 5CX2 OOS SL1 13 Same as Table 5.2.7 - SL13 ADS SL11 12 Refer to Attachment 5 of SOO 7			KMO/FKR/VOL/MCÝ
Combined Multi- phase Contingency (6L1/2/3/4/7/11/12) KMO/FKRVOL/MCY Am the greatest gen shed requirement 5L3 MP No generation shedding required SL1 MP No generation shedding required 5L1 MP No generation shedding required SL1 MP No generation shedding required gen shed 5L4 MP No generation shedding required 5L1 MP No generation shedding required 5L1 MP No generation shedding required SL1 ZMP This MP contingency will be covered by double contingency of 5L11_13 Contingency 5L61 MP No generation shedding required Contingency 5L1 Z Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS SL1 Z Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 T SL1 Z Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 Z Sume as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 T Same as Table 5.2.2 - 5L11 AND MLS 5CX2 OOS SL1 Z Same as Table 5.2.2 - 5L11 AND MLS 5CX2 OOS 5L1 Z Gen shed requirements at KMO/FKRVOL/MCY: Contingency (SLG on both lines with different phases) SL1 2 Gen shed requirements at KMO/FKRVOL/MCY: Gen shed at KK/OVC/MCY: <td></td> <td></td> <td> 7.26 * (0.13 * 5L12 WSN + 2L96 WSN – 2L96 Over Rating) – armed GS amount at </td>			 7.26 * (0.13 * 5L12 WSN + 2L96 WSN – 2L96 Over Rating) – armed GS amount at
Combined Multiphase Contingency 5L1 MP No generation shedding required (5L1/2)/3/1711/12 No generation shedding required Arm the greatest gen shed 5L3 MP No generation shedding required (5L1/2)/3/1711/12 Stamp No generation shedding required (5L1/2)/3/1711/12 Stamp No generation shedding required (5L1/2)/3/1711/12 Stamp No generation shedding required (5L1/2)/3/1711/12 No generation shedding required (5L1/2)/3/1711/12 Stamp Stamp Stamp (5L1/2)/3/17 Same as Table 5.5.25 - 5.111 AND MLS 5CX2 OOS Stamp Stamp (5L1/2)/3/17 Same as Table 5.5.25 - 5.111 AND MLS 5CX2 OOS Stamp Stamp (5L1/2)/3/17 Same as Table 5.5.25 - 5.111 AND MLS 5CX2 OOS Stamp Stamp (5L1/2)/3/17 Same as Table 5.2.7 - 5.11 AND MLS 5CX2 OOS Stamp Stamp (5L1/2)/3/3 Same as Table 5.2.7 - 5.11 AND MLS 5CX2 OOS </td <td></td> <td></td> <td>KMO/FKR/VOL/MCY</td>			KMO/FKR/VOL/MCY
Schwarz Size MP No generation shedding required phase Contingency (SL12/3/4/7/11/12) Size MP No generation shedding required Arm the greatest gen shed requirement SL7 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL1 MP No generation shedding required SL2 MP This MP contingency will be covered by double contingency of SL12_13 Multi-phase SL61 MP No generation shedding required Contingency SL1 2 Same as Table 5.5.2.5 - SL11 AND MLS 5CX2 OOS SL1 7 Same as Table 5.5.2.5 - SL11 AND MLS 5CX2 OOS SL2 3 Same as Table 5.5.2.5 - SL11 AND MLS 5CX2 OOS SL2 3 Same as Table 5.5.2.5 - SL11 AND MLS 5CX2 OOS SL1 1 2 Same as Table 5.5.2.5 - SL11 AND MLS 5CX2 OOS SL2 7 SL1 12 SL1 1 12 Refer to Attachment 5 of SOO 7T-13 SL1 11 12 Suble Contingency (SLG on both lines with different phases) SL1 2 Gen shed at KMO/FKRVOL/MCY: Iransient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:	Combined Multi-	5L1 MP	No generation shedding required
Sci 1/2/3/4/7111/12) No generation shedding required Arm the greatest gen shed requirement SL7 MP No generation shedding required SL12 MP This MP contingency will be covered by double contingency of 5L11_13 Multi-phase 5L1 MP This MP contingency will be covered by double contingency of 5L12_13 Multi-phase 5L1 MP No generation shedding required Contingency SL12 MP No generation shedding required SL12 MP No generation shedding required Contingency SL12 MP No generation shedding required SL12 MP No generation shedding required Contingency SL12 MP No generation shedding required SL12 MP Same as Table 5.525 - 5L11 AND MLS 5CX2 OOS SL2 3 Same as Table 5.525 - 5L11 AND MLS 5CX2 OOS SL11 12 Refer to Attachments of SOO 7T-13 SL12 12 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required;	phase Contingency	5L2 MP	No generation shedding required
Arm the greatest gen shed requirement 5L7 MP No generation shedding required 5L4 MP No generation shedding required 5L1 MP This MP contingency will be covered by double contingency of 5L11_13 Multi-phase 5L1 MP This MP contingency will be covered by double contingency of 5L12_13 Multi-phase 5L61 MP No generation shedding required Contingency 5L1 2 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 3 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 7 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L2 7 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 12 Refer to Attachment 5 of SOO 7T-13 5L11 12 Refer to Attachment 5 of SOO 7T-13 5L11 13 Same as Table 5.2.7 - 5L13 OOS 5L12_13 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required;	(5L1/2/3/4/7/11/12)	5L3 MP	No generation shedding required
gen shed SL4 MP No generation shedding required fequirement SL11 MP This MP contingency will be covered by double contingency of SL12_13 Multi-phase SL61 MP No generation shedding required Contingency SL1 2 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 3 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 7 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 7 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 7 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL2 7 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 12 Refer to Attachment 5 of SOO 7T-13 SL11 12 Refer to Attachment 5 of SOO 7T-13 SL11 13 Same as Table 5.2.7 - 5L13 OOS SL11 13 Same as Table 5.2.7 - 5L13 OOS SL11 13 Same as Table 5.2.7 - 5L13 OOS SL12_13 Gen shed at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 > - 1083 no gen-shedding is required; If fP1 + P2 + 0.51 * P3 - 1083 no gen-shedding is required; Gen shed at KMC/DKW/QTY first and then GMS/PCN, the greatest of: • 1.96 * (P1 + P2 + 0.51 * P3 - 1083 - armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] • 1.96 * (P1 + P2 + 0.51 * P3 - 1083 - armed gen shed at	Arm the greatest	5L7 MP	No generation shedding required
requirement SL11 MP This MP contingency will be covered by double contingency of SL11_13 Multi-phase SL61 MP No generation shedding required Contingency SL12 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL13 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL14 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL12 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL12 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL12 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL12 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL2 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL11 12 Refer to Attachment 5 of SOO 7T-13 SL11 Refer to Attachment 5 of SOO 7T-13 SL12_13 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required;	gen shed	5L4 MP	No generation shedding required
Multi-phase Contingency SL12 MP Inits MP Contingency Will be covered by double contingency of SL12_13 Multi-phase Contingency SL1 2 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 3 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 7 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 1 Same as Table 5.5.25 - SL11 AND MLS 5CX2 OOS SL1 1 Refer to Attachment 5 of SOO 7T-13 SL11 12 Refer to Attachment 5 of SOO 7T-13 SL11 13 Same as Table 5.2.7 - SL13 OOS SL11 13 Same as Table 5.2.7 - SL13 OOS SL12_13 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 <= 1083 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO/FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at KMC/DKW/QTY first and then GMS/PCN, the greatest of: • 1.96 * (P1 + P2 + 0.51 * P3 - 1083 - armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] • 1.03 * [(SL11 + 5L12) WSN + 5L11_BypassMLS_Over_Rating] - armed gen shed at KMO/FKR/VOL/MCY • 7.14 * [2L96 WSN + 0.14 * 5L12 WSN - 2L96 Over Rating] - armed gen shed at KMO/FKR/VOL/MCY • 7.14 * [2L96 WSN + 0.14 * 5L12 WSN - 2L96 Over Rating] - armed gen shed at KMO/FKR/VOL/MCY KDY	requirement	5L11 MP	This MP contingency will be covered by double contingency of 5L11_13
Millipliase SLD MP No generation shedding required Contingency 5L1 2 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 3 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 7 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L2 3 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L2 7 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS 5L1 11 Refer to Attachment 5 of SOO 7T-13 5L11 12 Refer to Attachment 5 of SOO 7T-13 5L11 13 Same as Table 5.2.7 - 5L13 OOS 5L12_13 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required;	Multi phooo		I his MP contingency will be covered by double contingency of 5L12_13
Series Capacitor5L1 2Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L1 3Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L1 7Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L2 3Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L2 7Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L1 12Refer to Attachment 5 of SOO 7T-135L11 13Same as Table 5.2.7 - 5L13 OOS5L12 13Gen shed requirements at KMO/FKR/VOL/MCY:If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required;	Contingency	JL01 MF	
Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L1 7Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L2 3Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L2 7Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L1 12Refer to Attachment 5 of SOO 7T-135L11 13Same as Table 5.2.7 - 5L13 OOS5L12_13Gen shed requirements at KMO/FKR/VOL/MCY:If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required;		5L1 2	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
Series Capacitor Sume as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS Series Capacitor SEX Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS Series Capacitor SL1 12 Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS Series Capacitor SL1 12 Refer to Attachment 5 of SOO 7T-13 Series Capacitor SL12_13 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required; If P1 + P2 + 0.51 * P3 >= 1083 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 1 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 - 1083 - armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX3 KDY 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2		5L1_3	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L2 3Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS5L1 12Refer to Attachment 5 of SOO 7T-135L11 13Same as Table 5.2.7 - 5L13 OOS5L12_13Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required; If P1 + P2 + 0.51 * P3 > 1083 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 3 [Transient Stability] Gen shed at KMO/FKR/VOL/MCY: Level 3 [Transient Stability]Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: • 1.96 * (P1 + P2 + 0.51 * P3 - 1083 - armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] • 1.03 * [(5L11 + 5L12) WSN - 5L11_BypassMLS_Over_Rating] - armed gen shed at KMO/FKR/VOL/MCYSeries CapacitorKDY 5CX1No generation shedding required KDY 5CX2KDY 5CX2No generation shedding required MLS 5CX2No generation shedding requiredKDY 5CX2No generation shedding requiredMLS 5CX2No generation shedding required		5L1_7	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
Subset Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS SL11 Refer to Attachment 5 of SOO 7T-13 SL11 Same as Table 5.2.7 - 5L13 OOS SL11 Same as Table 5.2.7 - 5L13 OOS SL12_13 Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required; If P1 + P2 + 0.51 * P3 >= 1083 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 - 1083 - armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 - 1083 - armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Series Capacitor KDY 5CX1 Series Capacitor KDY 5CX2 No generation shedding required KDY 5CX2 No generation shedding required MLS 5CX2 No generation shedding required		5L2 3	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
Seli1 12 Refer to Attachment 5 of SOO /1-13 Souble 5L11 13 Same as Table 5.2.7 – 5L13 OOS Contingency (SLG on both lines with different phases) Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 > 1083 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 - 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 - 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Visual of the stability of the		5L2 7	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
Same as Table 5.2.7 – 5L13 OOS Double Contingency (SLG on both lines with different phases) Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 < 1083, no gen-shedding is required; If P1 + P2 + 0.51 * P3 >= 1083 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] • 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) • 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) • 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) • 1.03 * [[5L11 + 5L12] WSN - 5L11_BypassMLS_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY • 7.14 * [2L96 WSN + 0.14 * 5L12 WSN – 2L96 Over Rating] – armed gen shed at KMO/FKR/VOL/MCY Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required KDY 5CX3 KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required		<u>5L11_12</u>	Refer to Attachment 5 of SOO 7T-13
Double Contingency (SLG on both lines with different phases) SL12_13 Gen shed arequirements at KMO/FKR/VOL/MCY: If P1 + P2 + 0.51 * P3 >= 1083 no gen-shedding is required; If P1 + P2 + 0.51 * P3 >= 1083 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) Series Capacitor Bypass KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required		<u>5L11_13</u>	Same as Table 5.2.7 – 5L13 OOS
Contingency (SLG on both lines with different phases) If P1 + P2 + 0.51 * P3 <= 1083 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at KMO: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] Series Capacitor KDY 5CX1 Series Capacitor KDY 5CX2 Bypass KDY 5CX3 MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required	Double	5L12_13	Gen shed requirements at KMO/FKR/VOL/MCY:
on both lines with different phases) IFFFF2F0.51 F32-1085 then Gen shed at KMO: Level 1 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: • 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] • 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] • 1.03 * [(5L11 + 5L12) WSN - 5L11_BypassMLS_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY • 7.14 * [2L96 WSN + 0.14 * 5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY Series Capacitor Bypass KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required MLS 5CX2 No generation shedding required	Contingency (SLG		If $P1 + P2 + 0.51$ P3 < 1003, no gen-shedding is required, If $P1 + P2 + 0.51 \times P3 > -1092$ then
different phases) Gen shed at KNOL Lever 1 (manschrifterability) Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability] Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: 1.96* (P1 + P2 + 0.51*P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] 1.03* [(5L11 + 5L12) WSN - 5L11_BypassMLS_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY 7.14* [2L96 WSN + 0.14*5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY 7.14* [2L96 WSN + 0.14*5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY 8eries Capacitor KDY 5CX1 No generation shedding required KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required 	on both lines with		Gen shed at KMO: Level 1 [Transient Stability]
Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: • 1.96* (P1 + P2 + 0.51*P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] • 1.03* [(5L11 + 5L12) WSN - 5L11_BypassMLS_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY • 7.14* [2L96 WSN + 0.14* 5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY • 8cries Capacitor Bypass KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required	different phases)		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of: • 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] • 1.03 * [(5L11 + 5L12) WSN - 5L11_BypassMLS_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY • 7.14 * [2L96 WSN + 0.14 * 5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required			
 1.96* (P1 + P2 + 0.51*P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability] 1.03* [(5L11 + 5L12) WSN - 5L11_BypassMLS_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY 7.14* [2L96 WSN + 0.14*5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY 7.14* [2L96 WSN + 0.14*5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required 			Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
• 1.03 * [(5L11 + 5L12) WSN - 5L11_BypassMLS_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY • 7.14 * [2L96 WSN + 0.14 * 5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY Series Capacitor Bypass KDY 5CX2 No generation shedding required KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required			 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
KMO/FKR/VOL/MCY • 7.14*[2L96 WSN + 0.14*5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required			 1.03 * [(5L11 + 5L12) WSN - 5L11_BypassMLS_Over_Rating] – armed gen shed at
• 7.14*[2L96 WSN + 0.14*5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/FKR/VOL/MCY Series Capacitor KDY 5CX1 No generation shedding required KDY 5CX2 No generation shedding required KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required			KMO/FKR/VOL/MCY
Series Capacitor KDY 5CX1 No generation shedding required Bypass KDY 5CX2 No generation shedding required MLS 5CX2 No generation shedding required MLS 5CX2 No generation shedding required			 7.14 * [2L96 WSN + 0.14 * 5L12 WSN – 2L96_Over_Rating] – armed gen shed at KMO/EKR//OL/MCY
Series Capacitor KDY 5CX2 No generation shedding required Bypass KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required		KDY 5CX1	No generation shedding required
Bypass KDY 5CX3 No generation shedding required MLS 5CX2 No generation shedding required	Series Capacitor	KDY 5CX2	No generation shedding required
MLS 5CX2 No generation shedding required	Bypass	KDY 5CX3	No generation shedding required
		MLS 5CX2	No generation shedding required

Table 5.5.36 – 5L13 AND MLS 5CX2 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12) WSN < 2600 MW
 Winter: (5L11 + 5L12) WSN < 2600 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L11	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L11_13
		Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.86 * P3 < 1941, no GS is required.
		If $P1 + P2 + 0.86 * P3 >= 1941$, then
SLG or		Gen shed at KMO: Level 1 [Transient Stability]
No Fault Opening		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greatest of:
		 1.10 (PT+P2+0.00 P3-1941-armed GS amount at KWO/FKR/VOL/MCT) [Transient Stability] 1.05 *(/5 11 + 5 12) W/SN 5 12 BypassMI S Over Pating) armed GS amount at
		* 1.05 ((5LTT + 5LTZ) WSIN = 5LTZ_BypassiNLS_OVEL_Rating) = attred GS attount at KMO/EKRA/OL/MCY
		 7 26 * (0 13 * 51 11 WSN + 21 96 WSN – 21 96 Over Rating) – armed GS amount at
		KMO/EKR//OL/MCY
	5L12	Gen shed arming for this requirement shall be sub-set of gen shed arming for 5L12_13
		Gen shed at DKW/QTY/MKL first, then GMS/PCN:
		1.01 * ((5L11 + 5L12) WSN – 5L11_Over_Rating)
	5L1 MP	No generation shedding required
Combined Multi-	5L2 MP	No generation shedding required
pnase Contingency	5L3 MP	No generation shedding required
(3L1/2/3/4///11/12)	5L7 MP	No generation shedding required
Arm the greatest gen shed requirement	5L4 MP	No generation shedding required
	5L11 MP	This MP contingency will be covered by double contingency of 5L11_13
	5L12 MP	This MP contingency will be covered by double contingency of 5L12_13
Multi-phase Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L1_3	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	<u>5L1_7</u>	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L2_3	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L2 7	Same as Table 5.5.25 - 5L11 AND MLS 5CX2 OOS
	5L11 12	Refer to Attachment 5 of SOO 7T-13
	5L11_13	Gen shed requirements at KMO/FKR/VOL/MCY:
Double		If $P1 + P2 + 0.51^{\circ} P3 < 1083$, no gen-snedding is required;
Contingency (SLG		If $P'_1 + P'_2 + 0.51 + P'_3 \ge 1083$ then Concluded at KMO: Level 1 [Transient Stability]
on both lines with		Gen shed at EKP/VOL/MCV: Lovel 3 [Transient Stability]
differentphases)		
		Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greatest of:
		 1.96 * (P1 + P2 + 0.51 * P3 – 1083 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
		 1.03 * [(5L11 + 5L12) WSN - 5L12_BypassMLS_Over_Rating] – armed gen shed at
		KMO/FKR/VOL/MCY
		 7.14 * [2L96 WSN + 0.14 * 5L12 WSN – 2L96_Over_Rating] – armed gen shed at
	51.40.40	
	5L12 13	Same as Table 5.2.7 – 5L13 UUS
Carias Con asitar	KDY 50X1	No generation shedding required
Series Capacitor	KDY 50X2	No generation shedding required
Буразs	MISECVA	No generation shedding required
	IVILS SUX1	I no generation snedding required

5.6 <u>Two of GMS/PCN - KLY 500 kV Series Capacitor Banks Out of Service</u>

Table 5.6.1 – KDY 5CX1 AND KDY 5CX2 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements			
CONTINGENCY		SHEDDING REQUIREMENTS	
	5L1	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1 50 * (0 65 * 5I 1 GMS + 5I 3 PCN – 5I 3 Over Rating)	
	5L2	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.50 * (0.65 * 51.2 GMS + 51.3 PCN - 51.3 Over Bating)	
SLG or	5L3	Gen shed at QTY/MKL/DKW first, then GMS/PCN:	
No Fault Opening	517	$1.03 \text{ [(5L] + 5L2) GNS + 5L3 PCN - (-0.28 \text{ 2L} 103 \text{ KIT + 2828)] [V01(age Stability]}$	
	567	1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – (– 0.28 * 2L103 KIT + 2828)] [Voltage Stability]	
	5L4	No generation shedding required	
	5L11	No generation shedding required	
	5L12	No generation shedding required	
	5L1 MP	Same as Table 5.3.2 – KDY 5CX2 OOS	
	5L2 MP	Same as Table 5.3.1 – KDY 5CX1 OOS	
	5L3 MP	Gen-shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW	
		Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]	
		Gen-shed at MKL/DKW/QTY first, and then GMS/PCN: • 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 2800 MW] [Voltage Stability]	
Combined Multi-	5L7 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0 71 * P2 >= 200 MW	
phase Contingency		Gen shed at KMO: Level 3 [Transient Stability]	
(5L1/2/3/4/7/11/12) Arm the greatest		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]	
gen shed requirement		Gen shed at MKL/DKW/QTY first, and then GMS/PCN:	
•		1.03° [(5L1 + 5L2) GNS + 5L7 KDS - 2800 MW] [Voltage Stability]	
	5L4 MP	Gen sned requirements at KMO/FKR/VOL/MCY:	
		If $P'_1 + 0.60 + P_2 \ge 300$ MVV and $P_3 \ge 1800$ MVV,	
		Gen shed at EKP/VOL/MCV: Level 1 [Transient Stability]	
		Gen shed at MKL/DKW/OTY first, then at GMS:	
		1 03 * [(5] 1 + 5] 2) GMS + 5] 3 PCN - 3500 MWI [Voltage Stability]	
	5I 11 MP	Same as Table 5.2.1 - 5I 1.00S	
	5I 12 MP	Same as Table 5.2.1 - 51.1.00S	
Multi-phase	5L13 MP	Same as Table 5.2.1 - 5L1 OOS	
Contingency	5L61 MP	No generation shedding required	
	5L1 2	Same as Table 5.1.1 – System Normal	
5	5L1 3	Same as Table 5.3.2 – KDY 5CX2 OOS	
Double Contingency (SLG on both lines with different phases)	5L1 7	Same as Table 5.3.2 – KDY 5CX2 OOS	
	5L2 3	Same as Table 5.3.1 – KDY 5CX1 OOS	
	5L2 7	Same as Table 5.3.1 – KDY 5CX1 OOS	
	5L11 12	Same as Table 5.2.1 - 5L1 OOS	
	5L11 13	Same as Table 5.2.1 - 5L1 OOS	
	5L12 13	Same as Table 5.2.1 - 5L1 OOS	
	KDY 5CX3	No generation shedding required	
Series Capacitor	MLS 5CX1	No generation shedding required	
Bypass	MLS 5CX2	No generation shedding required	
	MLS 5CX3	No generation shedding required	

Table 5.6.2 - KDY 5CX1 AND KDY 5CX3 0.0.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.50 * (0.65 * 5L1 GMS + 5L2 GMS – 5L2_Over_Rating)
	5L2	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – (– 0.28 * 2L103 KIT + 2828)] [Voltage Stability]
SLG or	5L3	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.50 * (0.65 * 5L3 PCN + 5L2 GMS – 5L2 Over Rating)
No Fault Opening	5L7	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.50 * (0.65 * 5L7 KDS + 5L2 GMS – 5L2_Over_Rating)
	5L4	No generation shedding required
	5L11	No generation shedding required
	5L12	No generation shedding required
	5L1 MP	Same as Table 5.3.3 – KDY 5CX3 0.0.S
	5L2 MP	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Combined Multi-		Gen-shed at MKL/DKW/QTY first and then GMS/PCN
phase Contingency		1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 2800 MW] [Voltage Stability]
(5L1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.3.1 – KDY 5CX1 0.0.S
Arm the greatest	5L7 MP	Same as Table 5.3.1 – KDY 5CX1 0.0.S
gen shed	5L4 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
requirement	-	If $P1 + 0.60 * P2 >= 300 \text{ MW}$ and $P3 >= 1800 \text{ MW}$.
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
	5L11 MP	Same as Table 5.2.1 - 5L1 OOS
	5L12 MP	Same as Table 5.2.1 - 5L1 OOS
Multi-phase	5L13 MP	Same as Table 5.2.1 - 5L1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.3.3 – KDY 5CX3 0.0.S
	5L1_3	Same as Table 5.1.1 – System Normal
Double	5L1_7	Same as Table 5.1.1 – System Normal
(SI C on both lines	5L2_3	Same as Table 5.3.1 – KDY 5CX1 O.O.S
(SLG on both lines with different phases)	5L2 7	Same as Table 5.3.1 – KDY 5CX1 0.0.S
	5L11_12	Same as Table 5.2.1 - 5L1 OOS
	5L11_13	Same as Table 5.2.1 - 5L1 OOS
	5L12_13	Same as Table 5.2.1 - 5L1 OOS
	KDY 5CX2	No generation shedding required
Series Capacitor	MLS 5CX1	No generation shedding required
Bypass	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required
Table 5.6.3 – KDY 5CX1 AND MLS 5CX1 O.O.S.

<u>Pre-outage Restrictions</u> GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L3	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L7	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L4	No generation shedding required
SIGor	5L11	No generation shedding required
No Fault Opening	5L12	Gen shed requirements at KMO/FKR/VOL/MCY:
-1 5		If $1.41 \circ P1 + 1.65 \circ P2 + P3 => 4324$, then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at MKL/DKW//OTV first: and then GMS/PCN, the greater of:
		• $1.41 \times P1 + 1.65 \times P2 + P3 - 4324 - 1.41 \times armed GS amount at KMO [Transient Stability]$
		• 1.41×10^{-1} 1.03×12^{-1} 1.41×10^{-1} $1.$
		• 1.61 (0.03 SET2 WSIN + SET3 WSIN - SET3_OVEL_Rating) - armed GS amount at KIVIO
		Same as Table 5.3.4 – MLS 5CAT 005
		Con shod requirements at KMO/EKPA/OL/MCV:
		If $P1 + 0.71 * P2 > -200 MW/$
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOI /MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN:
		 1.54 * (5L2 GMS + 0.65 * 5L3 PCN – 5L2 Over Rating)
Complined Wulti-	5L7 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
(5 1/2/3/4/7/11/12)		If P1 + 0.71 * P2 >= 200 MW
Arm the areatest		Gen shed at KMO: Level 3 [Transient Stability]
den shed		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
requirement		
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN:
		1.54 ^ (5L2 GMS + 0.65 ^ 5L7 KDS - 5L2 Over Rating)
	5L4 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		II PT + 0.00° PZ >= 300° MVV and P3 >= 1800° MVV,
		Con shed at EKP/VOL/MCV: Lovel 1 [Transient Stability]
	5I 11 MP	Same as Table 5.3.1 – KDY 5CX1.00S
	5L12 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Multi-phase	5L13 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
,	5L1 2	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L1 3	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L1 7	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L2_3	Gen shed at MKL/DKW/QTY first and then GMS/PCN:
	_	1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1350] [Voltage Stability]
Double		If P1 + 0.63 * P2 >= 280 MW AND P3 > 400 MW, then,
Contingency		Gen shed at KMO: Level 3 [Transient Stability]
(SLG on both lines		Gen shed at FKR/VOL/MCY: Level 3 Iransient Stability
with different	SLZ_/	Gen sned at MKL/DKW/QTY TIFSt and then GMS/PGN: $1.04 * [(51.1 \pm 51.2) \text{ CMS} \pm 51.7 \text{ KDS} = 13501 [V] ottage Stability]$
phases)		1.04 [(521 + 522) Givis + 527 KDS - 1550] [Voltage Stability]
. ,		If P1 + 0.63 * P2 >= 280 MW 4ND P3 > 400 MW then
		Gen shed at KMO ⁻ Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
	5L11 12	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L11 13	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L12 13	Same as Table 5.3.4 – MLS 5CX1 OOS
	KDY 5CX2	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.6.4 – KDY 5CX1 AND MLS 5CX2 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L3	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L7	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L4	No generation shedding required
SIGor	5L11	Gen shed requirements at KMO/FKR/VOL/MCY:
No Fault Opening		If 1.41 * P1 + 1.65 * P2 + P3 => 4324, then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of:
		 1.41 * P1 + 1.65 * P2 + P3 – 4324 – 1.41 * armed GS amount at KMO [Transient Stability]
		 1.81 * (0.63 * 5L11 WSN + 5L13 WSN – 5L13_Over_Rating) – armed GS amount at KMO
	5L12	No generation shedding required
	5L1 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1
Combined Multi-	5L2 MP	Same as Table 5.3.1 – KDY 5CX1 0.0.S
phase Contingency	5L3 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
(5L1/2/3/4/7/11/12)	5L7 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
Arm the greatest	5L4 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1
gen sneu roquiromont	5L11 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
requirement	5L12 MP	Same as Table 5.3.1 – KDY 5CX1 OOS
Multi-phase	5L13 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L1_3	Same as Table 5.3.4 – MLS 5CX1 OOS
Double	5L1_7	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency (SLG	5L2_3	Same as Table 5.6.3 – KDY 5CX1 AND MLS 5CX1 OOS
on both lines with	5L2 7	Same as Table 5.6.3 – KDY 5CX1 AND MLS 5CX1 OOS
different phases)	5L11_12	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L11_13	Same as Table 5.3.5 – MLS 5CX2 OOS
	5L12_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	KDY 5CX2	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.6.5 - KDY 5CX1 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L3	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L7	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L4	No generation shedding required
	5L11	Gen shed requirements at KMO/FKR/VOL/MCY:
		If 1.41 * P1 + 1.65 * P2 + P3 => 4324, then
		Gen shed at KMO: Level 1 [Transient Stability]
SLG or		
No Fault Opening		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of:
		 1.41 * P1 + 1.65 * P2 + P3 – 4324 – 1.41 * armed GS amount at KMO [Transient Stability]
		 1.81 * (0.63 * 5L11 WSN + 5L12 WSN – 5L12_Over_Rating) – armed GS amount at KMO
	5L12	Gen shed requirements at KMO/FKR/VOL/MCY:
		If $1.41 * P1 + 1.65 * P2 + P3 => 4324$, then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN, the greater of:
		• 1.41° P1 + 1.65° P2 + P3 – 4324 – 1.41° armed GS amount at KMO[Transient Stability]
		• 1.81 ^ (0.63 ^ 5L12 WSN + 5L11 WSN – 5L11_Over_Rating) – armed GS amount at KMO
Combined Multi-	5L1 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
phase Contingency	5L2 MP	Same as Table 5.3.1 – KDY 5CX1 0.0.S
(5) 1/2/3/4/7/11/12)	5L3 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
Arm the greatest	5L7 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
aen shed	5L4 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
requirement	5L11 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L12 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
Multi-phase	5L13 MP	Same as Table 5.3.1 – KDY 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L1_3	Same as Table 5.3.4 – MLS 5CX1 OOS
Double	5L1_7	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency (SLG	5L2_3	Same as Table 5.6.3 KDY 5CX1 AND MLS 5CX1 OOS
on both lines with	5L2_7	Same as Table 5.6.3 KDY 5CX1 AND MLS 5CX1 OOS
different phases)	5L11_12	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L11_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L12_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	KDY 5CX2	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

Table 5.6.6 - KDY 5CX2 AND KDY 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Gen shed at QTY/MKL/DKW first, then GMS/PCN:
		1.03 * ((5L1 + 5L2) GMS + 5L3 PCN – (– 0.28 * 2L103 KIT + 2828)) [Voltage Stability]
	5L2	Gen shed at QTY/MKL/DKW first, then GMS/PCN:
		1.50 * (0.65 * 5L2 GMS + 5L1 GMS – 5L1 Over Rating)
SIGor	5L3	Gen shed at QTY/MKL/DKW first, then GMS/PCN:
No Fault Opening		1.50 * (0.65 * 5L3 PCN + 5L1 GMS – 5L1 Over Rating)
No Fault Opening	5L7	Gen shed at QTY/MKL/DKW first, then GMS/PCN:
		1.50 * (0.65 * 5L7 KDS + 5L1 GMS – 5L1_Over_Rating)
	5L4	No generation shedding required
	5L11	No generation shedding required
	5L12	No generation shedding required
	5L1 MP	Gen-shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability]
Combined Multi-		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
nhase Contingency		
(5 1/2/3/1/7/11/12)		Gen shed at MKL/DKW/QTY first; and then GMS/PCN:
Arm the areatest		1.03 * [(5L1 + 5L2) GMS + 5L3 PCN - 2800 MW] [Voltage Stability]
den shed	5L2 MP	Same as Table 5.3.3 – KDY 5CX3 OOS
requirement	5L3 MP	Same as Table 5.3.2 – KDY 5CX2 0.0.S
requirement	5L7 MP	Same as Table 5.3.2 – KDY 5CX2 0.0.S
	5L4 MP	Same as Table 5.6.2 – KDY 5CX1 AND KDY 5CX3 OOS
	5L11 MP	Same as Table 5.2.1 - 5L1 OOS
	5L12 MP	Same as Table 5.2.1 - 5L1 OOS
Multi-phase	5L13 MP	Same as Table 5.2.1 - 5L1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.3.3 – KDY 5CX3 OOS
	5L1_3	Same as Table 5.3.2 – KDY 5CX2 OOS
Double	5L1_7	Same as Table 5.3.2 – KDY 5CX2 OOS
Contingency (SLG	5L2_3	Same as Table 5.1.1 - System Normal
on both lines with	5L2_7	Same as Table 5.1.1 - System Normal
different phases)	5L11_12	Same as Table 5.2.1 - 5L1 OOS
	5L11_13	Same as Table 5.2.1 - 5L1 OOS
	5L12_13	Same as Table 5.2.1 - 5L1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	MLS 5CX1	No generation shedding required
Bypass	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.6.7 – KDY 5CX2 AND MLS 5CX1 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.3.2 – KDY 5CX2 OOS
	5L2	No generation shedding required
	5L3	Same as Table 5.3.2 – KDY 5CX2 OOS
SLG OF	5L7	Same as Table 5.3.2 – KDY 5CX2 OOS
No Fault Opening	5L4	No generation shedding required
	5L11	No generation shedding required
	5L12	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
	5L1 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		1.54 * [5L3 PCN + 0.65 * 5L1 GMS – 5L3_Over_Rating]
	5L2 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L3 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
Combined Multi-		If P1 + 0.71 * P2 >= 200 MW
phase Contingency (5L1/2/3/4/7/11/12)		Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Arm the greatest		Gen shed at MKL/DKW/QTY first; and then GMS/PCN;
gen shed		1.54 * (5L1 GMS + 0.65 * 5L3 PCN – 5L1 Over Rating)
requirement	5L7 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW/QTY first; and then GMS/PCN: 1.54 * (5L1 GMS + 0.65 * 5L7 KDS – 5L1 Over Rating)
	5L4 MP	Same as Table 5.6.3 – KDY 5CX1 AND MLS 5CX1 OOS
	5L11 MP	Same as Table 5.3.2 – KDY 5CX2 OOS
	5L12 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Multi-phase	5L13 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L1_3	Gen shed at MKL/DKW/QTY first and then GMS/PCN:
		1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1350] [Voltage Stability]
		If P1 + $0.63 \times P2 \ge 280 \text{ MW AND P3} > 400 \text{ MW}$, then,
		Con abod at EKP/VOL/MCV: Level 2 [Transient Stability]
Daubla	51 1 7	Gen shed at MKL/DKW/OTV first and then GMS/DCN:
Double Contingency (SLG		1.04 * [(5L1 + 5L2) GMS + 5L7 KDS - 1350] [Voltage Stability]
different phases)		If P1 + $0.63 \times P2 \ge 280 \text{ MW AND P3} > 400 \text{ MW}$, then,
		Gen shed at KMU: Level 3 [Iransient Stability]
	51.0.0	Gen Shed at FKR/VOL/MCY: Level 3 [Transient Stability]
	5127	Same as Table 5.3.4 – MLS $30AT 003$
	<u>5 11 12</u>	Same as Table 5.3.4 - MLO JOAT 000
	5 11 13	Same as Table 5.3.1 – KDY 5CX1 00S
	5 12 13	Same as Table 5.3.4 – MLS 5CX1 00S
	KDY 5CX1	No generation shedding required
Series Canacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX2	No generation shedding required
- /	MLS 5CX3	No generation shedding required

Table 5.6.8 - KDY 5CX2 AND MLS 5CX2 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.3.2 – KDY 5CX2 OOS
	5L2	No generation shedding required
SIGor	5L3	Same as Table 5.3.2 – KDY 5CX2 OOS
No Fault Opening	5L7	Same as Table 5.3.2 – KDY 5CX2 OOS
No raul Opening	5L4	No generation shedding required
	5L11	Same as Table 5.6.4 - KDY 5CX1 AND MLS 5CX2 OOS
	5L12	No generation shedding required
Combined Multi	5L1 MP	Same as Table 5.3.2 – KDY 5CX2 OOS
Complined Wulli-	5L2 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
(51, 1/2)/2/1/7/11/12)	5L3 MP	Same as Table 5.6.7 - KDY 5CX2 AND MLS 5CX1 OOS
(3L1/2/3/4/7/11/12) Arm the greatest	5L7 MP	Same as Table 5.6.7 - KDY 5CX2 AND MLS 5CX1 OOS
den shed	5L4 MP	Same as Table 5.6.3 – KDY 5CX1 AND MLS 5CX1 OOS
requirement	5L11 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
requirement	5L12 MP	Same as Table 5.3.2 – KDY 5CX2 OOS
Multi-phase	5L13 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L1_3	Same as Table 5.6.7 - KDY 5CX2 AND MLS 5CX1 OOS
Double	5L1_7	Same as Table 5.6.7 - KDY 5CX2 AND MLS 5CX1 OOS
Contingency (SLG	5L2_3	Same as Table 5.3.4 – MLS 5CX1 OOS
on both lines with	5L2_7	Same as Table 5.3.4 – MLS 5CX1 OOS
different phases)	5L11_12	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L11_13	Same as Table 5.3.5 – MLS 5CX2 OOS
	5L12_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.6.9 - KDY 5CX2 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.3.2 – KDY 5CX2 OOS
	5L2	No generation shedding required
SICor	5L3	Same as Table 5.3.2 – KDY 5CX2 OOS
No Fault Opening	5L7	Same as Table 5.3.2 – KDY 5CX2 OOS
No Fault Opening	5L4	No generation shedding required
	5L11	Same as Table 5.6.5 - KDY 5CX1 AND MLS 5CX3 OOS
	5L12	Same as Table 5.6.5 - KDY 5CX1 AND MLS 5CX3 OOS
Careabina d Multi	5L1 MP	Same as Table 5.3.2 – KDY 5CX2 OOS
Complined Wulti-	5L2 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L3 MP	Same as Table 5.6.7 - KDY 5CX2 AND MLS 5CX1 OOS
(3L1/2/3/4/7/11/12)	5L7 MP	Same as Table 5.6.7 - KDY 5CX2 AND MLS 5CX1 OOS
ann the greatest	5L4 MP	Same as Table 5.6.3 – KDY 5CX1 AND MLS 5CX1 OOS
requirement	5L11 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
requirement	5L12 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
Multi-phase	5L13 MP	Same as Table 5.3.2 – KDY 5CX2 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L1_3	Same as Table 5.6.7 - KDY 5CX2 AND MLS 5CX1 OOS
Double	5L1_7	Same as Table 5.6.7 - KDY 5CX2 AND MLS 5CX1 OOS
Contingency (SLG	5L2_3	Same as Table 5.3.4 – MLS 5CX1 OOS
on both lines with	5L2 7	Same as Table 5.3.4 – MLS 5CX1 OOS
different phases)	5L11_12	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L11_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L12_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX3	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

Table 5.6.10 - KDY 5CX3 AND MLS 5CX1 0.0.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

Generation Shedding Requirements

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.3.3 – KDY 5CX3 OOS
	5L2	Same as Table 5.3.3 – KDY 5CX3 OOS
	5L3	No generation shedding required
SLG OF	5L7	No generation shedding required
No Fault Opening	5L4	No generation shedding required
	5L11	No generation shedding required
	5L12	Same as Table 5.6.3 – KDY 5CX1 AND MLS 5CX1 OOS
	5L1 MP	Gen shed requirements at KMO/FKR/VOL/MCY: If P1 + 0.71 * P2 >= 200 MW
		Gen shed at KMO: Level 3 [Transient Stability] Gen shed at FKR/VOI /MCY: Level 3 [Transient Stability]
		Gen shed at MKL/DKW//OTY first: and then GMS/PCN :
		• 1.54 * [5L2 GMS + 0.65 * 5L1 GMS – 5L2_Over_Rating]
phase Contingency	5L2 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
(5L1/2/3/4/7/11/12)		If $P1 + 0.71^{\circ}P2 \ge 200 \text{ MVV}$
Arm the greatest		Gen shed at KMO: Level 3 [Iransient Stability]
gen shed		Gen sheu al FKR/VOL/MCT. Level 5 [Transient Stability]
requirement		Cen shed at MKL/DKW//OTV first: and then CMS/PCN :
		• $1.54 \times [51.1 \text{ GMS} + 0.65 \times 51.2 \text{ GMS} - 51.1 \text{ Over Rating}]$
	51.3 MP	Same as Table 5.3.4 $-$ MLS 5CX1 OOS
	5L7 MP	Same as Table 5.3.4 – MLS 5CX1 005
	51.4 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
	5L11 MP	Same as Table 5.3.3 – KDY 5CX3.00S
	5I 12 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Multi-phase	5L13 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1 2	Gen shed at MKL/DKW/QTY first and then GMS/PCN:
	_	1.04 * [(5L1 + 5L2) GMS + 5L3 PCN – 1350] [Voltage Stability]
		If P1 + 0.63 * P2 >= 280 MW AND P3 > 400 MW then
		Gen shed at KMO: Level 3 [Transient Stability]
Double		Gen shed at FKR/VOL/MCY: Level 3 [Transient Stability]
Contingency (SLG	5L1 3	Same as Table 5.3.4 – MLS 5CX1 OOS
on both lines with	5L1 7	Same as Table 5.3.4 – MLS 5CX1 OOS
different phases)	5L2 3	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L2 7	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L11 12	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L11 13	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L12 13	Same as Table 5.3.4 – MLS 5CX1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	MLS 5CX2	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.6.11 - KDY 5CX3 AND MLS 5CX2 O.O.S.

Pre-outage Restrictions

GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.3.3 – KDY 5CX3 OOS
	5L2	Same as Table 5.3.3 – KDY 5CX3 OOS
SICor	5L3	No generation shedding required
No Foult Opening	5L7	No generation shedding required
No Fault Opening	5L4	No generation shedding required
	5L11	Same as Table 5.6.4 – KDY 5CX1 AND MLS 5CX2 OOS
	5L12	No generation shedding required
	5L1 MP	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
Combined Multi-	5L2 MP	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
pnase Contingency	5L3 MP	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
(3L1/2/3/4/1/11/12)	5L7 MP	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
Ann the greatest	5L4 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
requirement	5L11 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
requirement	5L12 MP	Same as Table 5.3.3 – KDY 5CX3 OOS
Multi-phase	5L13 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
	5L1_3	Same as Table 5.3.4 – MLS 5CX1 OOS
Double	5L1_7	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency (SLG	5L2_3	Same as Table 5.3.4 – MLS 5CX1 OOS
on both lines with different phases)	5L2_7	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L11_12	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L11_13	Same as Table 5.3.5 – MLS 5CX2 OOS
	5L12_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX3	No generation shedding required

Table 5.6.12 - KDY 5CX3 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit: No generation restriction

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	Same as Table 5.3.3 – KDY 5CX3 OOS
	5L2	Same as Table 5.3.3 – KDY 5CX3 OOS
SIGor	5L3	No generation shedding required
No Foult Opening	5L7	No generation shedding required
	5L4	No generation shedding required
	5L11	Same as Table 5.6.5 – KDY 5CX1 AND MLS 5CX3 O.O.S
	5L12	Same as Table 5.6.5 – KDY 5CX1 AND MLS 5CX3 O.O.S
Correlation and Marshi	5L1 MP	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
	5L2 MP	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
pnase Contingency	5L3 MP	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
(3L1/2/3/4/1/11/12)	5L7 MP	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
Ann the greatest	5L4 MP	Same as Table 5.6.3 - KDY 5CX1 AND MLS 5CX1 OOS
requirement	5L11 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
requirement	5L12 MP	Same as Table 5.3.6 – MLS 5CX3 OOS
Multi-phase	5L13 MP	Same as Table 5.3.3 – KDY 5CX3 OOS
Contingency	5L61 MP	No generation shedding required
	5L1 2	Same as Table 5.6.10 – KDY 5CX3 AND MLS 5CX1 OOS
	5L1 3	Same as Table 5.3.4 – MLS 5CX1 OOS
Double	5L1 7	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency (SLG on both lines with	5L2 3	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L2 7	Same as Table 5.3.4 – MLS 5CX1 OOS
different phases)	5L11_12	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L11_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	5L12_13	Same as Table 5.3.1 – KDY 5CX1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	MLS 5CX1	No generation shedding required
	MLS 5CX2	No generation shedding required

Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12 + 5L13) WSN < 3475 MW
 Winter: (5L11 + 5L12 + 5L13) WSN < 3475 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
No Foult Opening	5L4	No generation shedding required
No Fault Opening	5L11	Gen shed at QTY/MKL/DKW first, then GMS/PCN:
		1.76 * (0.63 * 5L11 WSN + 5L13 WSN – 5L13 Over_Rating)
	5L12	Gen shed at QTY/MKL/DKW first, then GMS/PCN: 1.76 * (0.63 * 5L12 WSN + 5L13 WSN – 5L13_Over_Rating)
	5L1 MP	No generation shedding required
Combined Multi-	5L2 MP	No generation shedding required
phase Contingency	5L3 MP	Same as Table 5.2.5 – 5L11 OOS
(3L1/2/3/4/7/11/12)	5L7 MP	Same as Table 5.2.5 – 5L11 OOS
Ann the greatest	5L4 MP	No generation shedding required
gensned	5L11 MP	Same as Table 5.3.5 – MLS 5CX2 OOS
requirement	5L12 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
	5L13 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.48 * P3 < 1528, no gen-shedding is required;
		If P1 + P2 + 0.48 * P3 >= 1528 then
		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 2 [Transient Stability]
Multi phase		
Contingonav		Gen shed at MKL/DKW/QTY first, and then GMS/PCN, the greatest of:
Contingency		 2.08 * (P1 + P2 + 0.48 * P3 – 1528 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
		 13.0 * (2L96 WSN + 0.08 * 5L13 WSN – 2L96_Over_Rating) - armed gen shed at
		KMO/FKR/VOL/MCY
		 1.02 * [(5L11 + 5L12 + 5L13) WSN - 2700] - armed gen shed at KMO/FKR/VOL/MCY[Voltage
		stability]
	5L61 MP	No generation shedding required
	5L1_2	Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
		 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 2200] [Voltage Stability]
		 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 5L3_Over_Rating]
	5L1_3	Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
		 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 2200] [Voltage Stability]
		• 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 5L2_Over_Rating]
	5L1_7	Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
Double		• $1.03 \times [(5L1 + 5L2)]$ GMS + 5L7 KDS – 2200] [Voltage Stability]
Contingency (SLG		 1.03 * [(5L1 + 5L2) GMS + 5L7 KDS – 5L2_Over_Rating]
on both lines with	5L2_3	Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
different phases)		 1.03 * [(5L1 + 5L2) GMS + 5L3 PCN – 2200] [Voltage Stability]
		• 1.03 ^ [(5L1 + 5L2) GMS + 5L3 PCN – 5L1_Over_Rating]
	5L2_7	Gen shed at MKL/DKW/QTY first and then GMS/PCN, the greater of:
		• $1.03 [(5L1 + 5L2) \text{ GMS} + 5L7 \text{ KDS} - 2200] [Voltage Stability]$
		• 1.03 * [(5L1 + 5L2)GMS + 5L7 KDS – 5L1_Over_Rating]
	5L11_12	Same as Table 5.1.1 - System Normal
	5L11_13	Same as Table 5.3.5 – MLS 5CX2 OOS
	5L12_13	Same as Table 5.3.4 – MLS 5CX1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	KDY 5CX3	No generation shedding required
	MLS 5CX3	No generation sneading required

Table 5.6.14 - MLS 5CX1 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12 + 5L13) WSN < 3475 MW
 Winter: (5L11 + 5L12 + 5L13) WSN < 3475 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L11	Gen shed at QTY/MKL/DKW first, then GMS/PCN:
		1.76 * (0.63 * 5L11 WSN + 5L12 WSN – 5L12 Over_Rating)
	5L12	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.88 * P3 < 3092, no GS is required.
SLG or		If $P1 + P2 + 0.88 * P3 >= 3092$, then
No Fault Opening		Gen shed at KMO: Level 1 [Transient Stability]
		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
		Or a shared at NIKL (DIAN/OD) (finate and the an ONO/DON), the annual test of
		Gen sned at MKL/DKW/QTY TIRST; and then GMS/PCN; the greatest of:
		• 1.14 (PT+P2+0.09 P3-3092-armed GS amount at KWO/FKR/VOL/WCY)[Transient Stobility]
		Stability] a 1.02 * (/El.11 + El.12 + El.12) M/SN = 2750) armed CS amount at KMO/EKB/V/OL/MCV (Voltage
		• 1.05 ((5LTT + 5LTZ + 5LT3) WSN - 2750) - armed GS amount at KINO/FKR/ VOL/WGT [Voltage
		 11.0 * (2).06 WSN + 0.08 * 51.12WSN - 21.06 Over Rating) - armed gen shed at
		• TI.0 (2L90 WSN + 0.00 SET2WSN - 2L90_OVEL_Nating) - anneu gensneu at
	5I 1 MD	NINO/FRR/VOL/INCT
		No generation shedding required
		Some as Table 5.2.5 \pm 51.11 OOS
		Same as Table 5.2.5 – 5L11 005 Same as Table 5.2.5 – 5L11 005
		No generation shedding required
	5L11MP	Same as Table 5.3.6 $-$ MLS 5CX3 OOS
Combined Multi-	5L12 MP	Gen-shed requirements at KMO/FKR//OL/MCY
phase Contingency		If $P1 + P2 + 0.48 \times P3 < 1528$ no gen-shedding is required
(5L1/2/3/4/7/11/12)		If $P1 + P2 + 0.48 * P3 >= 1528$ then
Arm the greatest		Gen shed at KMO: Level 1
gen shed		Gen shed at FKR/VOL/MCY: Level 2
requirement		
		Gen shed at MKL/DKW/QTY first, and then GMS/PCN, the greatest of:
		 2.08 * (P1 + P2 + 0.48 * P3 – 1528 – armed gen shed at KMO/FKR/VOL/MCY) [Transient Stability]
		 13.0 * (2L96 WSN + 0.08 * 5L12 WSN – 2L96_Over_Rating) - armed gen shed at
		KMO/FKR/VOL/MCY
		 1.02 * [(5L11 + 5L12 + 5L13) WSN - 2700] - armed gen shed at KMO/FKR/VOL/MCY [Voltage
		stability]
Multi-phase	5L13 MP	Same as Table 5.3.4 – MLS 5CX1 OOS
Contingency	5L61 MP	No generation shedding required
	5L1_2	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
Double	5L1_3	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
	5L1_7	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
Contingency (SLG	5L2_3	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
on both lines with	5L2_7	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
different phases)	5L11_12	Same as Table 5.3.6 – MLS 5CX3 OOS
	<u>5L11_13</u>	Same as Table 5.1.1 - System Normal
	5L12_13	Same as Table 5.3.4 – MLS 5CX1 OOS
	KDY 5CX1	No generation shedding required
Series Capacitor	KDY 5CX2	No generation shedding required
Bypass	KDY 5CX3	No generation shedding required
	MLS 5CX2	No generation shedding required

Table 5.6.15 - MLS 5CX2 AND MLS 5CX3 O.O.S.

Pre-outage Restrictions GMS to WSN transfer limit: No generation restriction WSN to KLY transfer limit:

- Summer: (5L11 + 5L12 + 5L13) WSN < 3475 MW
 Winter: (5L11 + 5L12 + 5L13) WSN < 3475 MW

CONTINGENCY		SHEDDING REQUIREMENTS
	5L1	No generation shedding required
	5L2	No generation shedding required
	5L3	No generation shedding required
	5L7	No generation shedding required
	5L4	No generation shedding required
	5L11	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.88 * P3 < 3092, no GS is required.
		If P1 + P2 + 0.88 * P3 >= 3092, then
		Gen shed at KMO: Level 1 [Transient Stability]
SLG or		Gen shed at FKR/VOL/MCY: Level 1 [Transient Stability]
No Fault Opening		Or a shared at NIKL (DKN/OD) firsts and these ONO/DONE these secrets at af
		Gen sned at MKL/DKW/QTY TIRST; and then GMS/PCN; the greatest of:
		• 1.14 ^ (P1 + P2 + 0.88 ^ P3 – 3092 – armed GS amount at KMO/FKR/VOL/MCY) [Transient
		Stability
		• 1.05 (((5LTT + 5LT2 + 5LT3) WSIN - 2750) - armed GS amount at KWO/FKR/VOL/WCY)[Voltage
		 Stabilityj 11.0 * (2).06 (WSN + 0.08 * 51.11 (WSN - 2).06 (Over Pating) - armed gen shed at
		KMO/EKRA/OL/MCY
	51.12	Gen shed at OTV/MKI /DKW first then GMS/PCN:
		1.76 * (0.63 * 5L12 WSN + 5L11 WSN - 5L11 Over Rating)
	5L1 MP	No generation shedding required
Combined Multi-	5L2 MP	No generation shedding required
	5L3 MP	No generation shedding required
	5L7 MP	No generation shedding required
	5L4 MP	No generation shedding required
	5L11 MP	Gen shed requirements at KMO/FKR/VOL/MCY:
		If P1 + P2 + 0.48 * P3 < 1528, no gen-shedding is required;
phase Contingency		If P1 + P2 + 0.48 * P3 >= 1528 then
(5L1/2/3/4/7/11/12)		Gen shed at KMO: Level 1
Arm the greatest		Gen shed at FKR/VOL/MCY: Level 2
gen shed		
requirement		Gen shed at MKL/DKW/QTY first, and then GMS/PCN, the greatest of:
		• $2.08 \times (P1 + P2 + 0.48 \times P3 - 1528 - armed gen shed at KMO/FKR/VOL/MCY)[Transient Stability]$
		 13.0 * (2L96 WSN + 0.08 * 5L11 WSN – 2L96_Over_Rating) - armed gen shed at
		 1.02 ^ [(5L11 + 5L12 + 5L13) WSN - 2700] - armed gen sned at KMO/FKR/VOL/MCY [Voltage Stability]
	5I 12 MD	Stability Samo as Tablo 5.3.6 MI S 5CX3 OOS
Multi-nhase	51 13 MP	Same as Table 5.3.0 – MLS 5CX3 003 Same as Table 5.3.5 – MLS 5CX2 00S
Contingency	51.61 MP	No generation shedding required
Double Contingency (SLG on both lines with different phases)	5L1 2	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
	5L1 3	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
	5L1 7	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
	5L2 3	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
	5L2 7	Same as Table 5.6.13 – MLS 5CX1 AND MLS 5CX2 OOS
	5L11_12	Same as Table 5.3.6 – MLS 5CX3 OOS
	5L11_13	Same as Table 5.3.5 – MLS 5CX2 OOS
	5L12 13	Same as Table 5.1.1 - System Normal
Series Capacitor Bypass	KDY 5CX1	No generation shedding required
	KDY 5CX2	No generation shedding required
	KDY 5CX3	No generation shedding required
	MLS 5CX1	No generation shedding required