

Annexure-5

INCIDENTS WHICH CAUSED LOSS OF SUPPLY

Sl. No.	Date	Substation & Fdr / TX	Areas affected	MW	Minutes	Energy not delivered
1	Muscat 27/02/05	1. 220/132/33kV MSQ S/S: a) 132kV CB of 500MVA 500 TX-2 b) 132kV Jahloot line-1&2 2. 132/33kV Jahloot S/S: 132kV & 33kV CB's of 1125 MVA TX-1 &2 3. 220/132kV Filayj S/S: 220kV Filayj-MSQ line-2	All areas fed from Jahloot S/S (Quriyat, Seh al dhabi, Mazara, Al Nahda, Wadi Hatat) affected from 19:02hrs to 20:06hrs. Loads on Seh Al Dhabi-2 affected till 21:10hrs (Wadi Hatat, Shabiya)	30	64	32
2	Dahirah (28/02/05)	132/33kV Ibri & Dank Grid S/S 1) 132kV Ibri-Dank Line-1 &2 2) 132kV Ibri-Dank Line-1&2	Nil Ibri-Dank line-1 tripped when test charged line-2, Wadi Jizzi Grid was separated due to the outage of 132kV Muladhah-Khabourah lines. Under Frequency tripping occurred in system.	22	15	5.5
3	Dahirah (28/02/05)	132/33 KV Ibri Grid S/S 1) 132/33KV 63 MVATX - 1 (132 & 33 kV CBs) 2) a. 132/33KV 63 MVATX - 1 (132 & 33 kV CBs) b. 33 kV Dreez feeder	MOD, Dreez and Wali	6	30	3
4	Muscat 22/03/05	1) 132/33/11 kV Wadi Adai S/S 132KV Wadi Kabir Ckt - 1	All areas feeding from Wadi Kabir SS - Wadi Kabir Residential, Commercial and industrial areas, Muscat, Muttrah Business areas, Riyam and some parts of Ruwi commercial area	40	200	133.3
5	Muscat 01/04/05	132/33/11 kV Wadi Adai S/S: 132KV Wadi Kabir Ckt-1 132/33/11 kV Wadi Kabir S/S: 1. 125MVA TX-1 2. 33kV Muscat-1 3. 33kV Ruwi Market-1 4. 20MVA TX-2	Part of Muscat and Muttrah areas	50	140	116.7
6	South Batina 03/04/05	132/33kV Muladhah S/S 132KV CB & 33kV I/C (2TOB) of 125MVA TX-2	All area fed from 33kV Bus-2 affected upto 11:51hrs. Part of Billah area affected upto 12:35hrs.	30	11	5.5
7	Muscat 13/04/05	132/33/11 kV Wadi Adai S/S 132KV Wadi Kabir Ckt-1	Part of Ruwi Market , Part of Muttrah, Riyam area, Part of Hamriya , Muttrah- Business District ,W. Kabir - Residential, Commercial and Industrial Areas (Wadi Kabir Grid station lost supply because circuit-2 was also shut down earlier for hand cleaning works)	35	50	29.2
8	Dahirah (19/04/05)	132/33/11kV Ibri S/S 132/33kV 63MVA TX-1	MOD, Dreez, Wali Office (All feeders fed from 33kV Bus-1 affected)	15.3	17	4.3
9	Dahirah (19/04/05)	132/33/11kV Dank S/S 1. 132/33 kV 15MVA TX-1 2. 132/33 kV 15MVA TX-2 3. 33kV Bukraba feeder 3. 33kV Cap. Bank-1	All areas fed from Dank S/S	7	118	13.8
10	Dahirah (19/04/05)	132/33kV Al Wasit S/S 1.132/33 kV, 30 MVA TX-1 (only 33kV CB) 2. 132/33 kV, 30 MVA TX-2 (both sides) 3. 33kV Mahada feeder	All areas fed from Al Wasit S/S	5	67	5.6

Annexure-5

INCIDENTS WHICH CAUSED LOSS OF SUPPLY

Sl. No.	Date	Substation & Fdr / TX	Areas affected	MW	Minutes	Energy not delivered
11	South Batinah 21/04/05	1)132KV Mulladah - Filayj ckt - 2 both ends 2) 132/33 Mulladah Grid S/S 132KV & 33KV CBs of 125 MVA TX-1 & TX -2	Total area feeding from Mulladah SS	76	30	38.0
12	South Batinah 19/05/05	132/33 kV Mulladah Main SS 125 MVA TX -1	Khadra, Thermad and Part of Rustaq, Musanah, Suweiq and Billah. (33 kV Bus -1 affected. Due to high load TX -1 & 2 were in radial)	98	254	414.9
13	Dhahirah 24/05/05	132/33/11 kV Dank SS 15 MVA TX -1 &2	Mazim, Sunaina and Dank	10	54	9.0
14	Sharquiah 30/06/05	Al Kamil and JBB Ali Grid SS 132 kV JBB Ali Feeder -2 and 132/33 kV TX -2	Entire feeding areas of JBB Ali SS. (TX -1 was not in service due to problem in Earthing TX Bushing)	51	65	55.3
15	Dhahirah 10/07/05	1) 132/33 kV Al Wasit S/S 132kV Buraimi ckt-1 &2 2) 132/33 kV Buraimi S/S 132kV Al Wasit ckt-2	Entire Buraimi area	64	67	71.5
16	Dhahirah 24/07/05	132/33 kV Al Wasit SS 1. 33 kV CB of 30 MVA TX -1 2. 33 kV Mahada Fdr	Shuwayah, Al Khadrah, Al Juwaif, Mahadah, Al Afrath and Al Rowdha.	5	40	3.3
17	Dhahirah 24/07/05	132/33 kV Al Wasit SS: 1. 132 kV Buraimi ckt -1&2 2. 132 kV Dank -1 132/33 kV Buraimi SS: 132 kV Al Wasit ckt -2	Entire Buraimi area	50	34	28.3
18	Dhahirah 24/07/05	132/33 kV Dank SS 132 kV Al Hail feeder	Entaire Al Hail and Yanqul area	10	15	2.5
19	Dhahirah 25/07/05	1.132/33kV Al Wasit S/S a) 33kV incomer of 30MVA TX-1 b)132kV Buraimi ckt-1 c)132kV Dank ckt-1 2. 132/33 kV Buraimi S/S 132kV Al Wasit ckt-1 3. 132/33kV Al Wasit S/S 132kV Buraimi ckt-2 4. 132/33kV Al Wasit S/S 132kV CB of 30MVA TX-1	Many areas in Batina & Dhahira region affected. Entire Buraimi area and many areas in Batina & Dhahira region affected.	60	43	43.0
20	Dhahirah 25/07/05	1.132/33kV Al Wasit S/S a)132kV Buraimi ckt-1 b)132kV Buraimi ckt-2 c)132kV Dank ckt-1 2. 132/33 kV Buraimi S/S 132kV Al Wasit ckt-1 3. 132/33 kV Buraimi S/S 132kV Al Wasit ckt-1 manually opened	Entire Buraimi area affected.	46	23	17.6
21	North Batina 04/08/05	1. 132/33kV Sohar S/S a)132kV Khabourah ckt-1 b)125MVA TX-1 & TX-2 2. 132/33kV Khabourah S/S 132kV Sohar ckt-1	All area fed from Sohar S/S	147	43	105.4

Annexure-5

INCIDENTS WHICH CAUSED LOSS OF SUPPLY

Sl. No.	Date	Substation & Fdr / TX	Areas affected	MW	Minutes	Energy not delivered
22	North Batina & South Batina 05/08/05	1. 132/33kV Sohar S/S a)132kV Khabourah ckt-1 b)125MVA TX-1 & TX-2 c) 132kV Khabourah ckt-2 2. 132/33kV Khabourah S/S a) 125MVA TX-1 b) 132kV Bus Coupler c) 132kV Sohar ckt-2 3. Muladhah S/S: a) 132kV Khabourah ckt-1 b) 33kV Musanah-1 c) 33kV Rustaq 1 & 2 d) 33kV Billah-1	All area fed from Sohar S/S and part of Musanah, Rustaq and Billah	210	21	73.5
23	North & South Batinah 06/08/05	1. 132/33 kV Sohar SS a) 132 kV Khaburah -1 2. 132/33 kV Khaburah SS a) 132 kV Mulladah -2 b) 132 kV Bus coupler c) 125 MVA TX -1 & 2 3. Mulladah SS a) 132 kV Khaburah -1 b) 125 MVA TX -1 & 2 4. Filayj SS 132 kV Filayj - Mulladah -2	All area fed from Khaburah S/S & Mulladah S/S	250	100	416.7
24	North Batinah 06/08/05	132/33 kV Sohar SS 33 kV I/C of 125 MVA TX -2 to Bus -2 (2T0B)	All area fed from 33 kV Bus -2	76	3	3.8
24	Dhahirah 08/08/05	132/33 kV Dank S/S 132kV Al Hail feeder	Al Hail S/S and it's feeding area affected for 15 sec for each time.	20	5	1.7
26	Dhahirah 09/08/05	1. 132/33 kV Al Wasit SS 132 kV Buraimi -1 132 kV Buraimi -2 2. 132/33 kV Buraimi SS 132 kV Al Wasit -2 15:46 & 15:56 hrs 132/33 kV Al wasit SS 132 kV Buraimi -2 3.132/33 kV Buraimi SS 132 kV Al Wasit -2	Entire Buraimi area from 15:17 to 15:38 hrs.	60	20	20.0
27	Sharquiya 11/08/05	1) 132/33/11kV Mudhairib S/S & 132kV Al Kamil S/S 132kV Al Kamil-Mudhairib line-1 2) 132/33/11kV Mudhairib S/S & 132kV Al Kamil S/S 132kV Al Kamil-Mudhairib line-2 (Same time GT-1A >-1B CB's tripped at Al Kamil P/S) 3)132/33/11kV Sur S/S 33kV Al Egga-1 33kV Al Egga-2 33kV Stadium 11kV Industrial Area 11kV Bilad Jina 11kV Barbuwera 4)132/33 kV JBB Ali S/S 33kV Al Ashkara 33kV JBB Ali-2 33kV JBB Ali-1	Nil Nil (GT-1C survived disturbance and was carrying some load of Sur & JBB Ali S/S) Al Agga, Shama,Shiya,Rasl Had,Stadium,Al Flej,Sur Hospital, Industrial,Bilad Jinah, Barbuwera. Crusher,Wadi Sall,Ruwais,Rumaila,Al Ashkara, Jalan Bani Bo Ali	21	45	15.8
28	Muscat 16/08/05	132/33/11kV Wadi Kabir S/S 33 kV incomer of 125 MVA TX-2 on Bus-1and all 33kV feeders in Bus-1	All feeders fed from Bus-1 affected. (Part of Wadi kabir,Ruwi, CBD, Riyam, Sldab areas)	40	152	101.3

Annexure-5

INCIDENTS WHICH CAUSED LOSS OF SUPPLY

Sl. No.	Date	Substation & Fdr / TX	Areas affected	MW	Minutes	Energy not delivered
29	North Batina & South Batina 21/08/05	1)132/33 kV Khaburah S/S a) 125MVA TX-1 & TX-2 b) 132kV Bus Coupler 2)132/33kV Sohar S/S 132kV Khaburah line-1 &2 3)132/33kV Muladhah S/S a) 132kV Khaburah line- 1 & 2 b) 33kV Musanah-1 c) 33kV Billah-1 d) 33kV Rustaq-2 4)33/11kV Sur Al Baloosh Pri. S/S 10MVA TX-2 5)33/11kV Liwa Pri. S/S 10MVA TX-1 & TX-2	1) All area fed from Khaburah S/S affected. 3.b,c,d) Part of South Batina area 4) & 5) Part of north Batina area	105	57	99.8
30	South Batinah 28/08/05	132/33KV Mulladah S/S a) 132KV & 33KV CB of 125MVA TX-2 b) 33KV Capacitor bank -1	All feeders fed from Bus-1	81	42	56.7
31	Dhahirah 31/08/05	132/33/11KV Dank S/S 132KV Al-Hail Feeder	Al Hail, Yanqul and Al Arid	25	10	4.2
32	Dhahirah 02/09/05	132/33/11 kV lbri Grid SS 1. 132/33 kV 63 MVA TX -1 2. 33 kV Capacitor Bank -1 & 2	Part of lbri, Dreez and Amla areas.	14	77	18.0
33	South Batinah 05/09/05	220 kV Barka & Filayj SS 220 kV Barka - Filayj ckt -2 220 kV Barka - Filayj ckt -1	Feeders tripped on Under frequency. (Barka PS separated from rest of the system)	45	60	45.0
34	North Batina 07/09/05	1) 132/33kV Khaburah SS a)132/33kV ,125MVA TX-1 & TX-2 b) 132kV Bus coupler c) 132kV Muladhah -2 2) 132/33kV Sohar S/S 132 kV Khaburah ckt-1	All area fed from Khaburah SS affected (Khaburah, Bidaya, Dil Abdul Salam, Wadi Bani Omer)	57	46	43.7
35	North Batina 07/09/05	1) 132/33kV Khaburah SS a)132/33kV ,125MVA TX-1 & TX-2 b) 132kV Bus coupler c) 132kV Muladhah -2 2) 132/33kV Sohar S/S 132 kV Khaburah ckt-1 3) 132/33kV Muladhah S/S 132 kV Khaburah ckt-1	All area fed from Khaburah SS affected. (Khaburah, Bidaya, Dil Abdul Salam, Wadi Bani Omer)	50	60	50

Annexure-5

INCIDENTS WHICH CAUSED LOSS OF SUPPLY

Sl. No.	Date	Substation & Fdr / TX	Areas affected	MW	Minutes	Energy not delivered
36	North Batinah 14/09/05	132/33 kV Sohar S/S 1) 33KV I/C's of 125 MVA TX-1 & TX-2 on Bus-2 2) All 33kV Feeder CB's on Bus-2 Note: 33kV Sohar Hospital fdr-1 also tripped same time. This Feeder tripped two times before, at 22:27hrs on 13/09/05 & 04:42hrs respectively.	All feeders fed from Bus-2 affected. (Part of Sohar Town, Part of Sohar industrial area, Sohar port area, Uwayanat, Wadi Hibi, Part of Sham, Al Huwail).	27	21	9.5
37	Muscat 20/09/05	Ghubrah PS & 132/33kV MSQ S/S 132 kV Ghubrah- MSQ ckt-1 (Boiler -2,3,4 & 6 tripped and ST-2,3 & 4 emergency shutdown at Ghubrah P/S)	Some areas in Muscat region affected due to 33& 11kV fdr tripping	54	30	27
38	Muscat 20/09/05	Rusail PS 132/33kV Bousher SS 132 kV Rusail - Bousher ckt-2	Entire areas feeding from Bousher SS affected.	91	47	71.3
39	Muscat 20/09/05	132/33kV MSQ SS & 132/33kV Wadi Adai SS a)132 kV MSQ- Wadi Adai ckt-2 b)132 kV MSQ- Wadi Adai ckt-1	Some areas in Muscat region affected due to 33& 11kV fdr tripping	10	10	1.7
40	Muscat 20/09/05	132/33kV MSQ SS & 132/33kV Wadi Adai SS 132 kV MSQ- Wadi Adai ckt-1	Some areas in Muscat region affected due to 11kV fdr tripping	4.4	10	0.7
41	Dhahirah 06/10/05	132/33 kV Ibri S/S 1. 63MVA TX-1 2. 33kV Cap. Bank- 1 & 2	Part of Ibri area, MOD,Dreez,Wali office	11.7	20	3.9
42	Muscat 23/10/05	132/33kV Rusail PS 1) 132/33 kV 75MVA IBTX-3 2) 132/33 kV 75MVA IBTX-4	Sultan Qaboos university, Rusail Industrial area,Industrial Housing (At 00:58hrs Bus-1 Section B supply affected & at 01:57hrs Bus-2 Section B supply affected.)	15.0	133	33.3
43	Muscat 20/11/05	132/33kV Jahloot SS 132KV & 33KV CB's of 125MVA TX-1 & TX-2	All feeding areas from Jahloot SS	18	29	8.7

2243.6
