

SHORT- CIRCUIT REPORT

Fault at bus: Bus11

Prefault voltage = 33.000 kV  
= 100.00 % of nominal bus kV ( 33.000 kV)  
= 100.00 % of base kV ( 33.000 kV)

Contribution		3-Phase Fault		Line-To-Ground Fault					Positive & Zero Sequence Impedances Looking into "From Bus"			
From Bus ID	To Bus ID	% V From Bus	kA Symm. rms	% Voltage at From Bus			kA Symm. rms		% Impedance on 100 MVA base			
				Va	Vb	Vc	Ia	3I0	R1	X1	R0	X0
Bus11	Total	0.00	1.043	0.00	128.76	124.96	0.599	0.599	7.49E+001	1.50E+002	2.03E+002	5.02E+002
Bus10	Bus11	0.36	0.354	0.51	128.52	124.71	0.335	0.599	1.93E+002	4.55E+002	2.03E+002	5.02E+002
Bus12	Bus11	15.77	0.690	74.52	79.23	100.00	0.264	0.000	1.20E+002	2.23E+002		

# Indicates fault current contribution is from three-winding transformers

\* Indicates a zero sequence fault current contribution (3I0) from a grounded Delta- Y transformer

Fault at bus: **Bus13**

Prefault voltage = 33.000 kV  
= 100.00 % of nominal bus kV ( 33.000 kV)  
= 100.00 % of base kV ( 33.000 kV)

Contribution		3-Phase Fault		Line-To-Ground Fault					Positive & Zero Sequence Impedances Looking into "From Bus"			
From Bus ID	To Bus ID	% V From Bus	kA Symm. rms	% Voltage at From Bus			kA Symm. rms		% Impedance on 100 MVA base			
				Va	Vb	Vc	Ia	3I0	R1	X1	R0	X0
Bus13	Total	0.00	1.141	0.00	92.32	84.02	1.523	1.523	7.49E+001	1.34E+002	8.89E+000	3.82E+001
Bus12	Bus13	0.91	0.327	2.91	92.06	83.61	0.701	1.232	2.00E+002	4.97E+002	6.92E+000	4.80E+001
Bus14	Bus13	2.70	0.811	2.89	91.55	84.92	0.823	0.314	1.15E+002	1.82E+002	1.03E+002	1.60E+002
Bus234	Bus13	9.14	0.006	51.68	53.59	100.00	0.006	0.000	1.10E+004	2.50E+004		

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Fault at bus: **Bus15**

Prefault voltage = 33.000 kV

= 100.00 % of nominal bus kV ( 33.000 kV)  
= 100.00 % of base kV ( 33.000 kV)

Contribution		3-Phase Fault		Line-To-Ground Fault					Positive & Zero Sequence Impedances Looking into "From Bus"			
From Bus ID	To Bus ID	% V From Bus	kA Symm. rms	% Voltage at From Bus			kA Symm. rms		% Impedance on 100 MVA base			
				Va	Vb	Vc	Ia	3I0	R1	X1	R0	X0
Bus15	Total	0.00	1.167	0.00	91.76	86.20	1.513	1.513	7.18E+001	1.32E+002	1.58E+001	4.50E+001
Bus14	Bus15	0.62	0.336	1.81	91.55	85.91	0.660	1.110	2.00E+002	4.81E+002	1.61E+001	6.30E+001
Bus16	Bus15	0.95	0.834	1.07	91.50	86.48	0.858	0.419	1.08E+002	1.80E+002	9.34E+001	1.45E+002

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Fault at bus: **Bus81**

Prefault voltage = 33.000 kV  
= 100.00 % of nominal bus kV ( 33.000 kV)  
= 100.00 % of base kV ( 33.000 kV)

Contribution		3-Phase Fault		Line-To-Ground Fault					Positive & Zero Sequence Impedances Looking into "From Bus"			
From Bus ID	To Bus ID	% V From Bus	kA Symm. rms	% Voltage at From Bus			kA Symm. rms		% Impedance on 100 MVA base			
				Va	Vb	Vc	Ia	3I0	R1	X1	R0	X0
Bus81	Total	0.00	0.742	0.00	111.87	100.91	0.657	0.657	1.54E+002	1.78E+002	1.66E+002	2.85E+002
Bus80	Bus81	6.34	0.650	6.95	110.00	100.70	0.566	0.548	1.80E+002	2.00E+002	1.95E+002	3.45E+002
Bus82	Bus81	0.00	0.001	0.00	111.87	100.91	0.001	0.000	4.86E+004	1.14E+005		
Bus83	Bus81	0.23	0.092	0.29	111.75	100.88	0.090	0.110	1.04E+003	1.59E+003	1.10E+003	1.65E+003

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Fault at bus: **Bus87**

Prefault voltage = 33.000 kV  
= 100.00 % of nominal bus kV ( 33.000 kV)  
= 100.00 % of base kV ( 33.000 kV)

Contribution		3-Phase Fault		Line-To-Ground Fault					Positive & Zero Sequence Impedances Looking into "From Bus"			
From Bus ID	To Bus ID	% V From Bus	kA Symm. rms	% Voltage at From Bus			kA Symm. rms		% Impedance on 100 MVA base			
				Va	Vb	Vc	Ia	3I0	R1	X1	R0	X0
Bus87	Total	0.00	0.776	0.00	111.18	101.04	0.691	0.691	1.44E+002	1.73E+002	1.56E+002	2.70E+002
Bus80	Bus87	0.87	0.746	1.00	110.89	100.99	0.673	0.691	1.52E+002	1.78E+002	1.56E+002	2.70E+002
Bus88	Bus87	0.00	0.004	0.00	111.18	101.04	0.003	0.000	1.59E+004	3.59E+004		
Bus90	Bus87	0.06	0.027	0.04	111.18	101.05	0.016	0.000	2.56E+003	5.93E+003		

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Fault at bus: **Bus361**

Prefault voltage = 33.000 kV

= 100.00 % of nominal bus kV ( 33.000 kV)  
= 100.00 % of base kV ( 33.000 kV)

Contribution		3-Phase Fault		Line-To-Ground Fault					Positive & Zero Sequence Impedances Looking into "From Bus"			
From Bus ID	To Bus ID	% V From Bus	kA Symm. rms	% Voltage at From Bus			kA Symm. rms		% Impedance on 100 MVA base			
				Va	Vb	Vc	Ia	3I0	R1	X1	R0	X0
Bus361	Total	0.00	1.106	0.00	90.88	89.14	1.388	1.388	8.18E+001	1.35E+002	2.96E+001	5.44E+001
Bus358	Bus361	1.23	0.798	1.65	90.61	89.28	0.891	0.674	1.12E+002	1.89E+002	5.04E+001	1.17E+002
Bus362	Bus361	0.05	0.054	0.51	90.74	89.04	0.273	0.719	3.22E+003	4.75E+002	6.61E+001	9.96E+001
Bus363	Bus361	0.52	0.276	0.44	90.79	89.32	0.231	0.000	2.59E+002	5.79E+002		

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