

Event	Occurrences	Benefit Index	Grid West Feature	GW Correcta	1	2	3	4	5	6	7
					26-Dec-02	2-Aug-02	1-Aug-01	18-Mar-00	26-Feb-00	8-Dec-98	17-Jul-98
Location					NWPP	DSW	NWPP	DSW	DSW	DSW	RM WECC
Load Lost					950	1300	0	1462	300	1200	600
Customers					140,000	348,360	0	660,000	112,000	456,000	150,000
Hours					0.5	2.0	3.0	3.0	0.3	5.0	6.0
Issue											
Not Ready for N-1	0	33	0	0							
Insufficient time to readjust	0	19	D	1							
Not Ready for N-1, N-1	0	2	D	1							
Not Ready for N-2 (common corridor)	4	2	D	1			1				
Not Ready for N-2 (different corridor)	2	33	0	0		1					1
ROW Maintenance Issue	4	15	0	0	1						1
Bus Configuration Problem	1	1	B	1							
Zone 3 or overcurrent relay line tripping	1	4	B	1							
Sympathetic or improper relay operation	11	33	0	0		1			1		1
RAS unavailable or improper operation	2	5	B	1							
Substandard voltage limits	0	1	B	1							
Reactive reserve margin not adequate or not monitored	2	10	B	1							
Tower collapse	1	33	0	0							
Line(s) falling into underbuild	1	33	0	0							
EMS System Failure	0	13	D	1							
Taking risk under weakened system condition	1	9	D	1							
No means to achieve rapid loading change	1	19	D	1							
No or poor visibility of system outage conditions	1	20	D	1							
Equipment tripping off under stress conditions	1	33	0	0							
Operators not aware of relay setpoint	0	21	0	0							
Lines tripping on overload (>20 minutes time to readjust)	2	14	A	1							
Successive lightning strikes	0	33	0	0							
Lack of Coordination	1	22	C	1							
Load Shedding Miscoordination	3	9	D	1	1			1			
Equipment Maintenance Error	0	33	0	0							
Fire	4	33	0	0				1			
Operator Error	2	33	0						1	1	
Operators not aware of insecure state	2	20	D	1							
	All Outages	WECC Outages									
Total Count	62	47			2	2	1	2	2	1	3
Count Correctable and in Grid West Plan	32	21			1	0	1	1	0	0	0
Percent Correctable and in Grid West Plan (see Grid West Fea	52%	45%			50%	0%	100%	50%	0%	0%	0%

	8	9	10	11	12	13	14	15	16	17
Event	21-Sep-97	26-Aug-97	10-Aug-96	2-Jul-96	14-Dec-94	4-Jun-93	4-Jan-93	30-Oct-92	28-Aug-92	20-Aug-92
Location	NWPP	DSW	West Coast	West Coast	NWPP	NWPP	NWPP	RM	DSW	DSW
Load Lost	20.5	20	28,000	11,850	9336	730	550	350	536	400
Customers	7,500	7,200	7,500,000	2,000,000	1,700,000	37,000	150,000	71000	150,000	100,000
Hours	3.0	1.5	2.0	1.5	4.0		1.3	3.0	3.0	5.0
Issue										
Not Ready for N-1										
Insufficient time to readjust										
Not Ready for N-1, N-1										
Not Ready for N-2 (common corridor)				1	1	1				
Not Ready for N-2 (different corridor)										
ROW Maintenance Issue			1	1						
Bus Configuration Problem					1					
Zone 3 or overcurrent relay line tripping				1						
Sympathetic or improper relay operation	1	1	1	1	1		1	1	1	
RAS unavailable or improper operation			1							
Substandard voltage limits										
Reactive reserve margin not adequate or not monitored			1	1						
Tower collapse										
Line(s) falling into underbuild										
EMS System Failure										
Taking risk under weakened system condition								1		
No means to achieve rapid loading change			1							
No or poor visibility of system outage conditions										
Equipment tripping off under stress conditions			1							
Operators not aware of relay setpoint										
Lines tripping on overload (>20 minutes time to readjust)					1	1				
Successive lightning strikes										
Lack of Coordination			1							
Load Shedding Miscoordination			1							
Equipment Maintenance Error										
Fire		1							1	1
Operator Error										
Operators not aware of insecure state			1	1						
Total Count	1	2	9	6	4	2	1	2	2	1
Count Correctable and in Grid West Plan	0	0	6	4	3	2	0	1	0	0
Percent Correctable and in Grid West Plan (see Grid West Fea	0%	0%	67%	67%	75%	100%	0%	50%	0%	0%

Event	18	19	20
	22-Dec-82	14-Aug-03	25-Jun-98
Location	West Coast	NE US	Mid-West
Load Lost	12,350	61,800	950
Customers	5,000,000	50,000,000	152,000
Hours	3.0	14.0	19.0
Issue			
Not Ready for N-1			1
Insufficient time to readjust			
Not Ready for N-1, N-1		1	
Not Ready for N-2 (common corridor)			
Not Ready for N-2 (different corridor)			
ROW Maintenance Issue		1	
Bus Configuration Problem			
Zone 3 or overcurrent relay line tripping		1	
Sympathetic or improper relay operation			
RAS unavailable or improper operation	1		
Substandard voltage limits			
Reactive reserve margin not adequate or not monitored		1	
Tower collapse	1		
Line(s) falling into underbuild	1		
EMS System Failure		1	
Taking risk under weakened system condition		1	
No means to achieve rapid loading change		1	
No or poor visibility of system outage conditions	1	1	
Equipment tripping off under stress conditions		1	
Operators not aware of relay setpoint			
Lines tripping on overload (>20 minutes time to readjust)		1	1
Successive lightning strikes			
Lack of Coordination		1	
Load Shedding Miscoordination			
Equipment Maintenance Error			
Fire			
Operator Error		1	
Operators not aware of insecure state		1	
Total Count	4	13	2
Count Correctable and in Grid West Plan	2	10	1
Percent Correctable and in Grid West Plan (see Grid West Fea	50%	77%	50%