

## System Restoration

Restoration from Mahaweli Complex

**1<sup>st</sup> Attempt:** From Victoria Generator 02

No	Location	Equipment	Time
1	Victoria	Gen 02 Resumed	12:55:26
2	Victoria	Kothmale PS 01	12:55:26
3	Kothmale	PS supply received	12:59:05
4	Kothmale	Biya 02 energized	13:01:28
5	Biyagama	GSS supply received	13:05:48
6	Biyagama	33kV F2 energized	13:08:50
7	Biyagama	Sapugaskanda 01 energized	13:10:10
8	Sapugaskanda	Biyagama 01 energized	13:10:11
9	Victoria	Gen 02 / tripped	13:10:11
10		<b>10 MW &amp; 16MVar lagging at the time of tripping</b>	
11		<b>Tripped due to excitation stage II</b>	

**2<sup>nd</sup> Attempt:** From Victoria Generator 01

No	Location	Equipment	Time
1	Victoria	Gen 01 Resumed	13:20:47
2	Kothmale	Kothmale PS 01 supply received via 21152 and 22152CBs at Victoria	13:20:47
4	Kothmale	Biyagama 02 energized	13:23:10
5	Biyagama	GSS supply received	13:23:49
6	Biyagama	33kV F3 energized	13:24:44
7	Biyagama	33kV F4 energized	13:25:37
8	Victoria	Gen 01 / tripped	13:26:19
9		<b>Frequency hunt observed</b>	
10		<b>8 MW &amp; 17 MVar lagging at the time of tripping</b>	
11		<b>Tripped with indication of over frequency</b>	

**3<sup>rd</sup> Attempt:** From Victoria Generator 01

No	Location	Equipment	Time
1	Victoria	Gen 01 Resumed	13:30:32
3	Kothmale	Kothmale PS 01 supply received via 21152 and 22152CBs at Victoria	Remain Closed
4	Kothmale	Victoria 01 energized	13:33:47
5	Kothmale	Biyagama 02 remain energized	
6	Biyagama	Kotmale 02 energized	13:34:55
7	Biyagama	Sapugaskanda 01 energized	13:35:45
8	Victoria	Gen 01 / tripped	13:35:46
9		<b>Tripped due to excitation stage II</b>	
10		<b>0 MW &amp; 0 MVar lagging at the time of tripping</b>	

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4<sup>th</sup> Attempt: From Kotmale Generator 03

No	Location	Equipment	Time
1	Kothmale	Biyagama 01 Energized	13:35:58
2	Kothmale	Gen 03 Resumed	13:39:25
3	Biyagama	Kotmale 1 energized	13:40:34
4	Biyagama	Kotugoda 02 energized	13:41:14
5	Kotugoda	Biyagama 02 energized	13:47:33
6	Kotugoda	220/132/33 kV TF 01 energized	13:49:25
7	Kotugoda	33kV F4 energized	13:54:24
8	Kotugoda	33kV F8 energized	13:55:02
9	Kotugoda	33kV F9 energized	13:56:20
10	Kotugoda	Aniyakanda line energized	13:58:28
11	Aniyakanda	GSS supply received	13:59:58
12	Aniyakanda	33kV F4/ F5 energized	14:01/14:02
12	Kothmale	<b>frequency, voltage stable at 27 MW / 4MVar leading</b>	
13	Biyagama	Sapugaskanda 02 energized	14:04:43
		<b>Frequency oscillation observed from 14:05 hrs</b>	
14	Sapugaskanda	TF 02/ TF 04 deenergized	14:05:23/14:05:28
15	Aniyakanda	33kV feeder 05 tripped	14:05:46
16	Sapugaskanda	Biyagama 02 energized	14:05:57
	Kothmale	Gen 03 / tripped	14:06:01
		<b>Tripped due to over frequency (Generator protection 810) 22 MW &amp; 3 MVar lagging at the time of tripping</b>	

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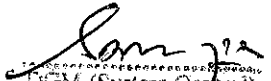
  
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5<sup>th</sup> Attempt: From Kotmale Generator 01

No	Location	Equipment	Time
1	Kothmale	Biyagama 01 remain ON	
2	Kothmale	Gen 01 synchronized	14:19:35
3	Biyagama	Kotmale 01 energized	14:20:38
4	Biyagama	Kotugoda 01 energized	14:21:24
5	Kotugoda	Biyagama 01 energized	14:23:30
6	Kotugoda	220/132/33 kV TF 02 energized	14:27:37
7	Kotugoda	33kV F4, F9, F8 energized	14:26/14:27
8	Kotugoda	Aniyakanda line energized	14:28:32
9	Aniyakanda	Kotugoda line energized	14:29:17
10	Aniyakanda	33kV F4 energized	14:30
11	Kotugoda	33kV F10 /13 energized	14:31/ 14:33
12	Aniyakanda	33kV F5 energized	14:34
13	Kotugoda	Kelaniya line energized	14:36:26
14	Kelaniya	Aniyakanda line energized	14:40:21
15	Aniyakanda	Kelaniya line energized	14:41:30
16	Kotugoda	Katunayaka 01 energized	14:44:04
17	Katunayaka	Kotugda 01 energized	14:45:08
18	Pannala	Supply received via Katunayaka	14:47
19	Kotugoda	Katunayaka 01 energized	14:44:04
		<b>Katunayaka SCADA Fail. Hence No events recorded</b>	
20			
21	Kelaniya	Kolonnawa 01 energized	14:49:12
22	Katunayaka	Pannala line energized	14:49:53
23	Pannala	Supply received	14:49:53
24	Kelaniya	Sapugaskanda 01 energized	14:50:15
25	Kolonnawa	Kelaniya 01 energized	14:52:52
26	Sapugaskanda	Kelaniya 01 energized	14:54:00
27	Kotmale	Gen 02 synchronized	14:51:21
28	Pannala	33kV feeder F5,F3	
29	Bolawatta	33kV feeder F1,F2	15:02
30	Sapugaskanda	33kV feeder F10,F8,F1	15:01
31	New Chilaw	Katunayaka line energized	15:06:13
32	New Chilaw	Chilaw 01 energized	15:07:40
33	Biyagama	Kelanithissa 01 energized	15:08:15
34	Biyagama	Kotmale 02 energized	15:12:01
35	Biyagama	Kotugoda 02 energized	15:12:34
36	Kotugoda	Biyagama 02 energized	15:13:39
37	New Chilaw	220kV Bus energized via TF 01 from 132kV side	15:14:00
38	Kelaniya	Kotugoda 01 energized	15:14:33
39	New Chilaw	Veyangoda 01 energized	15:14:53
40	Kelaniya	Sapugaskand 02 energized	15:15:43
41	Kotmale	Victoria 01 energized	15:18:06
42	Veyangoda	New Chilaw 01 energized	15:18:20
43	Victoria	Kotmale 01 energized	15:19:23
44	Kelanithissa	Biyagama 01 energized	15:20:32
45	New Chilaw	Veyangoda 01 de-energized	15:23:28
46	Veyangoda	New Chilaw 01 de-energized	15:25:33
	<b>Kothmale two units</b>	<b>88 MW &amp; 9 MVar lagging at the time of tripping</b>	<b>15:33:34</b>
		<b>Tripping due to over frequency (Generator protection 81O)</b>	

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**6<sup>th</sup> Attempt: From Kotmale Generator 01**

No	Location	Equipment	Time
1	Kothmale	Biyagama 01 energized	15:41:53
2	Kothmale	Gen 03 Resumed	15:42:53
3	Biyagama	Kotmale 01 energized	15:43:39
4	Biyagama	Sapugaskanda GSS 01	15:44:08
5	Sapugaskanda	GSS supply received	15:44:46
6	Sapugaskanda	33kV F 10 energized	15:47:38
7	Kothmale	BB 02 energized	15:49:01
8	Sapugaskanda	33kV F 8 energized	15:50:02
9	Sapugaskanda	33kV F 1 energized	15:52:09
10	Biyagama	Kotugoda 02 energized	15:52:32
11	Kotugoda	Biyagama 02 energized	15:53:09
12	Kotugoda	220/132/33 TF 02 energized	15:53:35
13	Kotugoda	33kV F4	15:55:04
14	Kotugoda	33kV F8 (5.8 MW)	15:56:52
15	Kotugoda	33kV F9 (8 MW)	15:58:24
16	Kothmale	Gen 03 / tripped	15:59:20
9		<b>23 MW and 14 MVar leading at the time of tripping</b>	
		<b>Tripping due to over frequency (Generator protection 81O)</b>	

**Restoration from Laxapana Complex**

**1<sup>st</sup> Attempt: From New Laxapana Generator 01**

No	Location	Equipment	Time
1	New Laxapana	Gen 01 Resumed	12:57:19
2	Popitiya	New Laxapana 01 energized	13:01:30
3	Popitiya	Kosgama line energized	13:03:56
4	Kosgama	33kV Feeder 04	13:05:21
5	Kosgama	33kV Feeder 07	13:09:28
6	Kosgama	33kV Feeder 08	13:10:25
7	Kosgama	33kV Feeder 03	13:11
5	Polpitiya	Athurugiriya 1 line energized	13:16:15
8	New Laxapana	Polpitiya 02 energized	13:17:25
9	Athurugiriya	Polpitiya line energized	
10	Athurugiriya	33kV F6 (70 A)	13:18:08
11	Popitiya	New Laxapana 02 energized	13:18:33
12	New Laxapana	Gen 01 Tripped	13:21:27
		<b>24 MW at the time of tripping</b>	
		<b>Tripped due to "Stable state loss"</b>	

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**2<sup>nd</sup> Attempt: From New Laxapana Generator 02**

No	Location	Equipment	Time
1	New Laxapana	Gen 02 Energized	13:43:46
2	Popitiya	New Laxapana 01 energized	13:52:38
3	Popitiya	Kosgama line energized	13:54:22
4	Kosgama	33kV Feeder 07	13:54:34
5	Kosgama	33kV Feeder 06	14:00:06
6	Polpitiya	Athurugiriya 1 line energized	14:00:44
7	Athurugiriya	Polpitiya line energized	
8	Athurugiriya	33kV F5	14:01:42
9	Thulhiriya	Incoming 01 energized	14:05:11
10	Thulhiriya	33kV F2 energized (70 A)	14:06:29
11	New Laxapana	Gen 02 Tripped	14:06:52
		<b>Tripped due to "Emergency trip"</b>	
		<b>13 MW at the time of tripping</b>	

**3<sup>rd</sup> Attempt: From New Laxapana Generator 01**

No	Location	Equipment	Time
1	New Laxapana	Gen 01 Energized	14:15:00
2	Popitiya	New Laxapana 01 energized	14:25:20
3	Popitiya	Kosgama line energized	14:26:40
4	Kosgama	33kV F06 energized	14:29:43
5	Kosgama	33kV F07 energized	14:32:59
5	Popitiya	Athurugiriya line energized	14:34:43
6	Athurugiriya	Polpitiya line energized	Already energized
7	Athurugiriya	33kV Feeder 05	14:35:58
8	Athurugiriya	33kV Feeder 01	14:38:39
9	Kosgama	33kV F03 energized	14:39:36
10	New Laxapana	Gen 01 Tripped	14:41:25
		<b>14 MW at the time of tripping</b>	
		<b>Tripping due to "Under Frequency"</b>	

**4<sup>th</sup> Attempt: From New Laxapana Generator 02**

No	Location	Equipment	Time
1	New Laxapana	Gen 02 Energized	14:51:42
2	Athurugiriya	Kolonnawa 01 energized	15:01:28
3	Polpitiya	New Laxapana 01 energized	15:09:03
4	Polpitiya	Kosgama line energized	15:09:28
	Kosgama	33kV Feeder 04 energized	
	Kosgama	33kV Feeder 06 energized	
5	Kosgama	33kV Feeder 07 energized (initial raeding-190A then dropped to 70A)	15:15:03
6	Kosgama	33kV Feeder 03 energized (Initially 90A)	15:16:00
7	New Laxapana	Gen 02 Tripped	15:16:14
		<b>10 MW at the time of tripping</b>	
		<b>Tripping due to "Over Frequency"</b>	

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**5<sup>th</sup> Attempt: From New Laxapana Generator 01**

No	Location	Equipment	Time
1	Old Laxapana	Wimalasurendra line 1 energized	15:46:10
2	Old Laxapana	Wimalasurendra line 2 energized	15:47:11
3	New Laxapana	Gen 01 Energized	15:49:42
4	Popitiya	New Laxapana 01 energized	16:00:00
5	Popitiya	Kosgama line energized	16:02:10
6	Kosgama	Polpitiya line energized	16:02
7	Kosgama	33kV F 06 energized	16:05:47
8	Kosgama	33kV F 07 energized	16:07:56
9	Polpitiya	Athurugiriya line energized	16:16:50
10	Athurugiriya	Polpitiya line energized	
11	Thulhiriya	Incoming 01 energized	16:19:42
12	Thulhiriya	33kV F 06 energized	16:20:56
13	New Laxapana	Gen 01 Tripped	16:21:27
		<b>15 MW at the time of tripping</b>	
		<b>Tripping due to "Under Frequency"</b>	

**6<sup>th</sup> Attempt: From New Laxapana Generator 01**

No	Location	Equipment	Time
1	New Laxapana	Gen 01 Energized	16:33:16
2	Popitiya	New Laxapana 01 energized	16:14:58
3	Popitiya	Kosgama line energized	16:46:06
4	Kosgama	33kV F 04 energized	16:48:38
5	Kosgama	33kV F 06 energized	16:48:38
6	Kosgama	33kV F 07 energized	16:51:24
7	New Laxapana	Gen 01 Tripped	16:52:06
		<b>08 MW at the time of tripping</b>	
		<b>Tripping due to "Over Frequency"</b>	

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Restoration from Samanala Complex

**1<sup>st</sup> Attempt:** From Samanalawewa Generator 01

01<sup>st</sup> Attempt

No	Location	Equipment	Time
1	Samanalawewa	Gen 01 Energized	13:29:34
2	Embilipitiya	PS supply received	13:29
3	Embilipitiya	33kV F6 energized	13:30:57
4	Embilipitiya	33kV F7 energized	13:32:37
5	Embilipitiya	33kV F1 energized	13:33:44
6	Embilipitiya	33kV F4 energized	13:34:36
7	Embilipitiya	33kV F8 energized	13:35:52
8	Beliatta	Embilipitiya line energized	13:36:18
9	Embilipitiya	33kV F5 energized	13:37:03
10	Embilipitiya	Beliatta line energized	13:39:06
11	Beliatta	33kV F4 energized	13:39:58
12	Beliatta	33kV F6 energized	13:41:04
13	Beliatta	33kV F8 energized	13:41:49
14	Beliatta	33kV F2 energized	13:43:53
15	Embilipitiya	Hambanthota 02 energized	13:44:23
16	Hambanthota	33kV F2 energized (8MW)	13:46:20
17	Samanalawewa	Gen 01 Tripped	13:46:25
		<b>25 MW at the time of tripping</b>	
		Tripping due to "Under Frequency"	

**2<sup>nd</sup> Attempt:** From Samanalawewa Generator 01

No	Location	Equipment	Time
1	Samanalawewa	Gen 01 Energized	14:30:27
2	Embilipitiya	PS supply received	14:30:27
3	Embilipitiya	33kV F6 energized	14:31:24
4	Embilipitiya	33kV F7 energized	14:32:33
5	Embilipitiya	33kV F8 energized	14:33:14
6	Embilipitiya	33kV F1 energized	14:34:19
7	Embilipitiya	33kV F5 energized	14:35:25
8	Embilipitiya	Hambanthota line 02 energized	14:36:34
9	Hambanthota	Supply received	14:37
10	Hambanthota	33kV F6 energized	14:37:36
11	Samanalawewa	Gen 01 Tripped	14:42:03
		<b>20 MW at the time of tripping</b>	
		Tripping due to "Under Frequency"	

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**3<sup>rd</sup> Attempt: From Samanalawewa Generator 01**

No	Location	Equipment	Time
1	Samanalawewa	Gen 01 Energized	15:02:36
2	Embilipitiya	PS supply received	15:02
3	Embilipitiya	33kV F7 energized	15:03:36
4	Embilipitiya	33kV F1 energized	15:04:22
5	Embilipitiya	33kV F5 energized	15:05:20
6	Embilipitiya	33kV F8 energized	15:06:00
7	Embilipitiya	33kV F6 energized	15:06:59
8	Embilipitiya	Beliatta line energized	15:08:14
9	Beliatta	33kV F4 energized	15:09:34
10	Beliatta	33kV F6 energized	15:09:54
11	Samanalawewa	Gen 01 Tripped	15:10:43
		<b>25 MW at the time of tripping</b>	
		<b>Tripping due to "Under Frequency"</b>	

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