

TransCanyon Cross-Tie Transmission Project

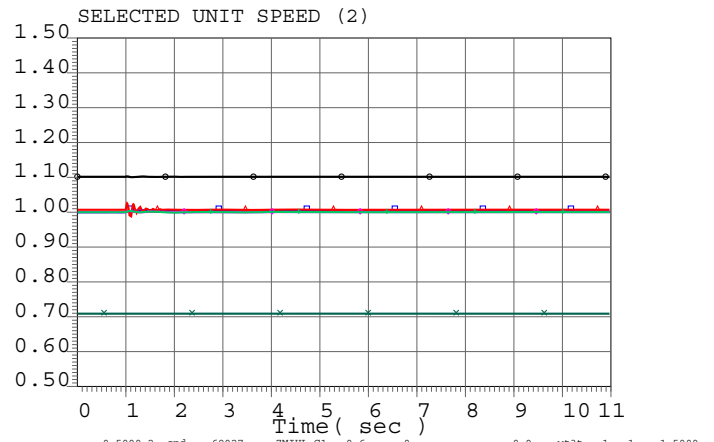
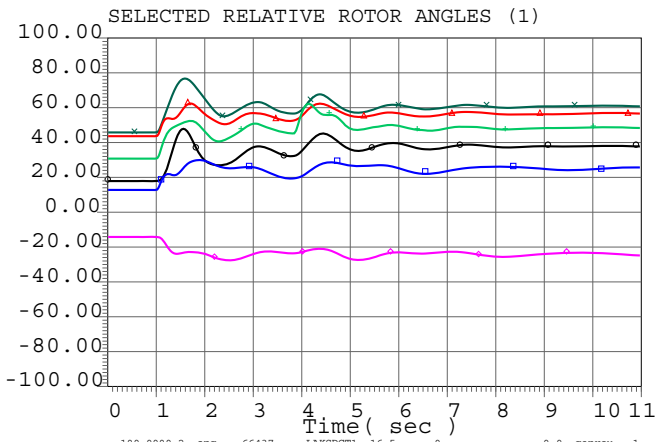
WECC Path Rating Studies and Comprehensive Progress Report (Phase 1)

Appendix 2 – Dynamic Stability Plots

July 2017

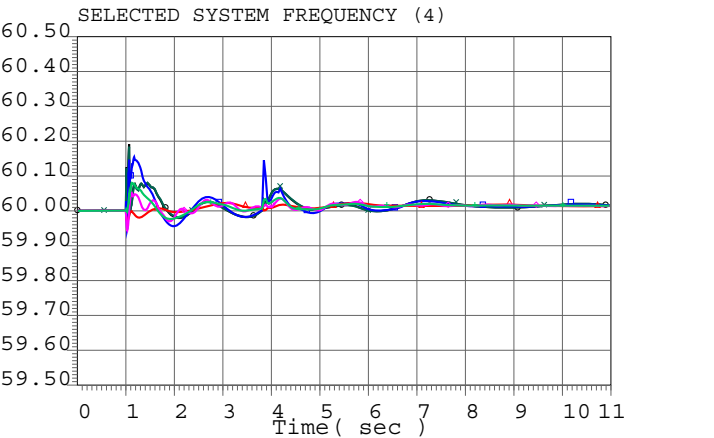
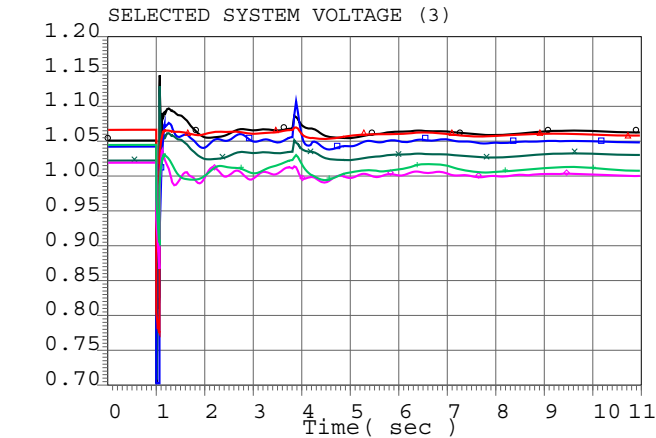


Cross-Tie Phase I Assessment - Transient Stability Plots



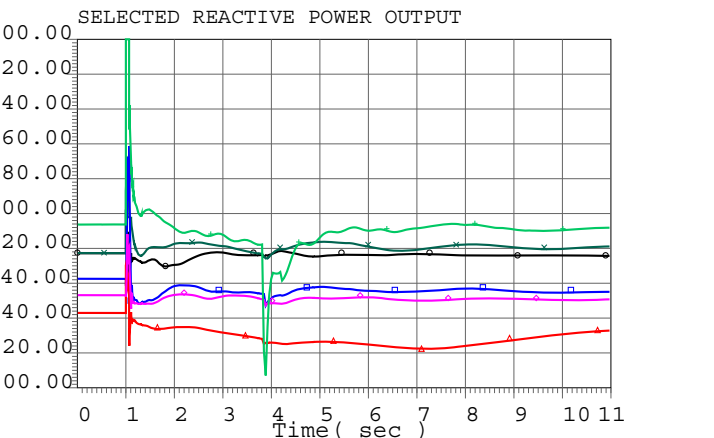
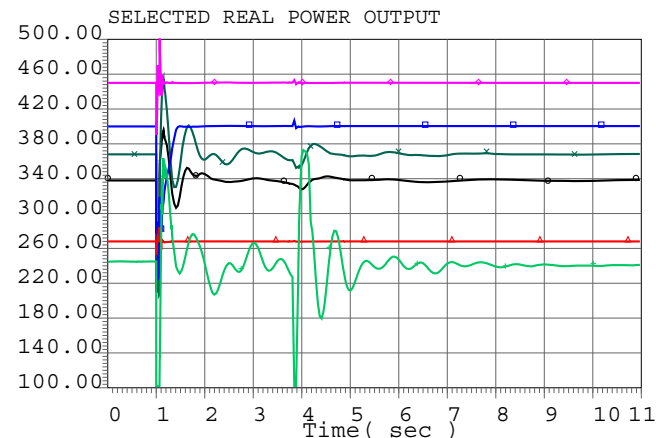
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x	-100.0000	2	ang	65495	BHUNTR	2	24.0	0	0.0	genrou	1	1	100.0000
□	-400.0000	2	ang	65445	DAVEJON4	22.0	0	0.0	genrou	1	1	-200.0000	
△	-100.0000	2	ang	65386	BRIDGER1	22.0	0	0.0	genrou	1	1	100.0000	
◇	-100.0000	2	ang	64131	VALMY G1	22.0	0	0.0	genrou	1	1	100.0000	
+	-100.0000	2	ang	26039	INTERMIG	26.0	0	0.0	gentpj	1	1	100.0000	

o	0.5000	2	spd	69027	TMHL G1	0.6	0	0.0	wt3t	1	1	1.5000
x	0.5000	2	spd	6504	FRZ 706	0.5	0	0.0	wtgt_a	1	1	1.5000
□	0.5000	2	spd	6517	ABO 836	0.5	0	0.0	wtgt_a	1	1	1.5000
△	0.5000	2	spd	65386	FT CRG2	34.5	0	0.0	wt3t	1	1	1.5000
◇	0.5000	2	spd	65445	DAVEJON4	22.0	0	0.0	genrou	1	1	1.5000
+	0.5000	2	spd	65386	BRIDGER1	22.0	0	0.0	genrou	1	1	1.5000



o	0.7000	2	vbus	67795	ABOLUS	500.0	0	0.0	vmeta	1	1	1.2000
x	0.7000	2	vbus	67796	ABOLUS	230.0	0	0.0	vmeta	1	1	1.2000
□	0.7000	2	vbus	65386	CLOVER	500.0	0	0.0	fmeta	1	1	1.2000
△	0.7000	2	vbus	64895	ROBINSON	500.0	0	0.0	fmeta	1	1	1.2000
◇	0.7000	2	vbus	38062	HA FS	345.0	0	0.0	vmeta	1	1	1.2000
+	0.7000	2	vbus	66225	PIVTO	345.0	0	0.0	vmeta	1	1	1.2000

o	59.5000	2	fbus	67795	ABOLUS	500.0	0	0.0	fmeta	1	1	60.5000
x	59.5000	2	fbus	67796	ABOLUS	230.0	0	0.0	fmeta	1	1	60.5000
□	59.5000	2	fbus	65386	CLOVER	500.0	0	0.0	fmeta	1	1	60.5000
△	59.5000	2	fbus	64895	ROBINSON	500.0	0	0.0	fmeta	1	1	60.5000
◇	59.5000	2	fbus	38062	HA FS	345.0	0	0.0	fmeta	1	1	60.5000
+	59.5000	2	fbus	66225	PIVTO	345.0	0	0.0	fmeta	1	1	60.5000



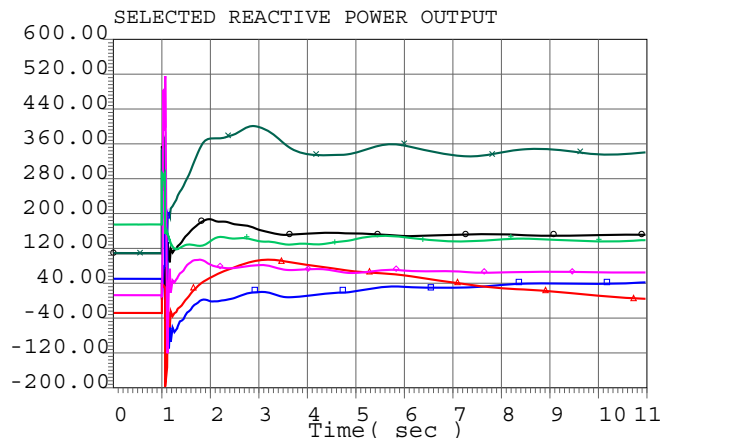
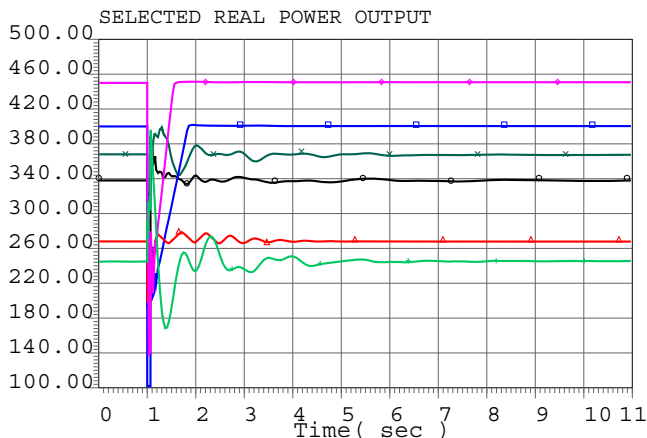
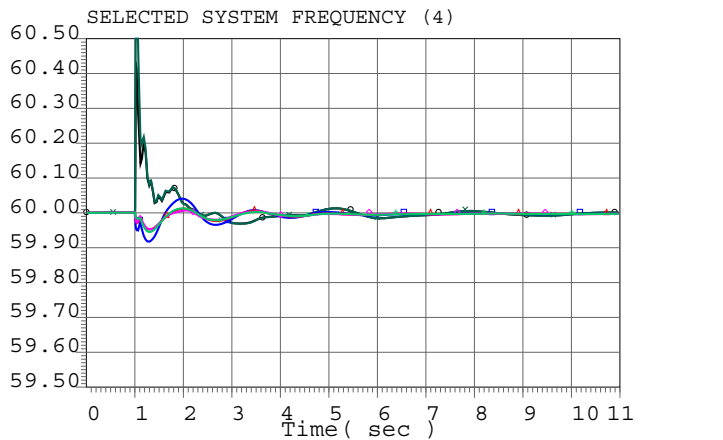
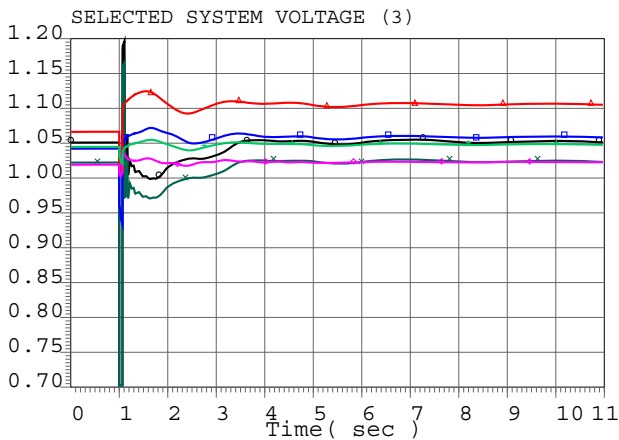
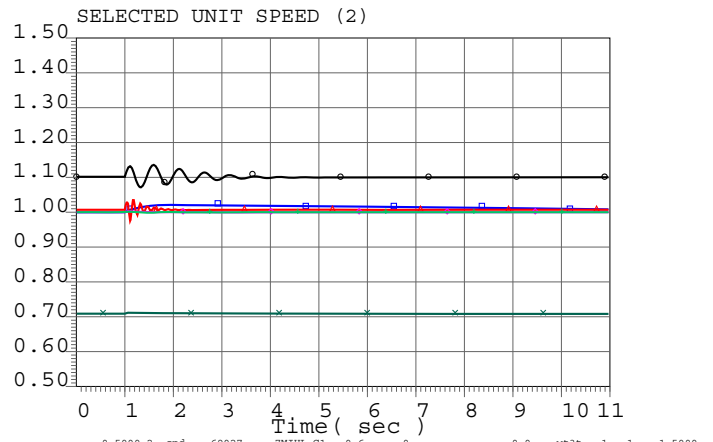
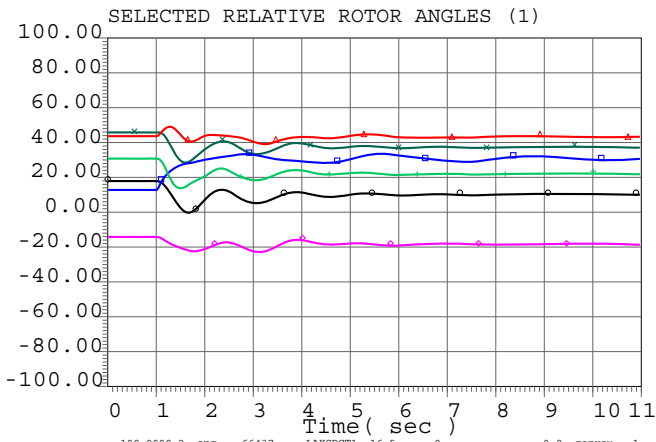
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□	100.0000	2	pg	6517	ABO 836	0.5	0	0.0	regc_a	1	1	500.0000
△	-100.0000	2	pg	69027	TMHL G1	0.6	0	0.0	wt3g	1	1	300.0000
◇	400.0000	2	pg	6507	WT 712	0.5	0	0.0	regc_a	1	1	800.0000
+	800.0000	2	pg	26039	INTERMIG	26.0	0	0.0	gentpj	1	1	1200.0000

o	-200.0000	2	qg	65445	DAVEJON4	22.0	0	0.0	genrou	1	1	600.0000
x	-200.0000	2	qg	65386	BRIDGER1	22.0	0	0.0	genrou	1	1	600.0000
□	-200.0000	2	qg	6517	ABO 836	0.5	0	0.0	regc_a	1	1	600.0000
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◇	-200.0000	2	qg	6507	WT 712	0.5	0	0.0	regc_a	1	1	600.0000
+	-200.0000	2	qg	26039	INTERMIG	26.0	0	0.0	gentpj	1	1	600.0000

TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Clover 500 kV 3PH Flt - Trip Cross-Tie 500 kV Line (Flash Capacitors)
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 10



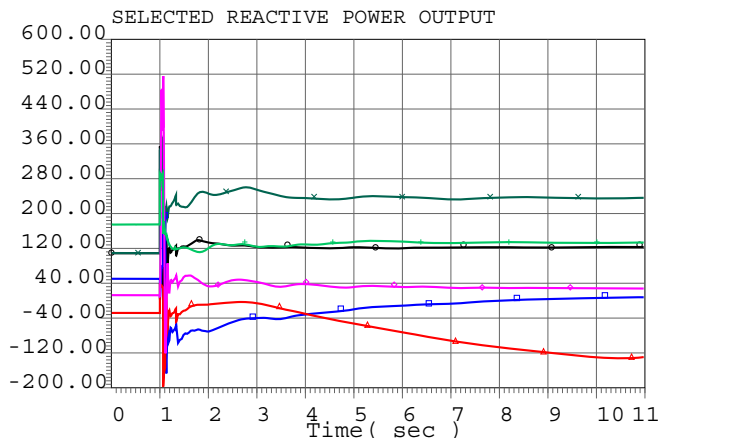
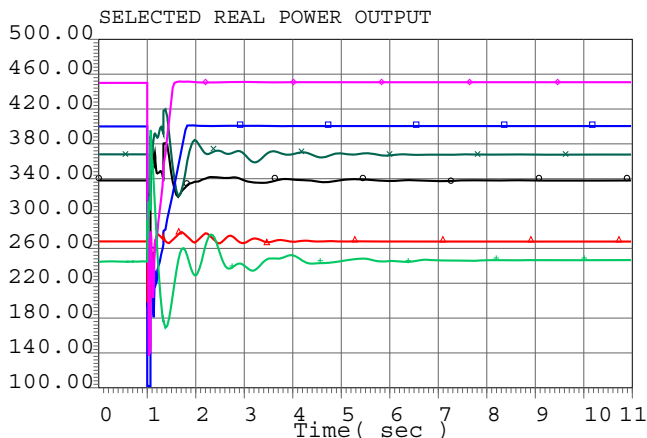
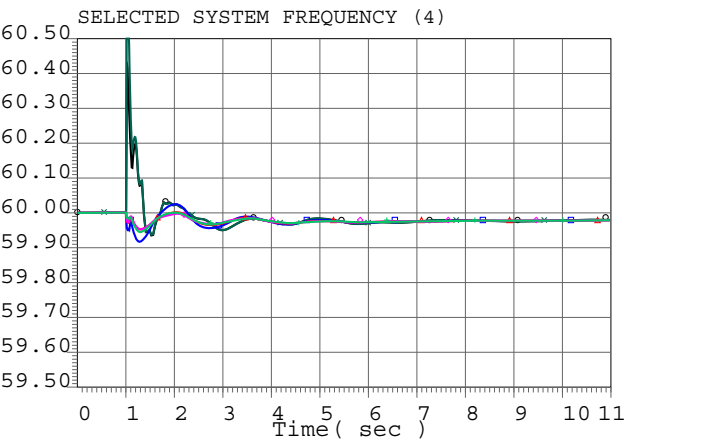
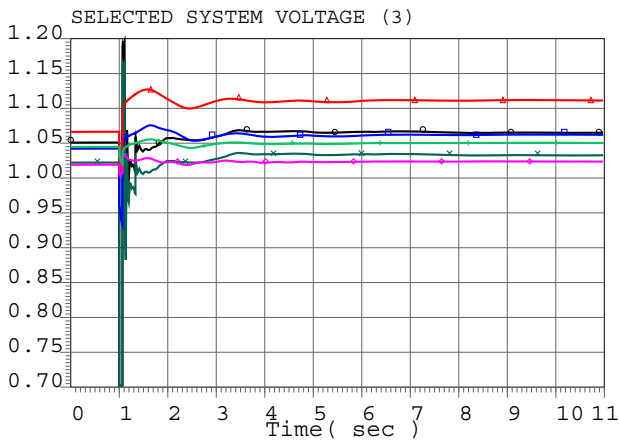
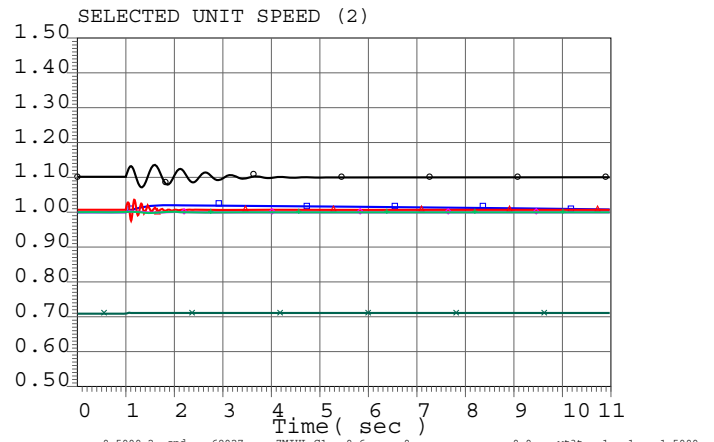
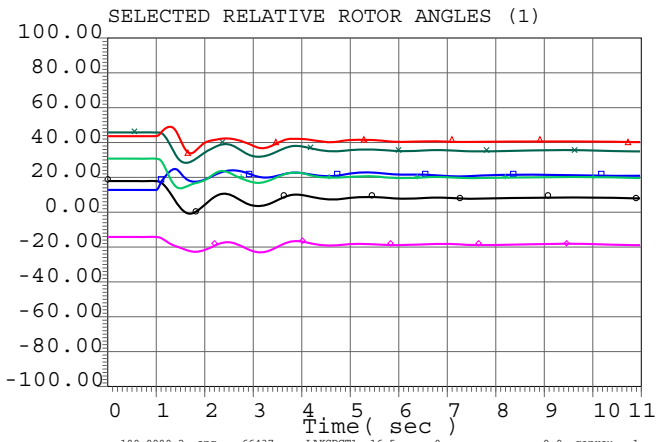
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Aeolus 3 PH Fault - Trip Aeolus South 500 kV Transmission Line (No RAS)
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 60



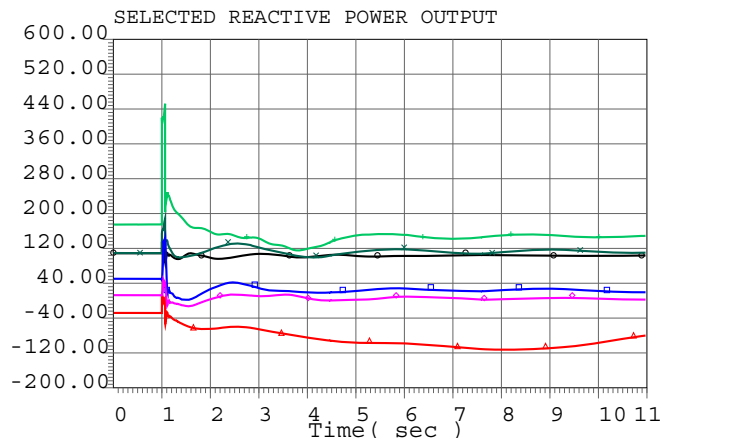
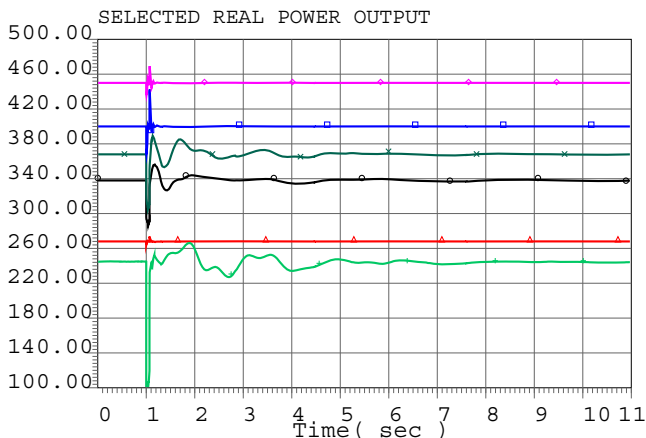
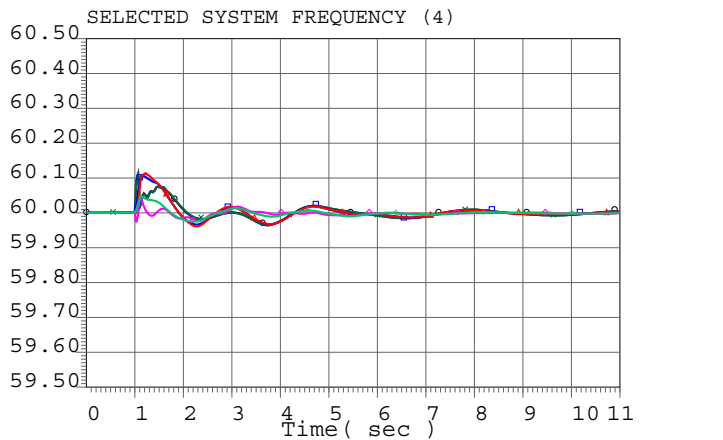
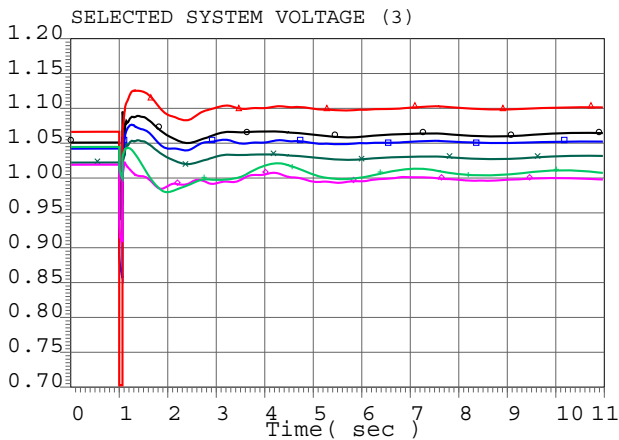
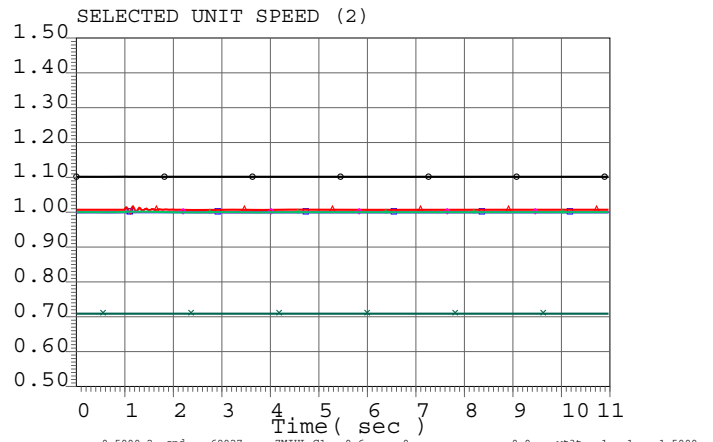
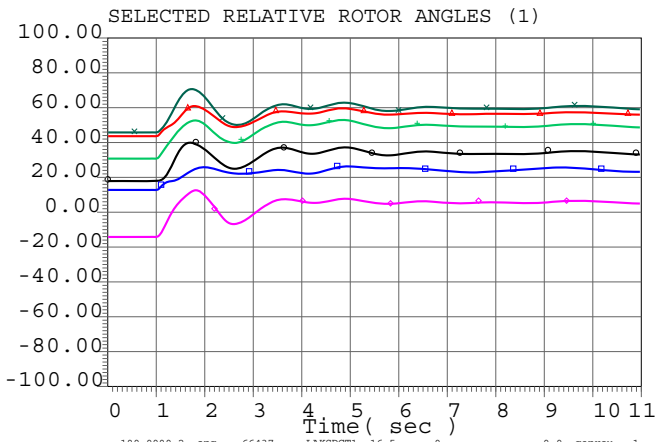
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Aeolus 3 PH Fault - Trip Aeolus South 500 kV Line (600 MW Gen Trip)
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 60.099998



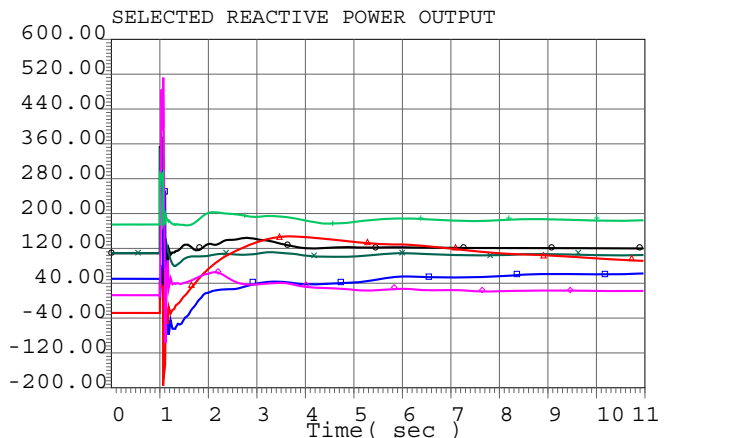
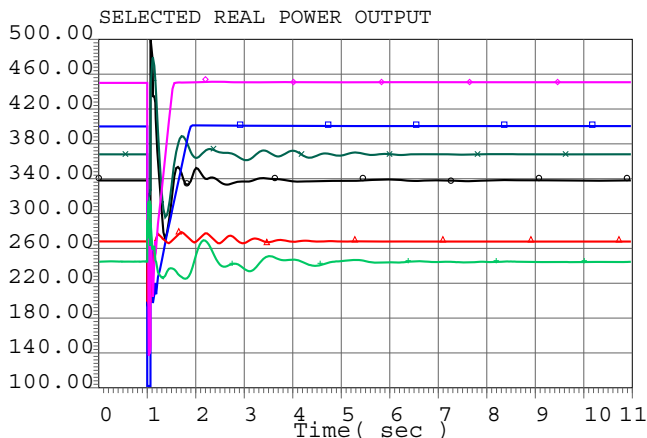
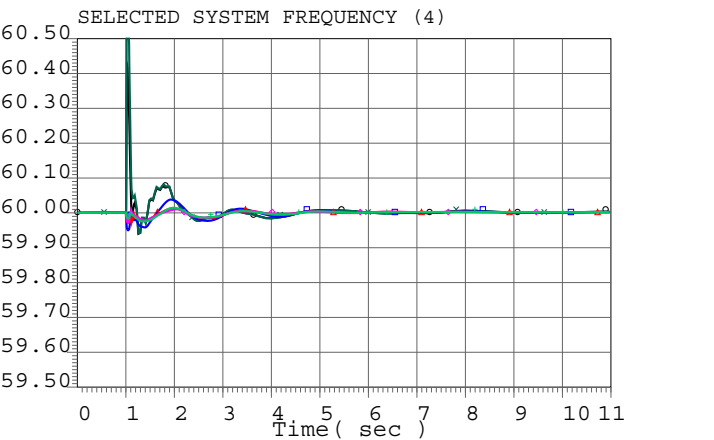
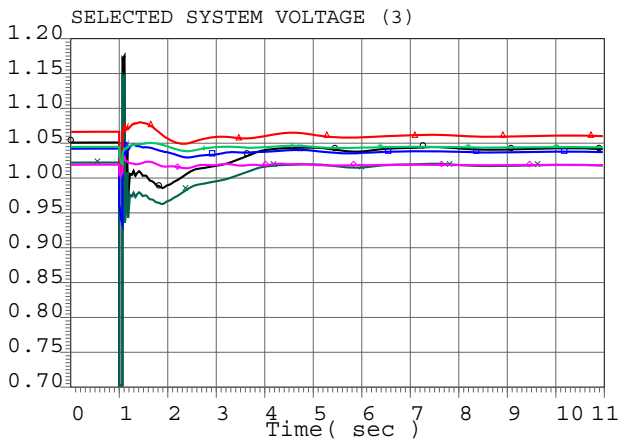
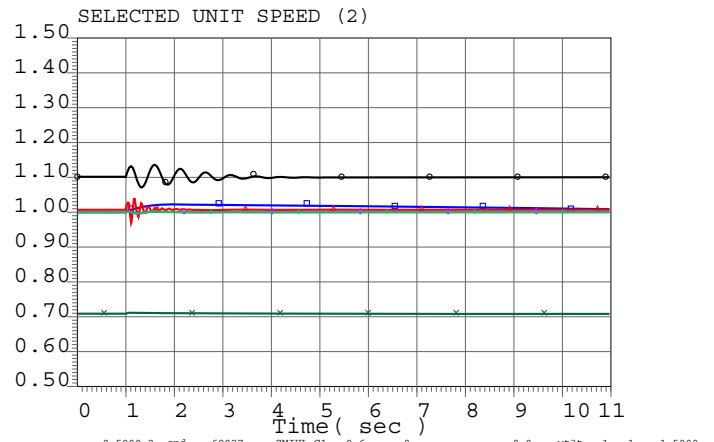
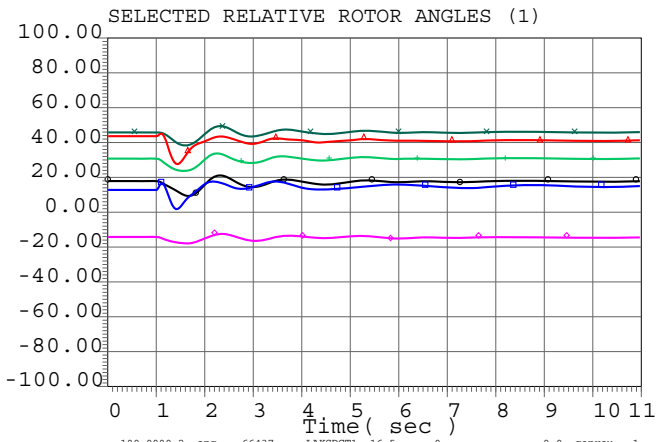
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Robinson 500 kV 3PH Flt - Trip SWIP South 500 kV Line
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 70



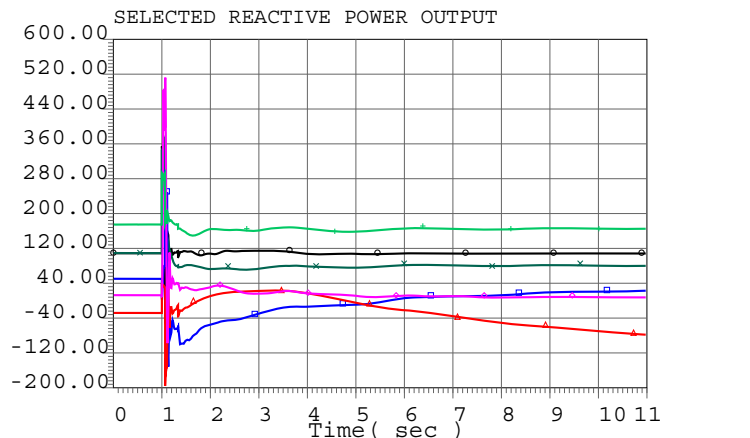
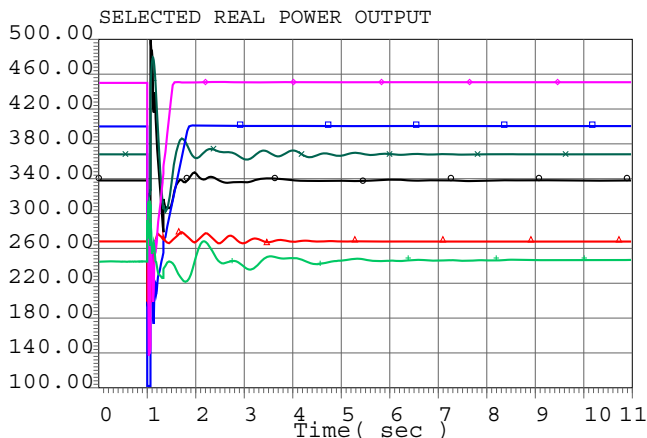
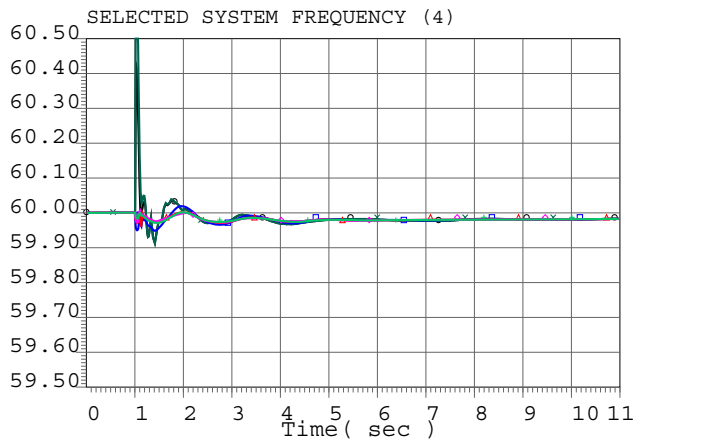
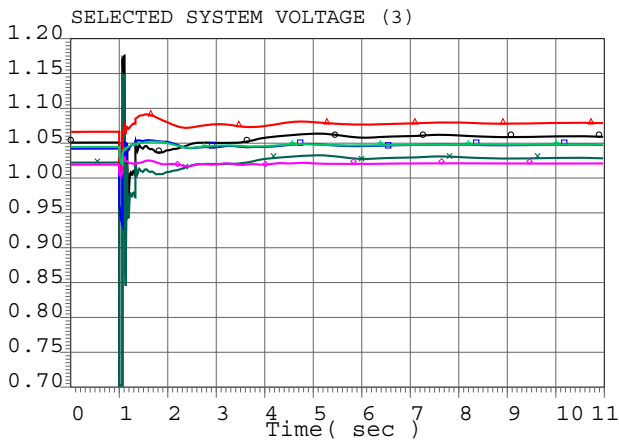
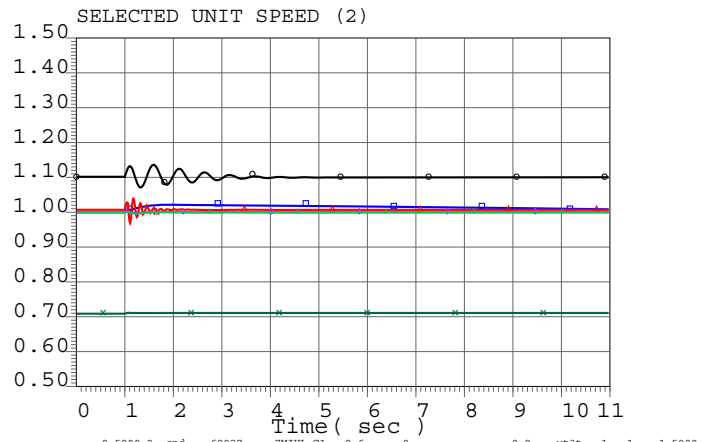
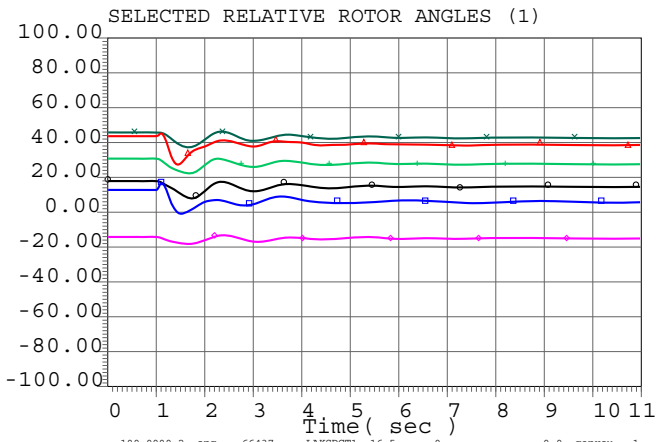
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Aeolus 3 PH Fault - Trip Aeolus-Anticline 500 kV Transmission Line (No RAS)
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 80



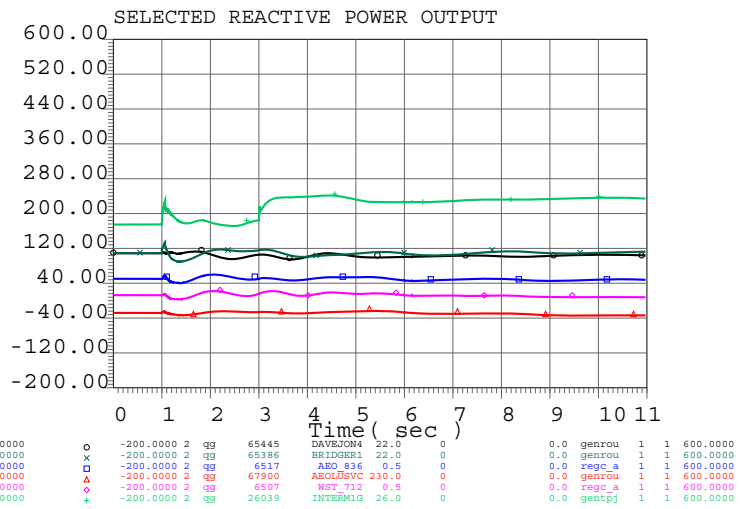
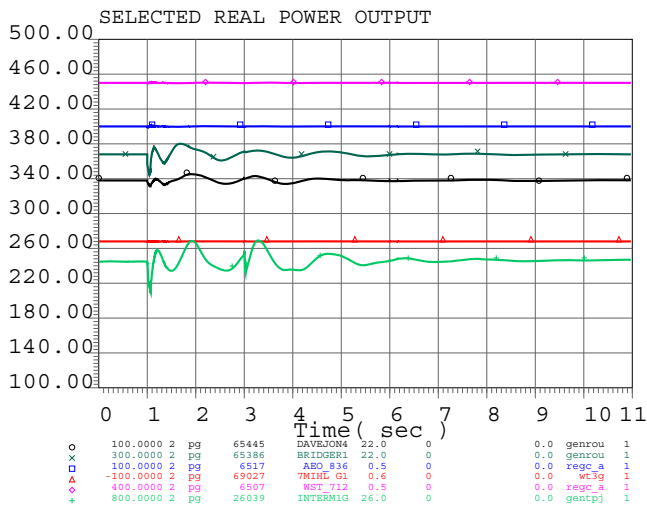
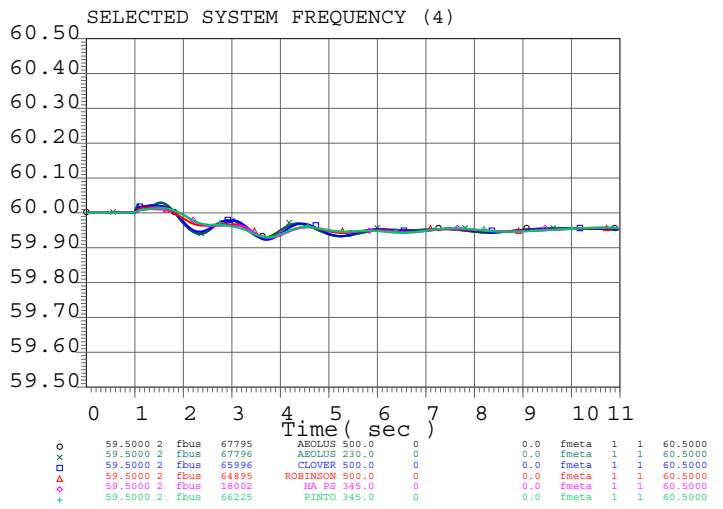
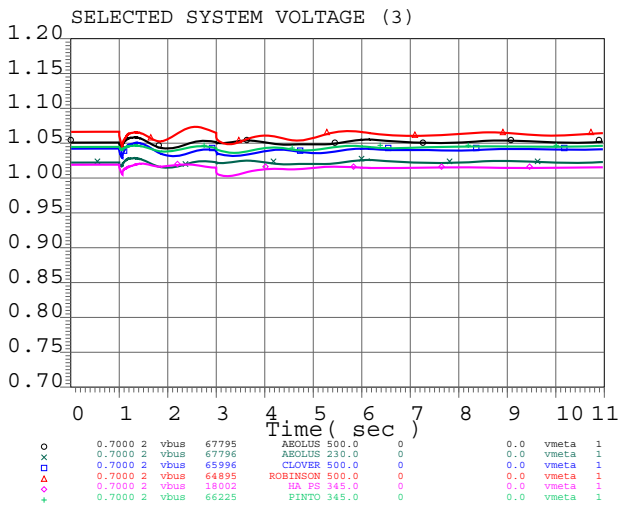
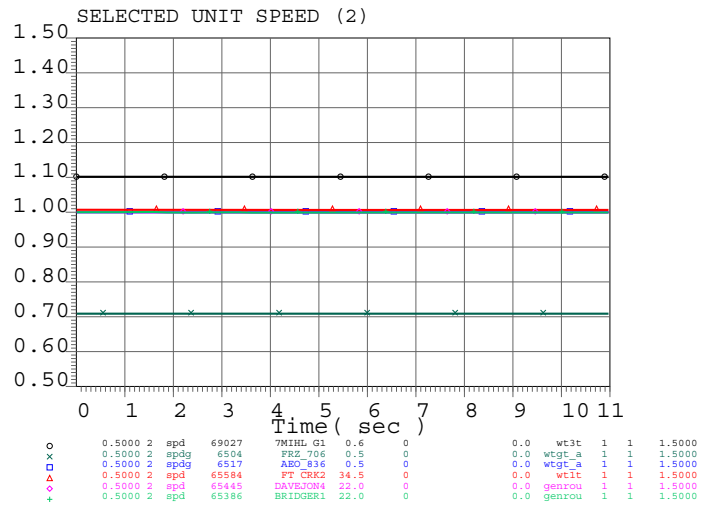
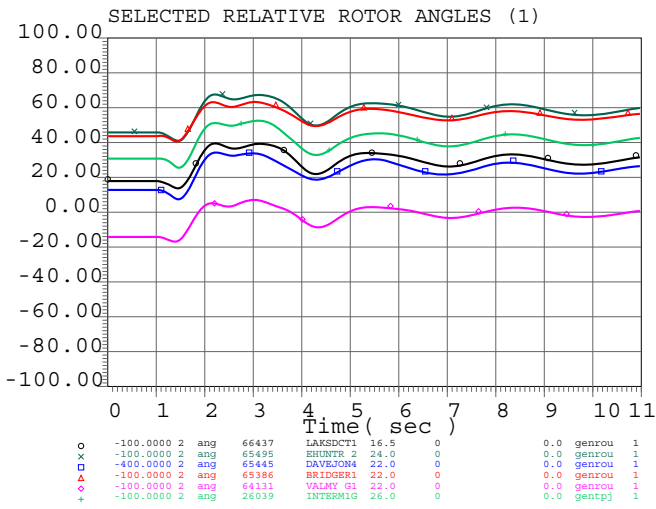
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Aeolus 3 PH Fault - Trip Aeolus-Anticline 500 kV Line (600 MW Gen Trip)
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 80.099998



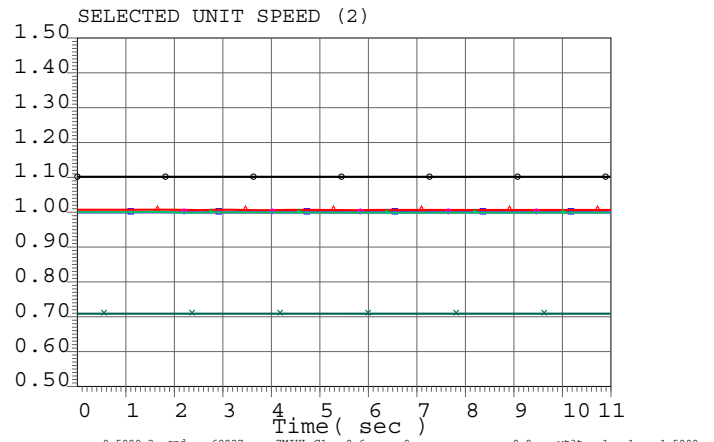
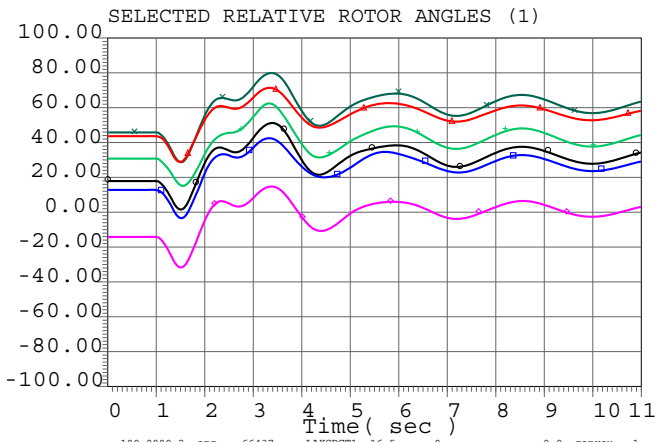
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Table Mountain-Tesla & Table Mountain-Vaca Dixon 500kV Lines
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 210

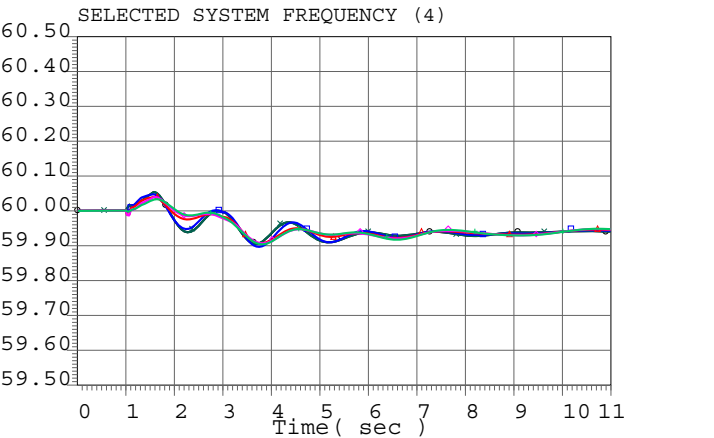
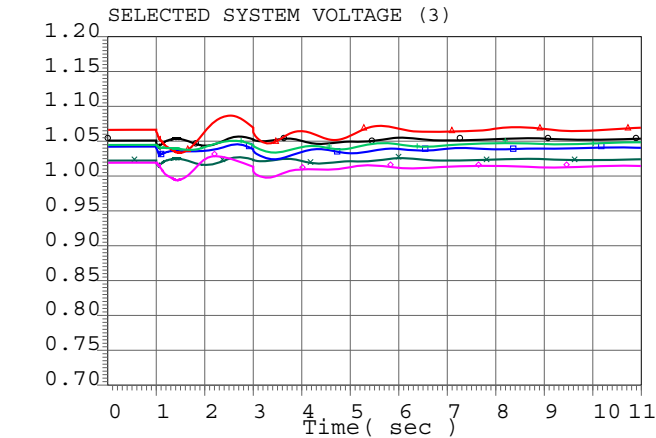


Cross-Tie Phase I Assessment - Transient Stability Plots



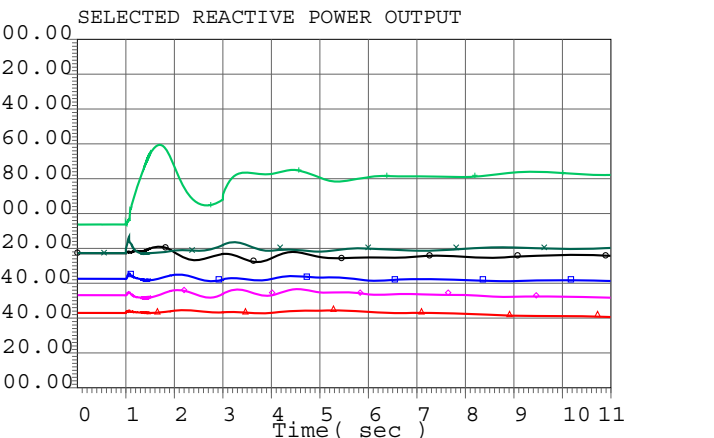
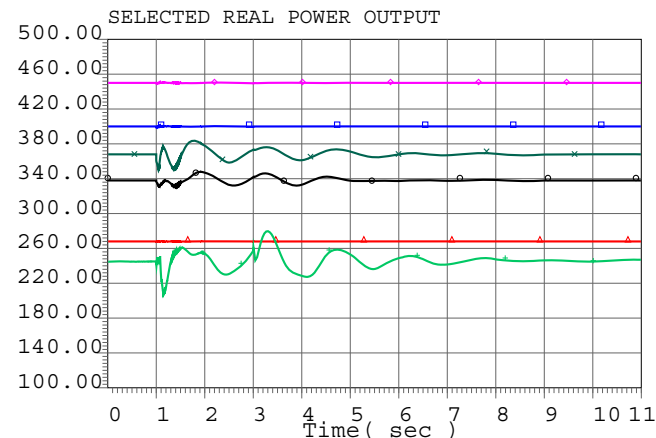
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x	-100.0000	2	ang	65495	BHUNTR	2	24.0	0	0.0	genrou	1	1	100.0000
□	-400.0000	2	ang	65445	DAVEJON4	22.0	0	0.0	genrou	1	1	-200.0000	
△	-100.0000	2	ang	65386	BRIDGER1	22.0	0	0.0	genrou	1	1	100.0000	
◇	-100.0000	2	ang	64131	VALMY G1	22.0	0	0.0	genrou	1	1	100.0000	
+	-100.0000	2	ang	26039	INTERMIG	26.0	0	0.0	gentpj	1	1	100.0000	

o	0.5000	2	spd	69027	TMHIL G1	0.6	0	0.0	wt3t	1	1	1.5000
x	0.5000	2	spd	6504	FRZ 706	0.5	0	0.0	wtgt_a	1	1	1.5000
□	0.5000	2	spd	6517	ABO 836	0.5	0	0.0	wtgt_a	1	1	1.5000
△	0.5000	2	spd	65386	FT CRG2	34.5	0	0.0	wt3t	1	1	1.5000
◇	0.5000	2	spd	65445	DAVEJON4	22.0	0	0.0	genrou	1	1	1.5000
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x	0.7000	2	vbus	67796	ABOLUS	230.0	0	0.0	vmeta	1	1	1.2000
□	0.7000	2	vbus	65386	CLOVER	500.0	0	0.0	fmeta	1	1	1.2000
△	0.7000	2	vbus	64895	ROBINSON	500.0	0	0.0	fmeta	1	1	1.2000
◇	0.7000	2	vbus	18002	HA FS	345.0	0	0.0	vmeta	1	1	1.2000
+	0.7000	2	vbus	66225	PINRO	345.0	0	0.0	vmeta	1	1	1.2000

o	59.5000	2	fbus	67795	ABOLUS	500.0	0	0.0	fmeta	1	1	60.5000
x	59.5000	2	fbus	67796	ABOLUS	230.0	0	0.0	fmeta	1	1	60.5000
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△	59.5000	2	fbus	64895	ROBINSON	500.0	0	0.0	fmeta	1	1	60.5000
◇	59.5000	2	fbus	18002	HA FS	345.0	0	0.0	fmeta	1	1	60.5000
+	59.5000	2	fbus	66225	PINRO	345.0	0	0.0	fmeta	1	1	60.5000



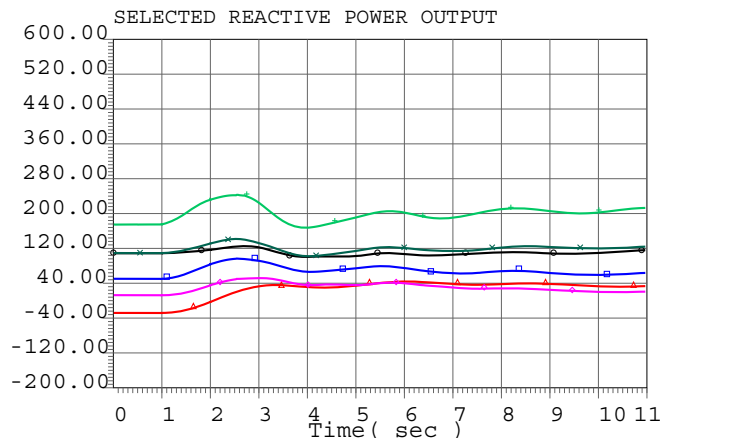
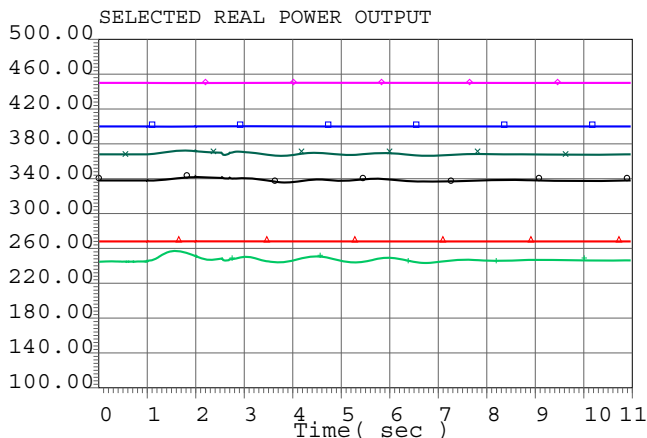
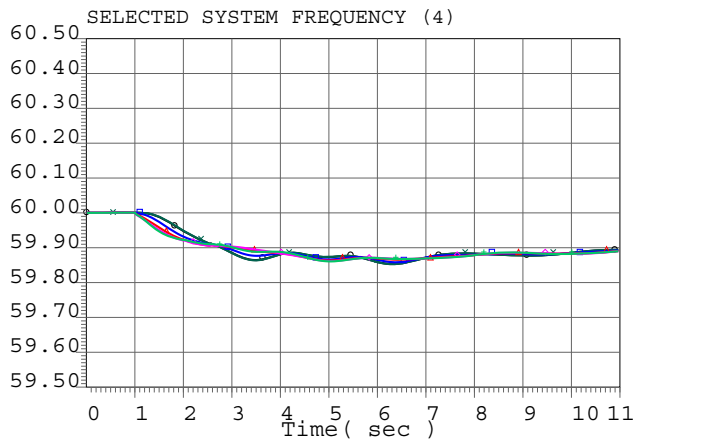
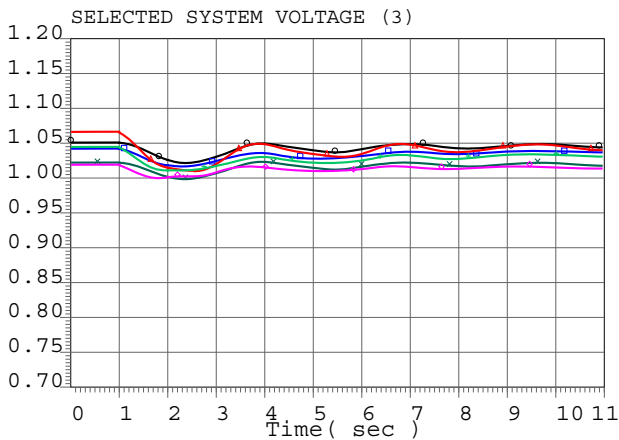
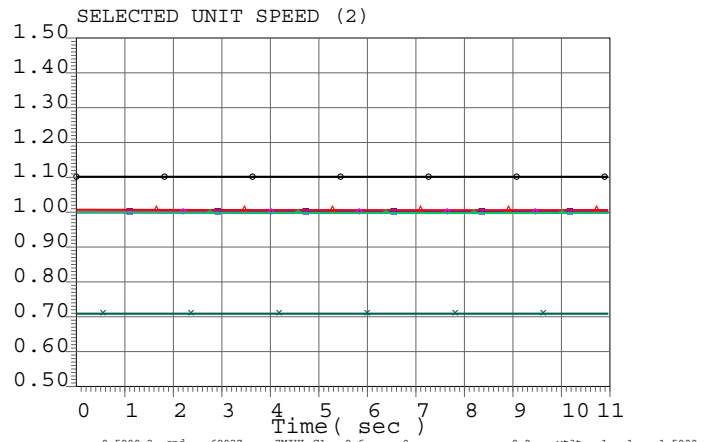
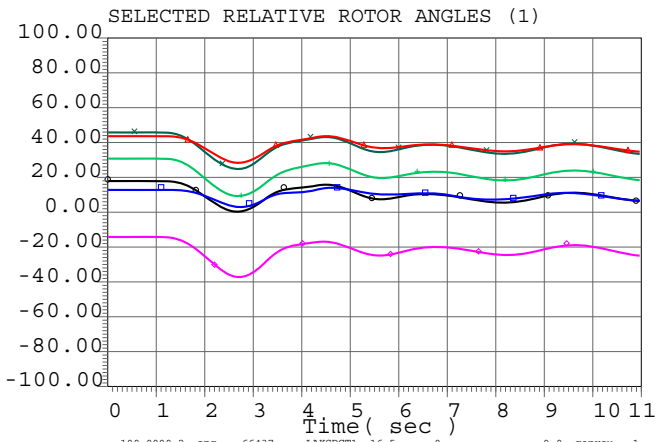
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□	100.0000	2	pg	6517	ABO 836	0.5	0	0.0	regc_a	1	1	600.0000
△	-100.0000	2	pg	69027	TMHIL G1	0.6	0	0.0	wt3g	1	1	300.0000
◇	400.0000	2	pg	6507	WT 712	0.5	0	0.0	regc_a	1	1	800.0000
+	800.0000	2	pg	26039	INTERMIG	26.0	0	0.0	gentpj	1	1	1200.0000

o	-200.0000	2	qg	65445	DAVEJON4	22.0	0	0.0	genrou	1	1	600.0000
x	-200.0000	2	qg	65386	BRIDGER1	22.0	0	0.0	genrou	1	1	600.0000
□	-200.0000	2	qg	6517	ABO 836	0.5	0	0.0	regc_a	1	1	600.0000
△	-200.0000	2	qg	67900	ABOLSV2	230.0	0	0.0	genrou	1	1	600.0000
◇	-200.0000	2	qg	6507	WT 712	0.5	0	0.0	regc_a	1	1	600.0000
+	-200.0000	2	qg	26039	INTERMIG	26.0	0	0.0	gentpj	1	1	600.0000

TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 PDCI Bi-Pole Outage
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 230



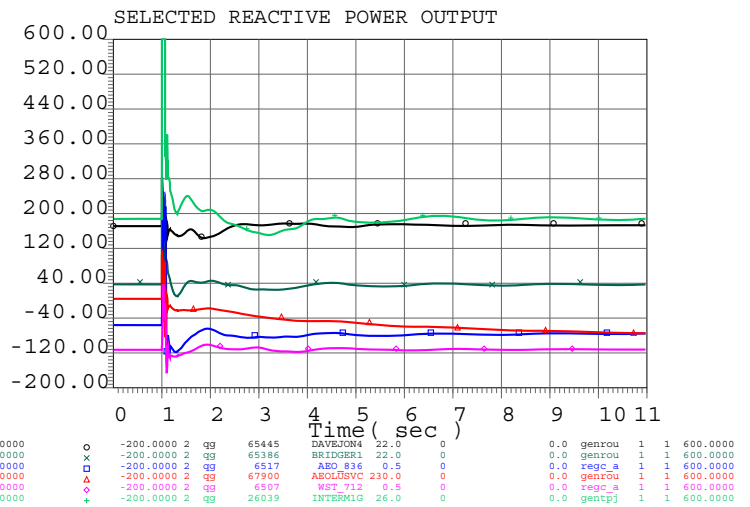
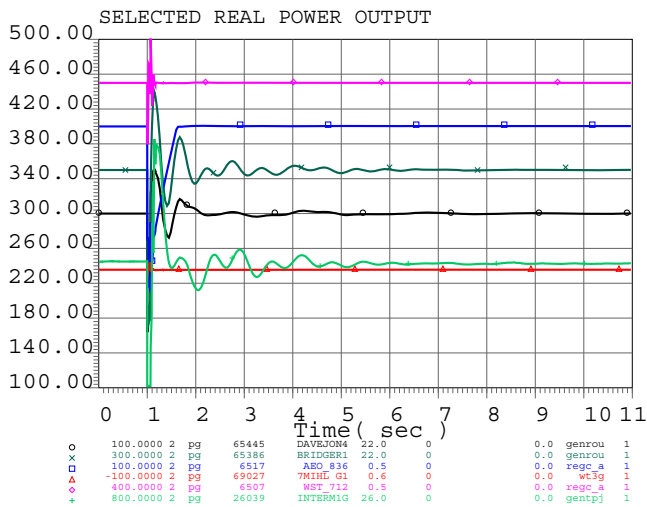
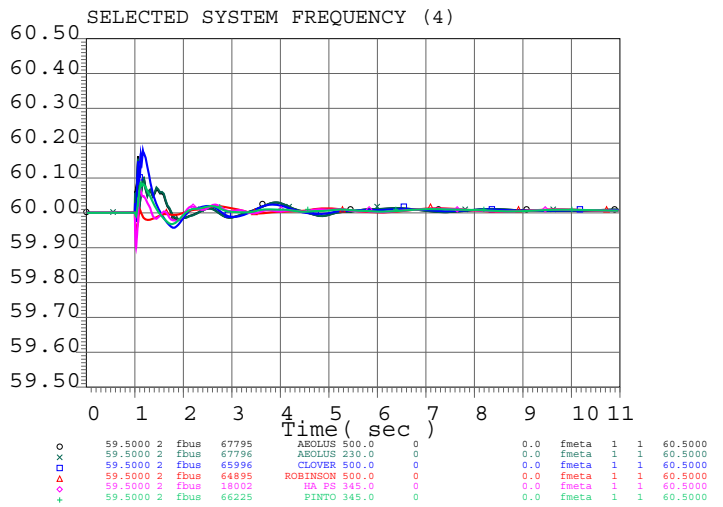
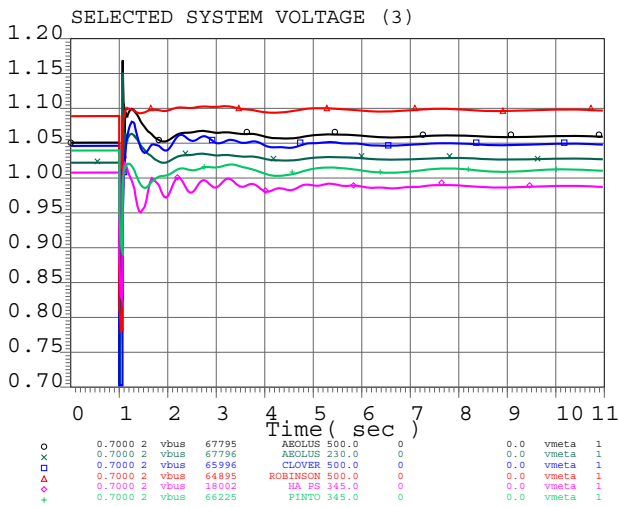
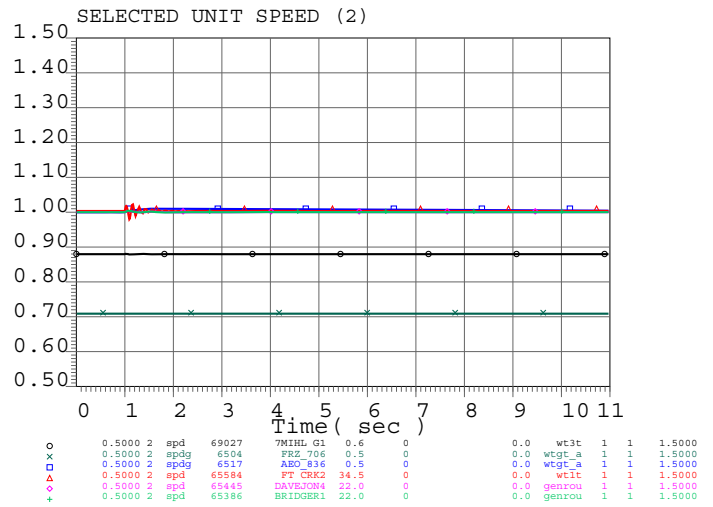
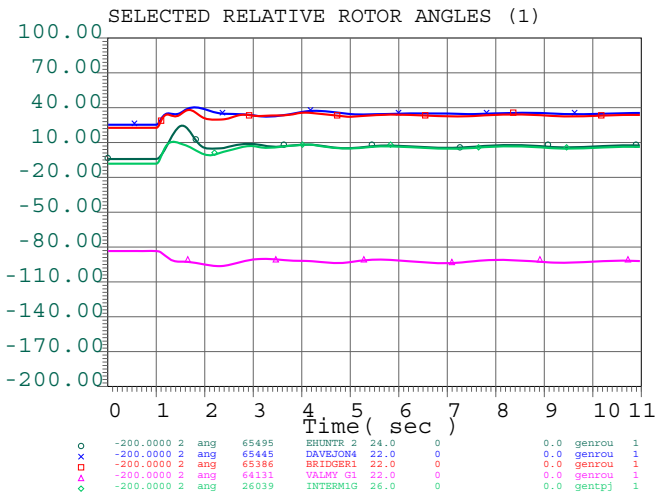
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Summer Peak conditions (26hs1 Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Palo Verde Double Generator Outage
 Dynamics_HS_ST.pfp - 26hs1a_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 240



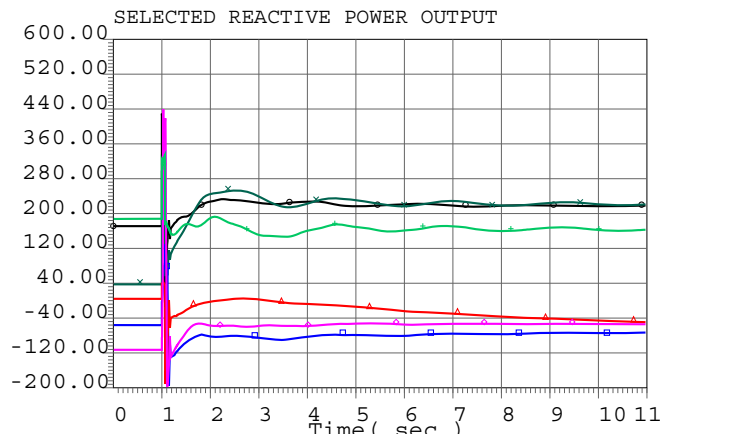
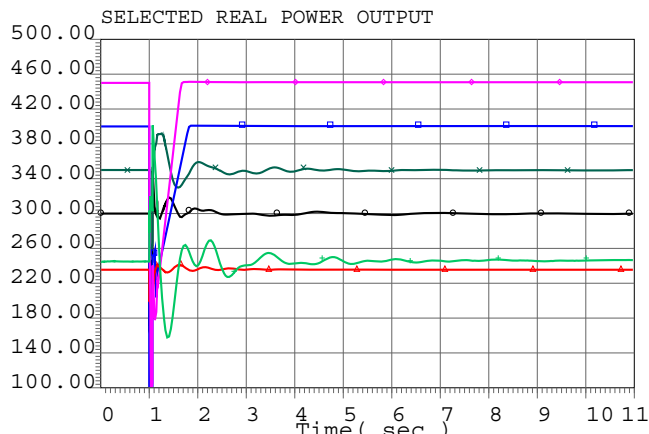
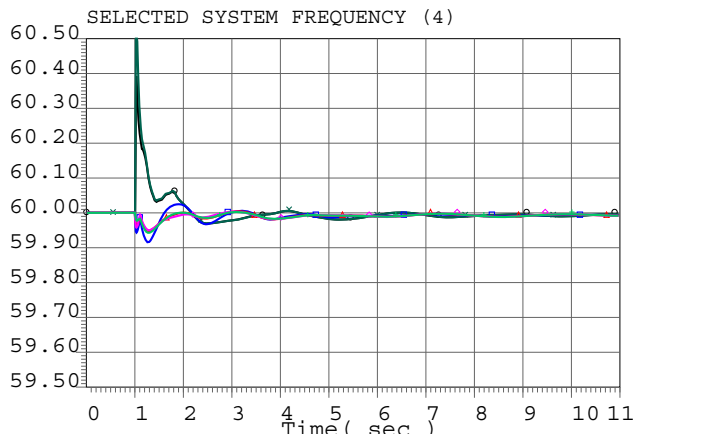
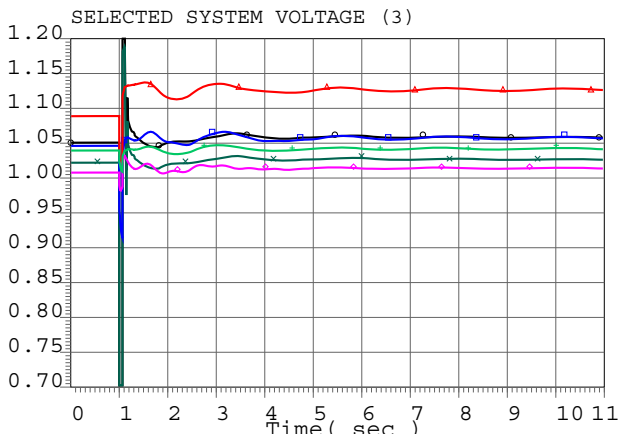
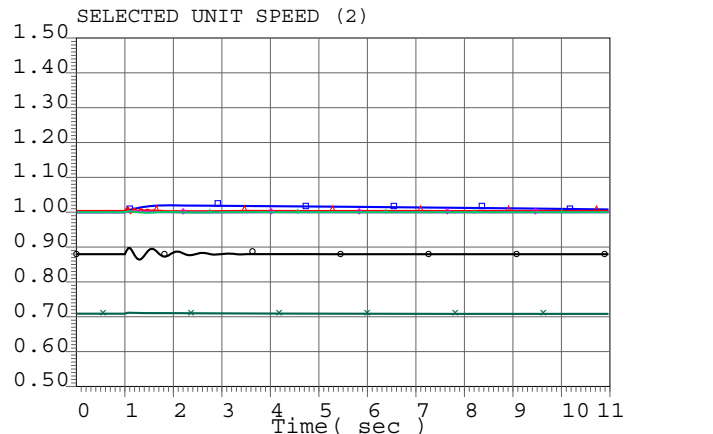
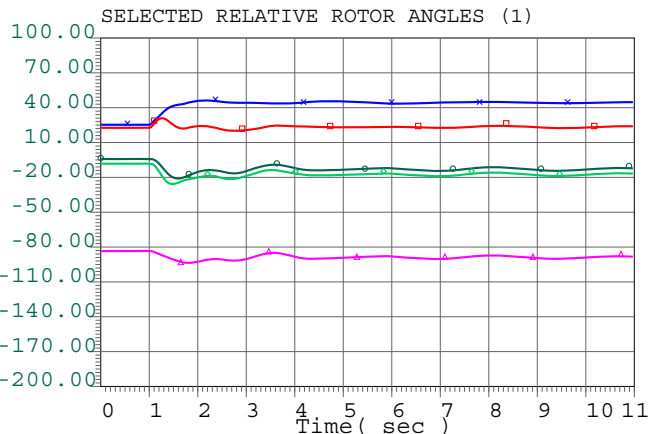
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Clover 500 kV 3PH Flt - Trip Cross-Tie 500 kV Line (Flash Capacitors)
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 10



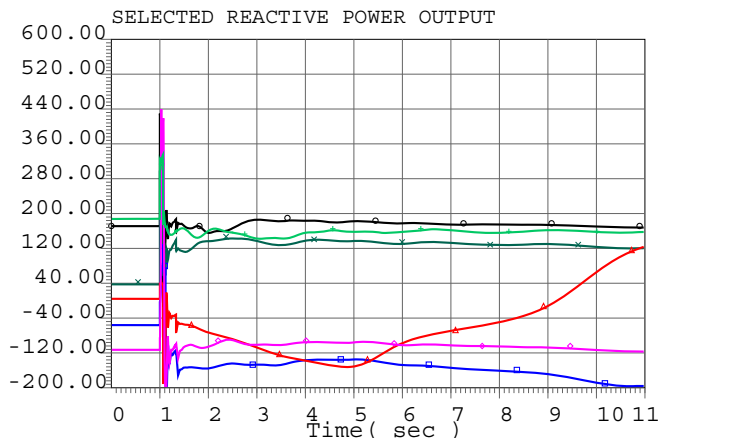
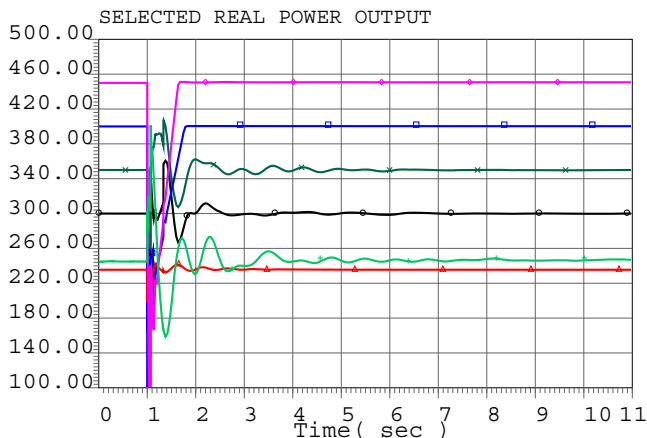
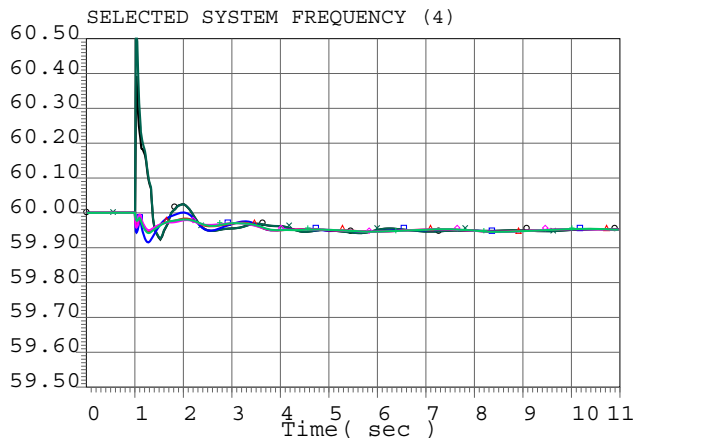
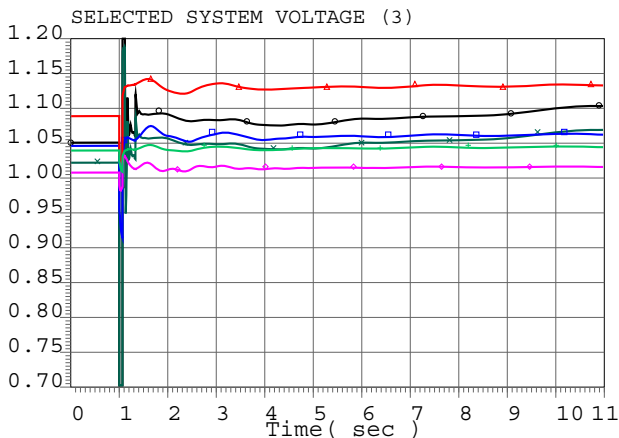
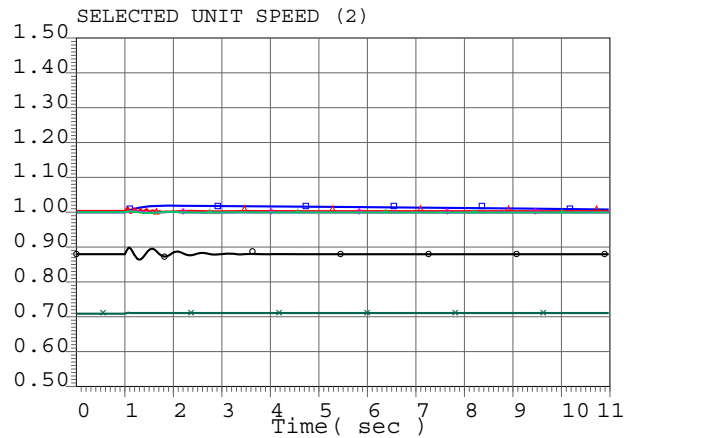
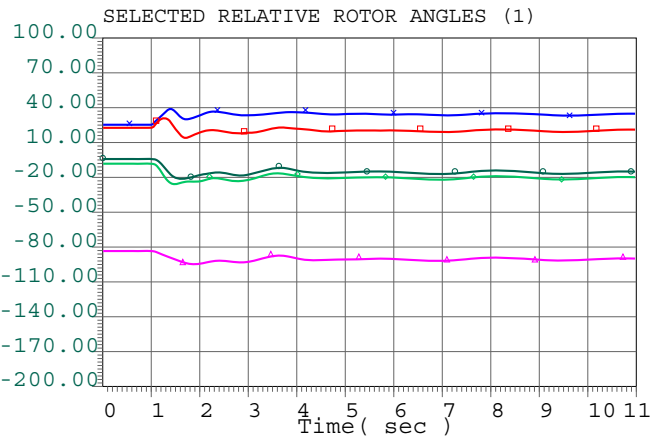
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Aeolus 3 PH Fault - Trip Aeolus South 500 kV Transmission Line (No RAS)
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 60



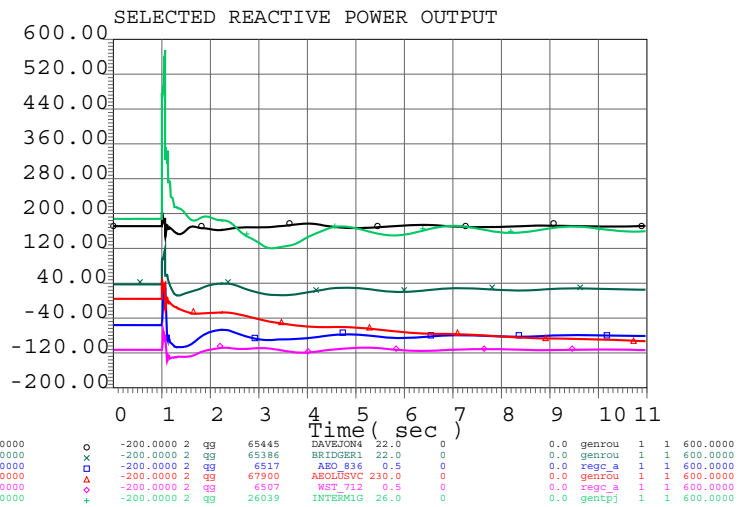
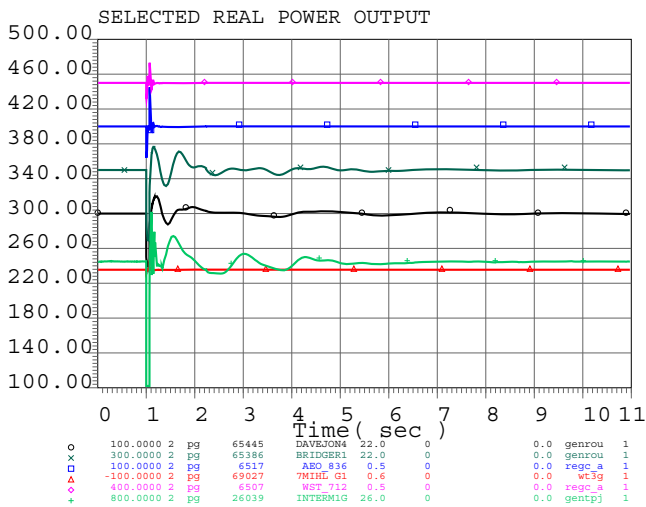
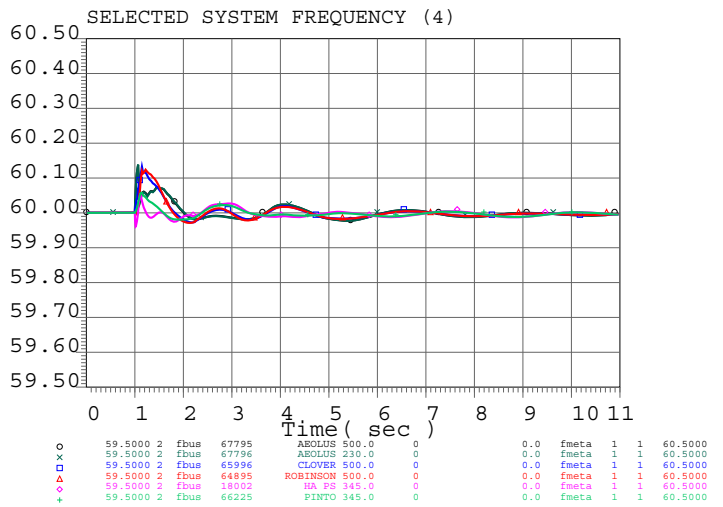
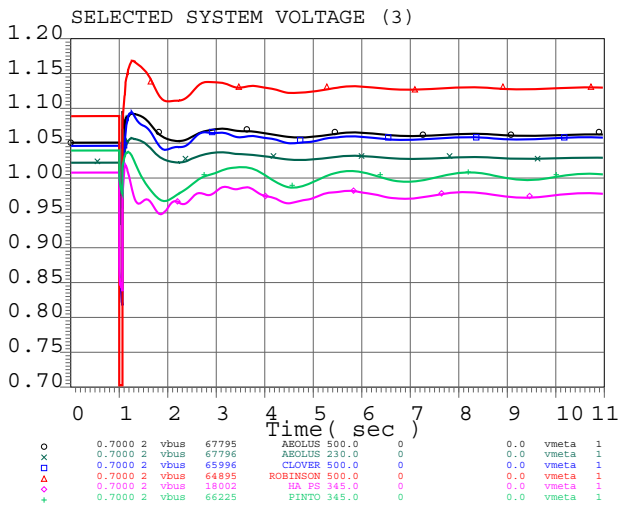
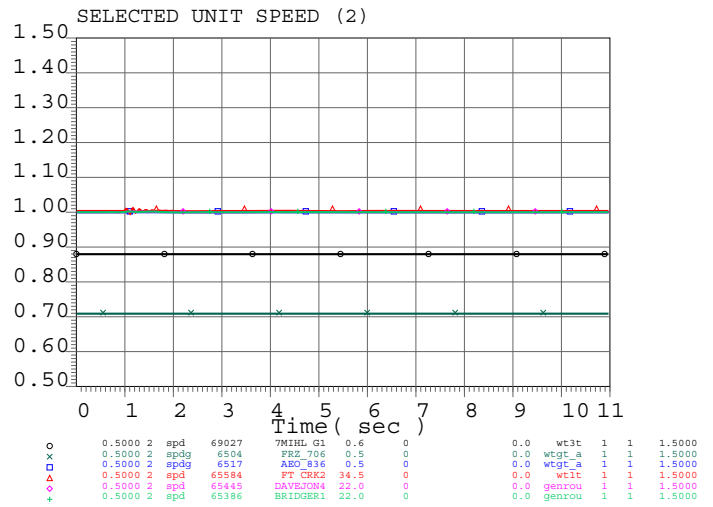
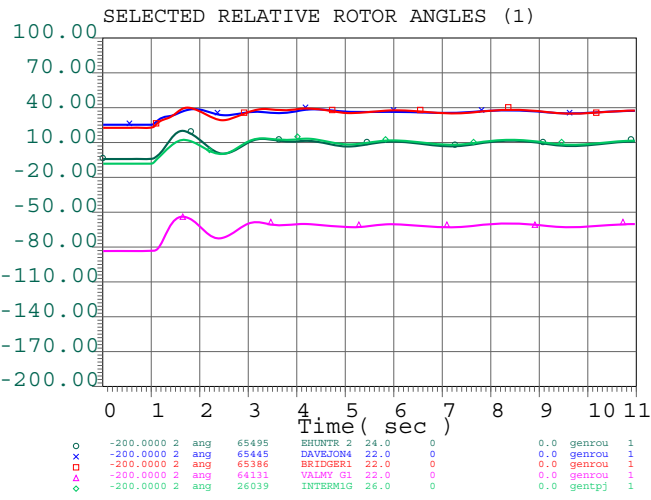
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Aeolus 3 PH Fault - Trip Aeolus South 500 kV Line (600 MW Gen Trip)
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 60.099998



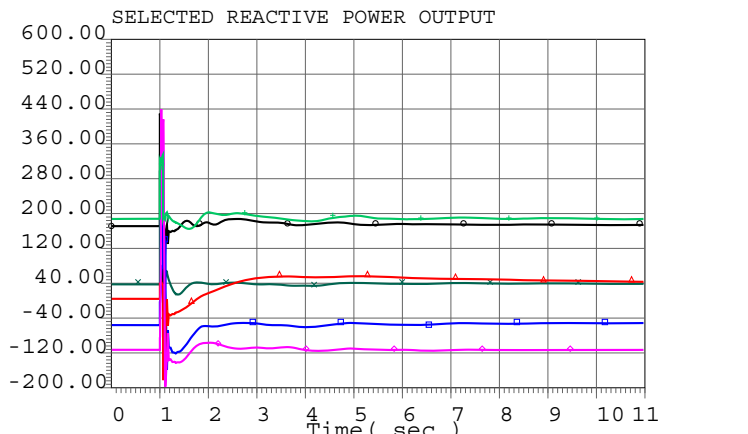
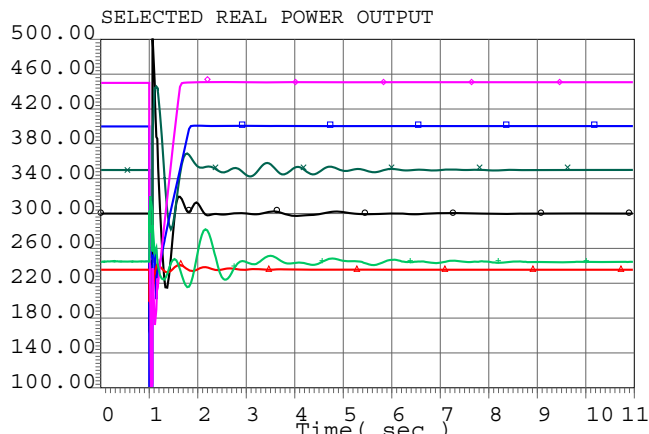
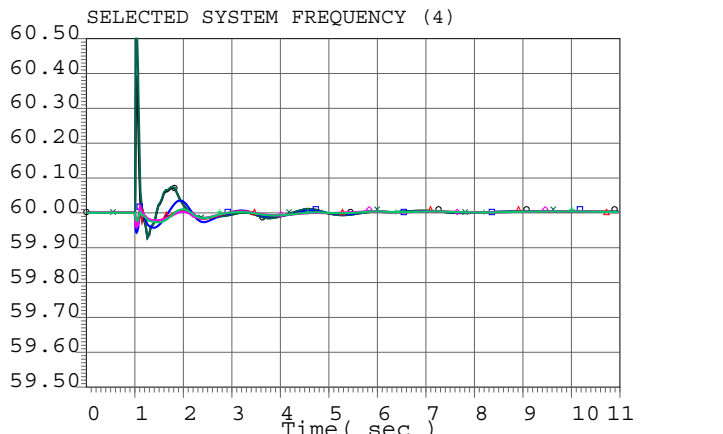
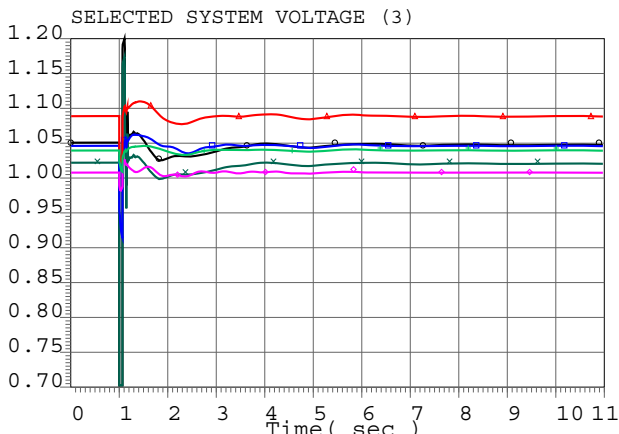
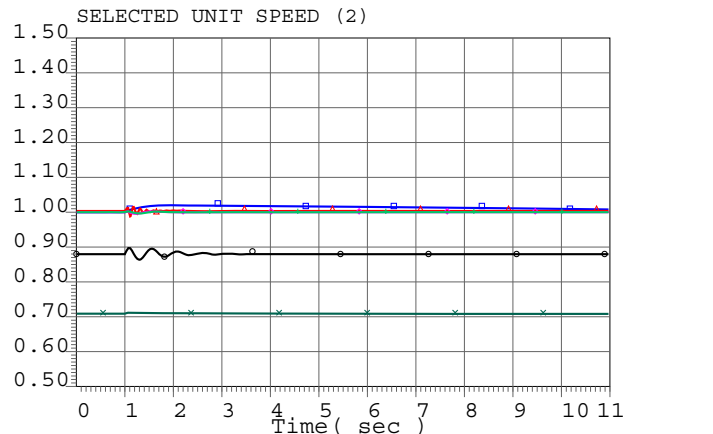
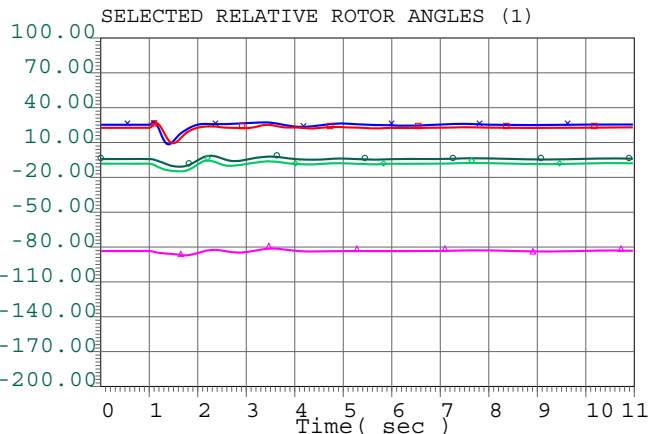
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Robinson 500 kV 3PH Flt - Trip SWIP South 500 kV Line
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 70



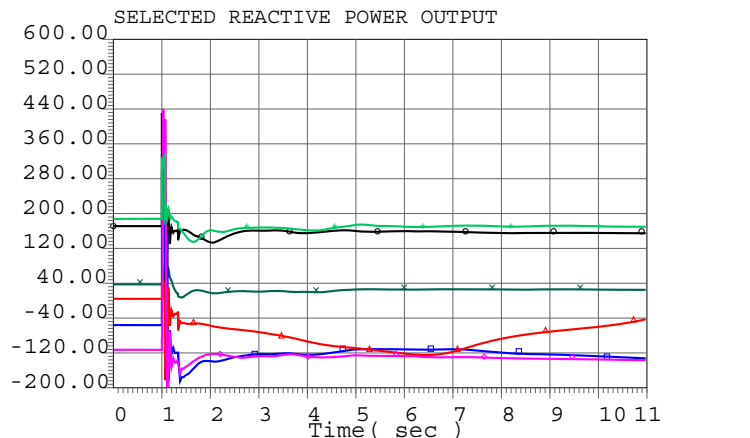
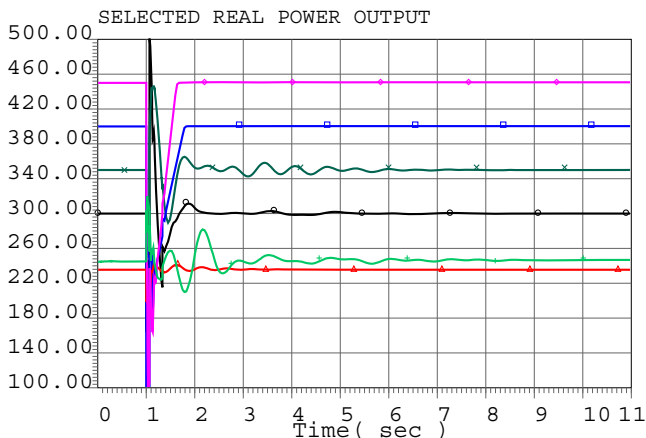
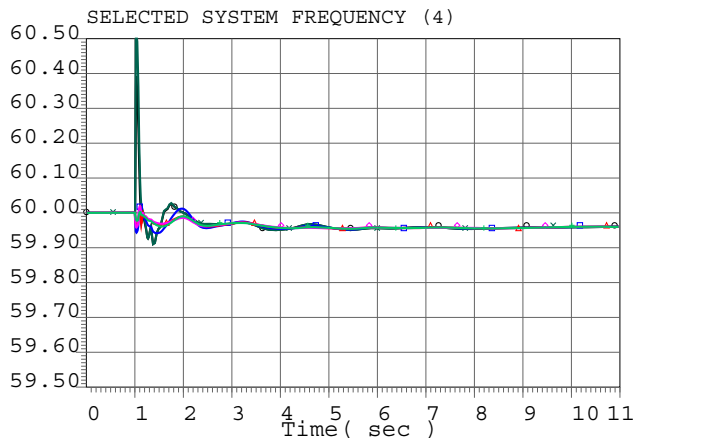
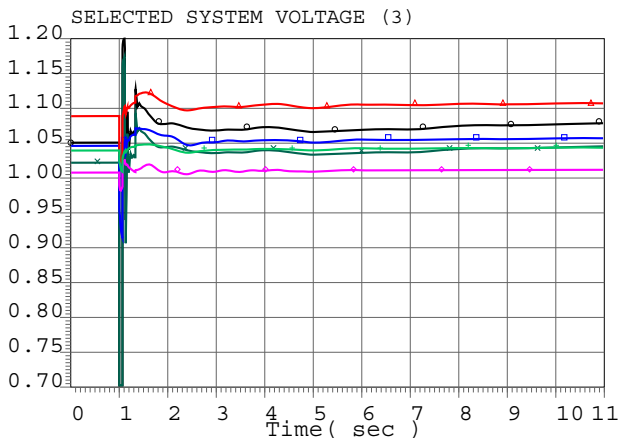
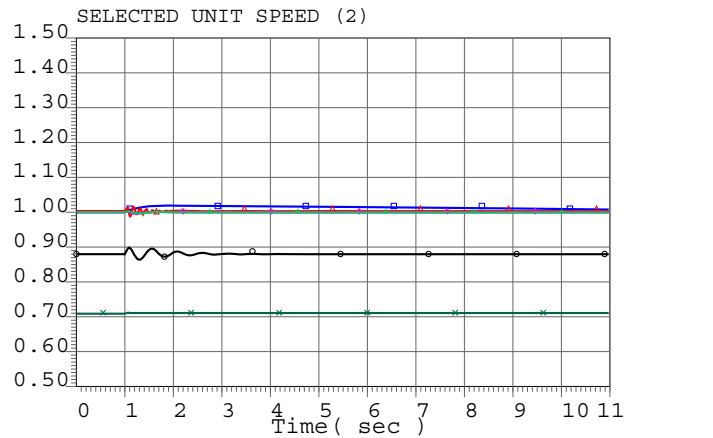
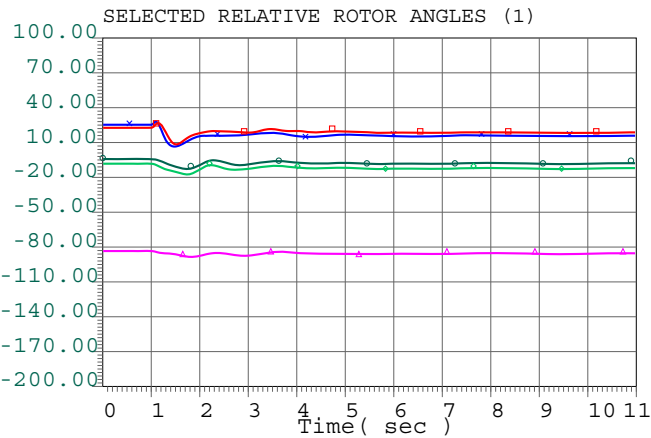
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Aeolus 3 PH Fault - Trip Aeolus-Anticline 500 kV Transmission Line (No RAS)
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 80



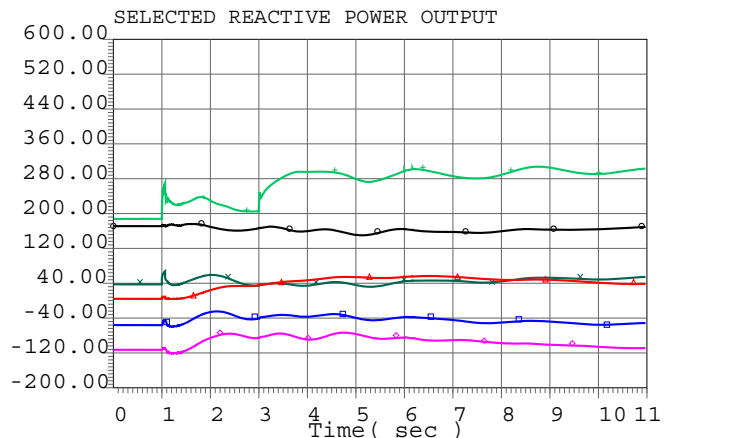
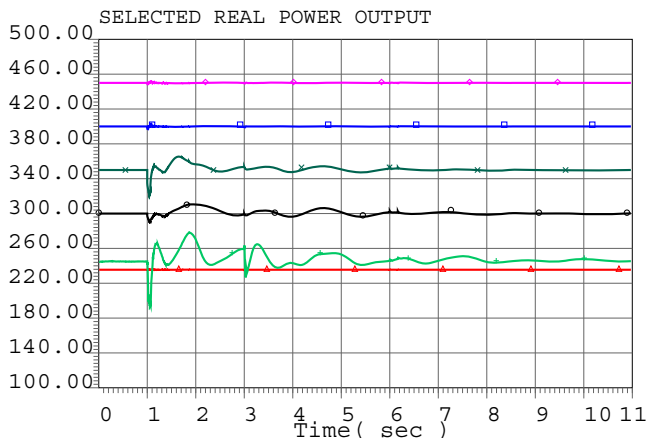
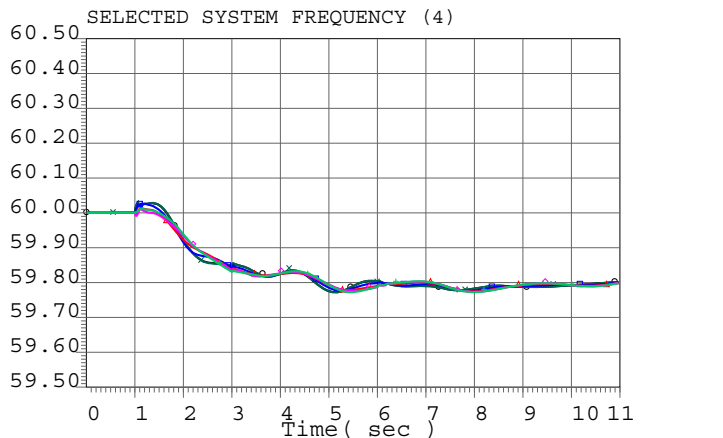
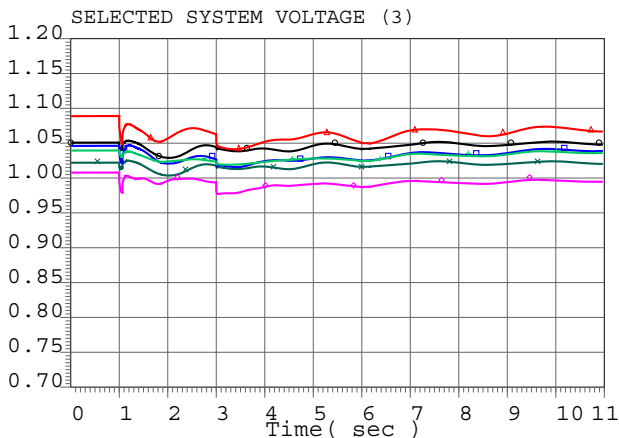
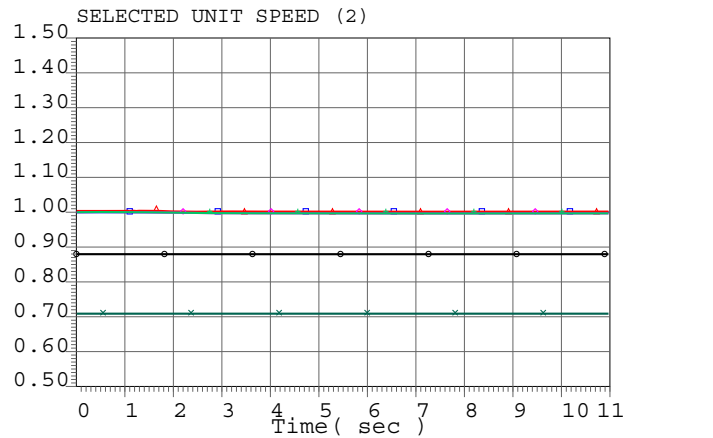
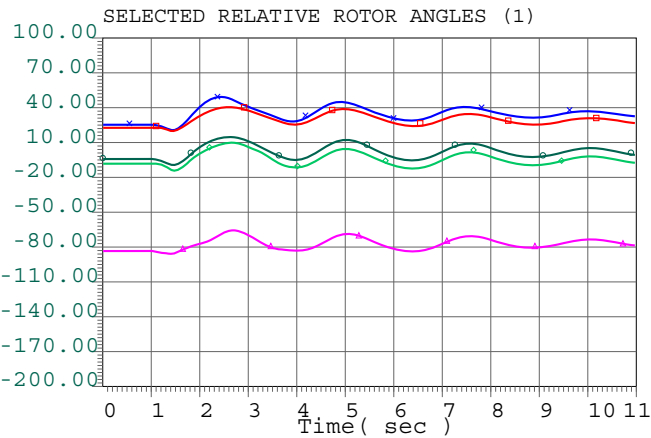
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Aeolus 3 PH Fault - Trip Aeolus-Anticline 500 kV Line (600 MW Gen Trip)
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 80.099998



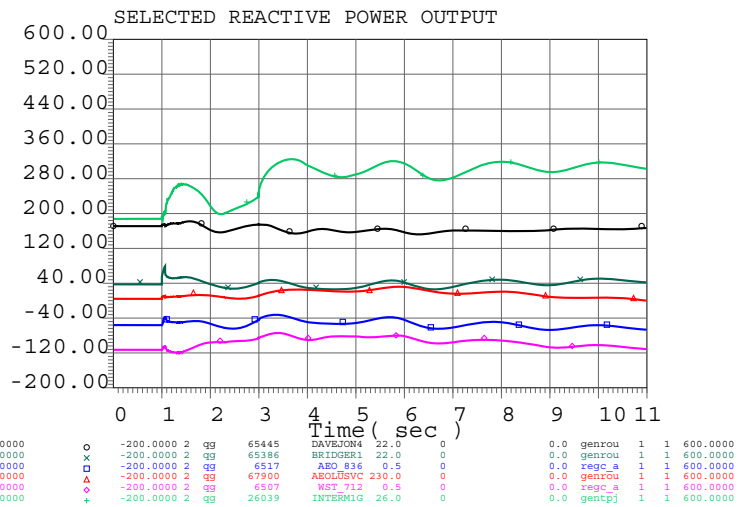
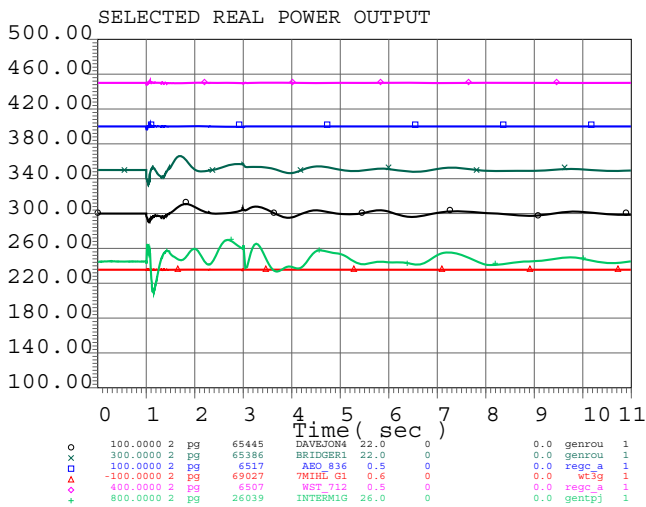
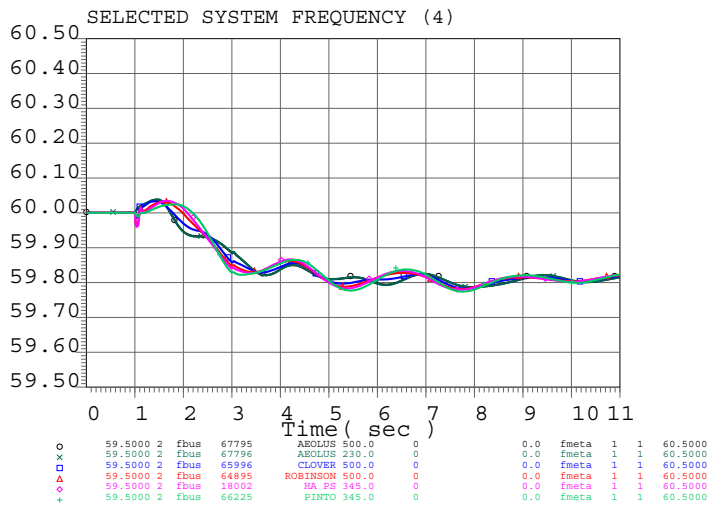
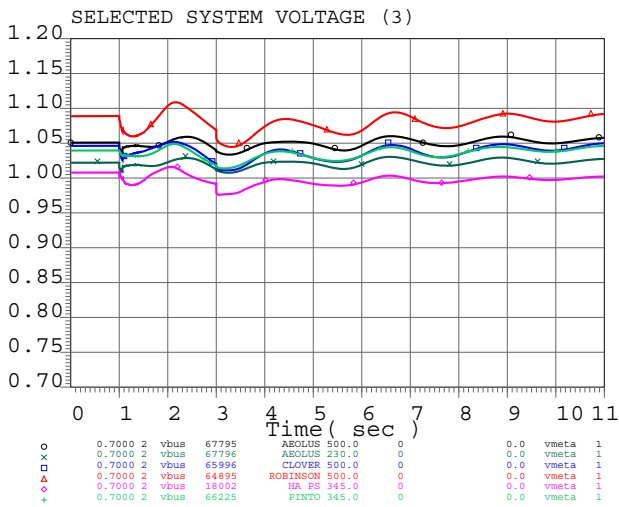
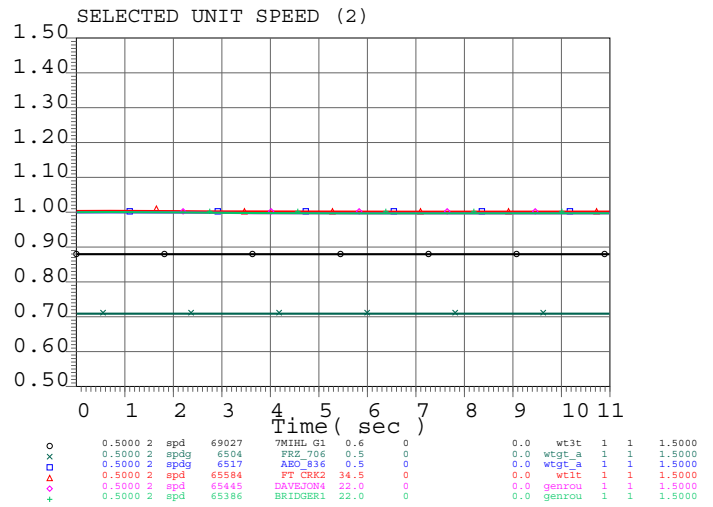
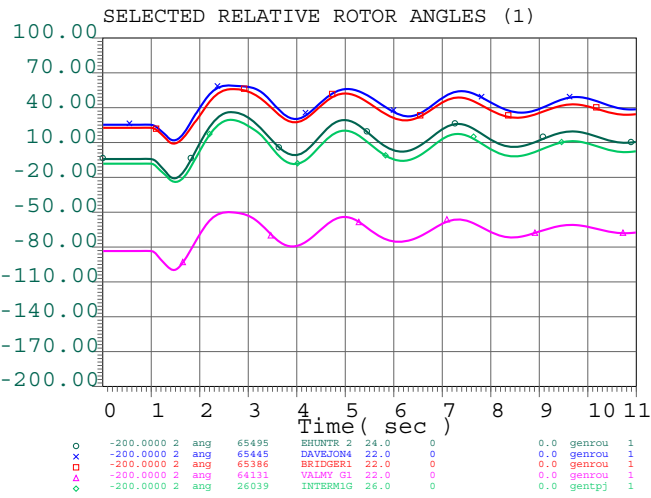
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Table Mountain-Tesla & Table Mountain-Vaca Dixon 500kV Lines
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 210



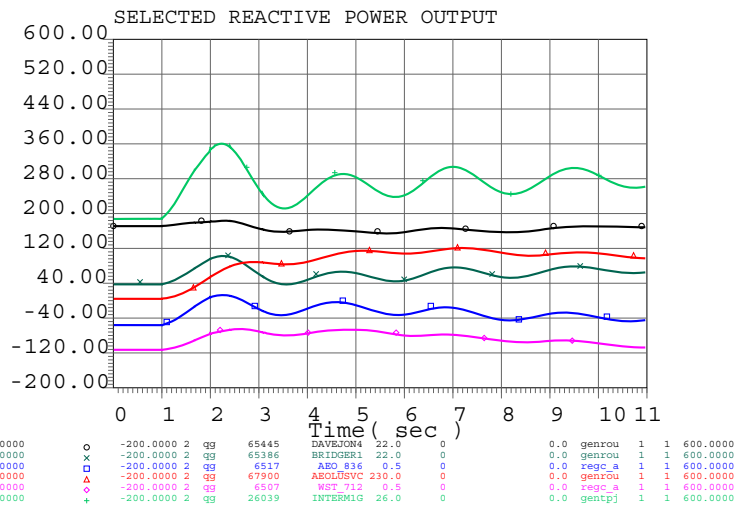
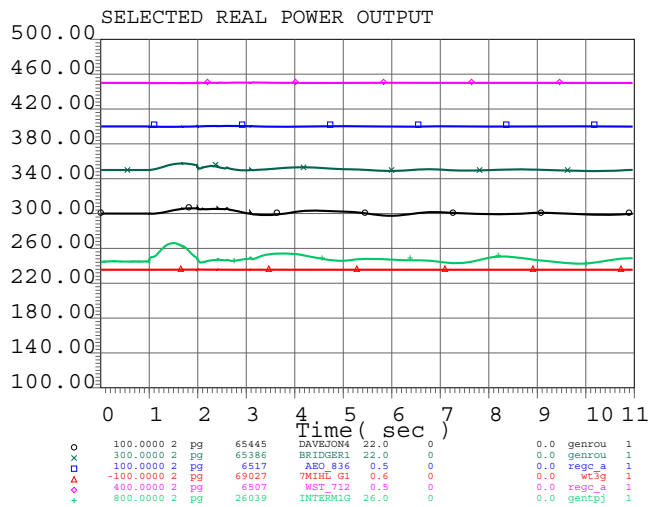
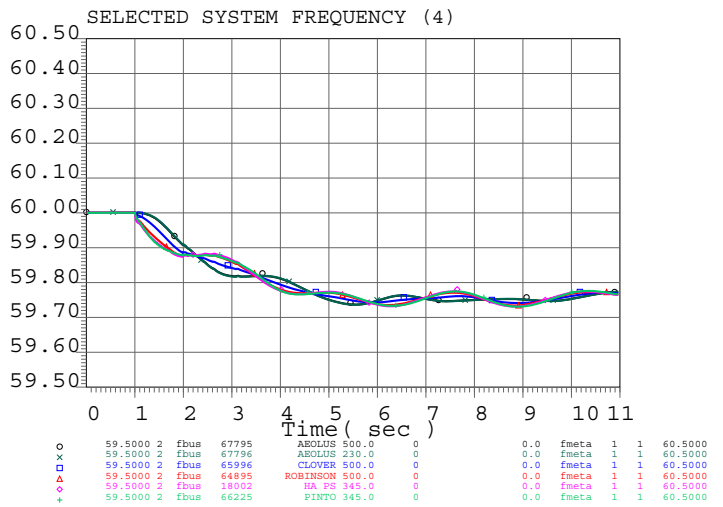
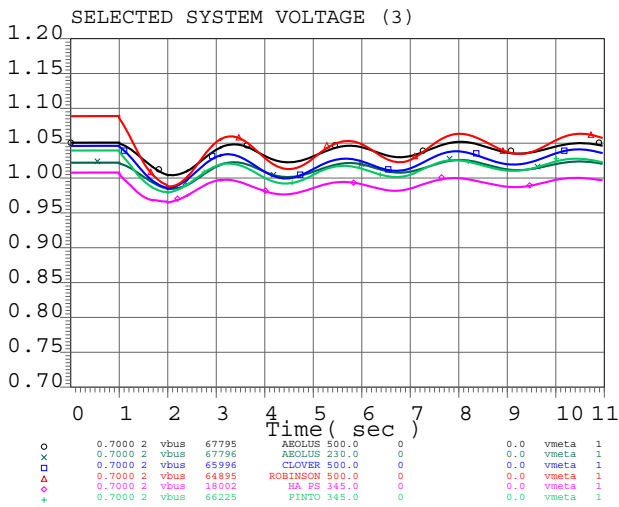
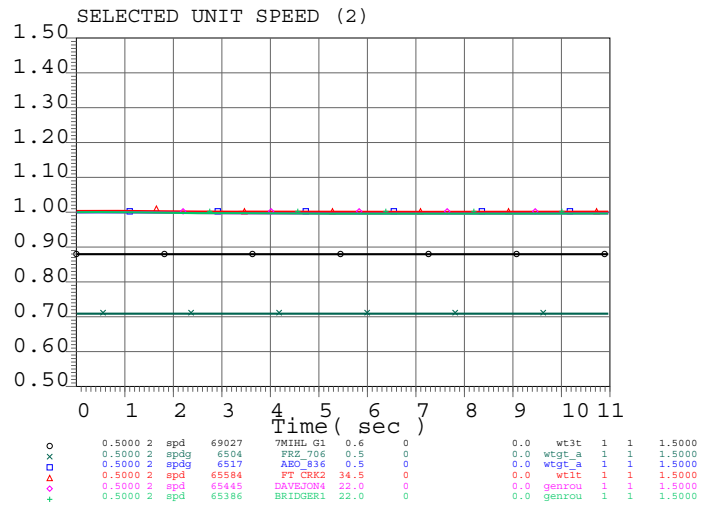
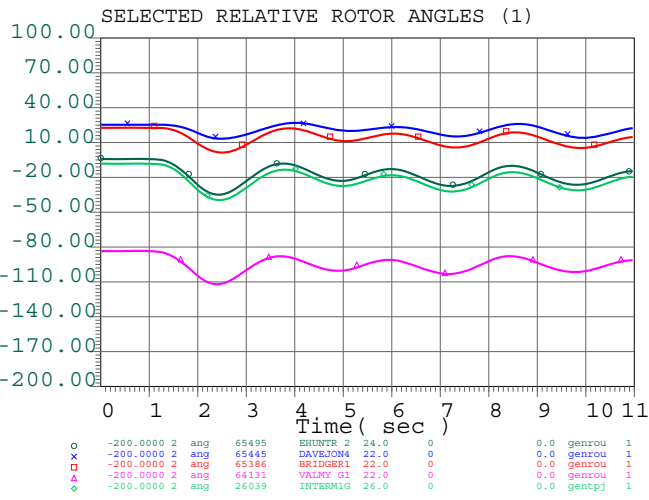
Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 PDCI Bi-Pole Outage
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 230



Cross-Tie Phase I Assessment - Transient Stability Plots



TransCanyon Cross-Tie Transmission Project
 2026 Light Spring conditions (26lsp1sa Base Case)
 Scenario 1 - Models Gateway West to Populus; Gateway South; and Cross-Tie
 Palo Verde Double Generator Outage
 Dynamics_LS_ST.pfp - 26LSP1Sa_CT_S1_P501_Base_NS_R.sav - CASE NUMBER 240

