

1.0 **GENERAL**

1.1 **Intent and Scope**

This operating order defines the operating limits of all transmission circuits. The continuous operating limit of a circuit is the minimum of either the maximum continuous rating of equipment at the substation (e.g. sectionalizing switches, bus, etc.), or the overhead or underground conductor ratings. A temporary overload capability may exist for some individual circuits. Ratings for all transmission circuits 60 kV and above are found in Appendix 1.

Note: All overhead line conductor emergency ratings are 30 minute ratings, unless otherwise specified.

When an outage of a Level III or IV circuit causes the remaining Level III or IV circuit to be radially connected to a generation source or IPP above 25 MW, that remaining circuit is automatically raised to Level II. Further information is found in:

- OO 1J-11 - Power System Operation – Authority and Responsibility
- OO 1T-53 - Implementation of BC Hydro Generation LOBs Commercial Management System by BC Hydro.

Any inquiries regarding the information provided within this document should be directed to tdso.compliance@bchydro.com.

1.2 **Policy and Process**

The review and update of 5T-10 is the responsibility of the T&D System Operations (TDSO) Director and the responsibility is delegated to the TDSO Principal Engineer. Operations Planning staff are to provide recommendation for approval by the TDSO Principal Engineer.

All ratings can be reviewed by Asset Investment Management, Asset Sustainment (AIM AS) which includes staff within the Lines Strategy and Standards or Stations/P&C Strategy and Standards departments. In addition to circuit conductor/clearance ratings, AIM-AS (Stations/P&C) will review for any protection changes/recommendations or equipment limitations and provide updated ratings, and/or drive PN changes, as necessary.

A Commissioning Notice to Energize (CNE) can be used to confirm ratings of new or updated circuits because it confirms that the technical specifications and operations requirements have been reviewed and accepted by a Professional of Record.

The Real Time Operations (RTO) System Control Manager (SCM) can temporarily de-rate the circuit rating prior to receiving new rating confirmation from AIM-AS or CNE, but not increase circuit ratings.

A Transmission Line Plant Alteration document (PA) without an associated CNE will **not** be used to verify ratings, only to confirm assets are in service (as built).

Subsequent to the revision of 5T-10, the following operating tools need to be updated:

- EMS alarms update: CPC and RTS SCADA teams are notified by distribution list when 5T-10 is updated. Analog alarm and warnings settings are updated accordingly.
- Other operating order update requirements: Ops Planner must confirm and remove ratings from other orders and cite the reference to 5T-10, and prepare for signing by the responsible BC Hydro manager.

1.3 **Circuit Rating**

The overall rating of a circuit is determined by taking the most restrictive rating between Protection (CT), Disconnect, and Conductor (cable or overhead) ratings associated to the same circuit. Where a circuit has taps, the distribution of the loading on the segments of the circuit, and the locations of the telemetry must be considered. During a contingency, for instance, the source end may reverse with the receiving end, and different line sections will be limiting. If taps exist for a circuit, and segment information is NOT provided, then the circuit limitation is based upon the minimum of all the segments, and tap loading does not have to be considered.

The emergency rating of a cable is dependent on variable factors, such as soil resistivity, load factor (assumed as 80%), duration of load, loading prior to emergency, etc., which can fluctuate widely in individual cases. The emergency rating of underground cables are intended as a guide only and must be applied with discretion.

Winter ratings apply during November to April and summer ratings apply during May to October. For overhead conductors, the summer ratings assume that the sun is shining on the conductor and the winter ratings do not. For cable ratings, different ground temperatures are assumed for summer versus winter.

Note: Bulk Electric System (BES) circuits in Appendix 1 are shown in **bold** font.

1.4 **Conductor Temperature Limitations**

Severe overloading of transmission conductors may cause permanent damage, through annealing of the steel and/or aluminum strands. A conductor that is nominally rated 590 A, if subjected to a current of 1200 A, will reach a temperature of 300°C. Within 12 minutes, the aluminum portion will lose 40% of its strength. This same conductor at 1000 A would reach 200°C and will lose 10% of its strength in 12 minutes. Overloads of these magnitudes must be reduced quickly to avoid permanently damaging the conductors.

Dependent upon the type of aluminum, significant loss of strength can begin at conductor temperatures as low as 60°C. However, most 'typical' conductors show no loss of strength until the 80°C – 90°C range is reached. For high steel content conductors, the limit may be higher, depending upon the amount of steel content. The conductor type and normal temperature are an indication of the temperature at which the limiting conductor can be operated continuously.

1.5 **Clearance Limitations**

Overhead sections of transmission circuits are required to meet minimum clearances for safety between conductor to ground and conductor to underbuilt circuits. Conductor sag and tension affect clearances, which are further influenced by factors such as conductor temperature, conductor creep, wind, and ice loading. For operating purposes, the conductor temperature at which the maximum allowable sag occurs will be used to determine the clearance limitation. This limitation is NOT to be exceeded without additional clearance monitoring procedures in place (see exceptions, Section 2.3).

1.6 **Normal Rated Capacity**

The rating of a transmission circuit is dependent upon ambient temperature that is normally defined to be 30°C ambient for summer and 0°C ambient for winter.

Overhead transmission circuit ratings may be adjusted by the actual ambient air temperature. The ambient air temperature must be picked as a maximum assumed to occur at any point in the circuit at the time. Ambient assumptions should be revisited should temperatures rise appreciably.

2.3 Exception to Overload Rules

Under certain planned conditions, it may be necessary to load some circuits beyond the value listed and accept the reduced ground clearance and/or strength loss that will result. However, this must be done only after consultation with the appropriate Transmission Operations Manager and after various monitoring procedures are put in place.

2.4 Cable Emergency Rating

The emergency rating is dependent on variable factors such as soil resistivity, load factor, duration of load, loading prior to emergency, etc. which can fluctuate widely in individual cases. The values given are intended as a guide only and must be applied with discretion. When the loading on any of the cable circuits exceeds the Normal ratings, the SCM must be notified, so that the appropriate manager can investigate and advise on the validity of the emergency rating for each particular case. Duration of overload loading is not to exceed a total of 100 hours in any twelve consecutive months.

3.0 CIRCUIT RATING TABLES

Conductors shown in the rating table in Appendix 1 are the LIMITING conductors. Other conductors in this circuit may have equal or greater rating than the one shown.

Abbreviations and Definitions Used in Circuit Rating Tables:

DS	Disconnect Switch
CT	Current Transformer
IR	Impedance Relay
O/C	Over Current Relay
WT	Wave Trap
PN	Protection
CB	Circuit Breaker
SCOIP	Solid Core Oil Impregnated Paper
LPOF	Low Pressure Oil Filled
SCOF	Self-Contained Oil Filled
Single Breaker Closed CT Rating:	Line is being fed by a single circuit breaker from the station end.

* Ending verification from asset manager

4.0 REVISION HISTORY

Revised By	Revision Date	Summary of Revision
CM	17 February 2022	Appendix 1 – updated ratings for 1L157, 5L42, 5L71 and 5L72.
AH	03 March 2022	Appendix 1 – added 5L6.
CM	10 March 2022	Appendix 1 – updated ratings for 1L31, 1L214, 1L218, 1L375, 2L12, 2L48, 5L79 and 5L96. Removed 60L9.
AH	17 March 2022	Appendix 1 – removed line sections and updated ratings for 60L20; added ratings for 60L90; corrected rating in 2L48.
CM	25 March 2022	Appendix 1 – updated and added ratings for 1L251.
AH	12 May 2022	Appendix 1 – updated ratings for 1L201, 1L202, 1L358, 2L103, 2L128, 2L50, 5L1, 5L2, 5L7, 5L11, 5L12, 5L13, 5L41, 5L44, 5L45, 5L75, 5L77 and 5L87.
AH	20 May 2022	Appendix 1 – updated ratings for 2L50, 2L97 and added rating for 1L210 tap to BKP, Changed TAP to Tap throughout the rating section of 5T-10.
AH	05 July 2022	Appendix 1 – updated ratings for 2L154; updated comment section for 2L90 and 2L103 to refer to App 2 for Ambient Temperature Adjusted ratings. Appendix 2 – Added new Ambient Temperature Adjusted ratings for 2L103.
AH	02 August 2022	Appendix 1 – updated ratings of 2L64.
AH	13 September 2022	Appendix 1 – updated ratings for 60L392, 1L14, 2L86, 5L92.
AH	16 October 2022	Appendix 1 – updated ratings for 60L351, 1L120, 1L121, 2L58, 2L62, 2L76, 2L79, and 2L264..
AH	11 January 2023	Section 1.3 – Note section removed shaded grey comment and Appendix 1 – updated ratings for 60L91, 1L366, 2L56, and 2L142.
AH	27 April 2023	Appendix 1 – updated ratings for 60L5, 60L20, 60L21, 60L31, 60L61, 60L62, 60L71, 60L75, 60L92, 60L101, 60L102, 60L271, 1L31, 1L209, 1L366, 1L377, 2L100; and added 2L107 rating row; and removed 2L1 overall rating row and 2L5 rating row; and deleted N/A from the rating tables and left blank for consistency.
AH	24 May 2023	Appendix 1 – updated ratings for 60L20, 60L21, 60L271, 1L143, 2L96; 3L2, 5L5 and 5L6.
AH	17 August 2023	Appendix 1 – updated ratings for 60L5, 60L20, 60L29, 60L295, 60L301, 1L48, 1L139, 1L251, and added new 2L379 rating rows.
AH	01 March 2024	Appendix 1 – updated ratings for 60L7, 60L8, 60L74, 60L336, 60L351, 60L392, 1L102, 1L109, 1L117, 1L120, 1L122, 1L143, 1L205, 1L218, 1L219, 1L385, 2L2, 2L4, 2L9, 2L13, 2L32, 2L51, 2L54, 2L123, 2L253, 2L263, 2L264, 2L277, 2L289 and 5L94.
BB	16 April 2024	Appendix 1 – updated ratings for 60L338, 1L220, 1L249, 1L251, 1L274, 1L275, 1L348, 1L359, 1L364, 2L277 and editing of many of the notes in the “Limitations” column for accuracy. Added line ratings for 1L351; transfer of ownership to BCH.

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L1	COK	BND	OVERHEAD	75	125	580	830	740	930			1200 CT				
60L2	COK	CQM	OVERHEAD	90		732		875		952		1059 IR				
60L2	CQM	MRG	OVERHEAD	75	110	400	530	505	600			1500 CT				
60L2	SFY	MRG	OVERHEAD	75	110	400	530	505	600			991 IR				
60L3	COK	MRG	OVERHEAD	75	110	580	770	740	880			1500 CT				
60L3	MRG	HNY Tap	OVERHEAD	75	110	580	770	740	880							
60L3	HNY Tap	HNY	CABLE			669	875	707	930			1000 CT			Cable 200 Hours Overload	
60L4	LB1	PCP	OVERHEAD	75		400		505				1200 CT				
60L5	SHL	WTR Tap	OVERHEAD			400		505				900 CT	1200		CT 900 includes 1.5 RF	
60L5	WTR Tap	WTR Str. 0/2	OVERHEAD			520	575	605	650	640	680		1200			
60L5	WTR Tap	LB1	OVERHEAD			400		505				1200 CT	600		CT 1200 includes 1.5 RF	
60L6	LB1	IOC	OVERHEAD	75		400		505				1200 CT				
60L7	PKL	BAL Tap-1	OVERHEAD			799		932		983		1000 CT	1200			
60L7	RUS	BAL Tap-1	OVERHEAD	90		620		745				1200 CT				
60L7	BAL Tap-1	BAL Tap-3	OVERHEAD	75		730		940								
60L7	BAL Tap-3	MLN	OVERHEAD	90		1145		1388								
60L7	BAL Tap-3	BAL Tap-6	OVERHEAD	75		440		555								

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Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L7	BAL	BAL Tap-6	OVERHEAD	75		215		290								
60L8	PKL	BAL Tap-2	OVERHEAD			799		932		983		1000 CT	1200			
60L8	RUS	BAL Tap-2	OVERHEAD	90		620		745				1200 CT				
60L8	BAL Tap-2	BAL Tap-4	OVERHEAD	75		730		940								
60L8	BAL Tap-4	MLN	OVERHEAD	90		1145		1388								
60L8	BAL Tap-4	BAL Tap-5	OVERHEAD	75		440		555								
60L8	BAL	BAL Tap-5	OVERHEAD	75		215		290								
60L8	BAL Tap 5	GLT Tap	OVERHEAD	90		713		864								
60L8	GLT Tap	GLT	OVERHEAD	90		493		594								
60L10	WAH	WAH Tap	OVERHEAD	75		440		555				552 IR				
60L10	KEN	WAH Tap	OVERHEAD	75		440		555								
60L10	WAH Tap	BBR Tap	OVERHEAD	75		440		555								
60L10	SZM	BBR Tap	OVERHEAD	75		440		555								
60L10	HOP	BBR Tap	OVERHEAD	75		440		555				300 CT				
60L10	BBR	SZM	OVERHEAD	75		440		555				150 CT				
60L11	BND	SFU Tap	OVERHEAD	75		400		510				1200 CT	800			
60L11	SFU	SFU Tap	OVERHEAD	75		440		555								

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Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L11	IOC	SFU Tap	OVERHEAD	75		400		510				1200 CT				
60L12	SFY	MIS Tap	OVERHEAD	90	125	731	906	880	1018			1200 CT				
60L12	(202.3m)*		OVERHEAD			730		940								*SHOWS HOW MUCH CONDUCTOR (IN METRES) FROM SFY OUT. (90°C)
60L12	CBN	MIS Tap	OVERHEAD	90		1151		1393				1457 IR				
60L12	MIS	MIS Tap	OVERHEAD	90		1151		1393				1000 CT				
60L13	ALU	SFY	OVERHEAD	75		245		325				200 CT				
60L13	(314.2m)*		OVERHEAD			830		1010								*SHOWS HOW MUCH CONDUCTOR (IN METRES) FROM SFY OUT. (90°C)
60L14	SVD	Str 08-09	OVERHEAD	90		1151		1393								
60L14	Str 08-09	MIS Tap	OVERHEAD	90	125	731	906	880	1018							
60L14	MIS	MIS Tap	OVERHEAD	90		1151		1393				1000 CT				
60L14	CBN	MIS Tap	OVERHEAD	90		1151		1393								
60L15	RUS	SFY	OVERHEAD	90		660		790				1200 CT				
60L15	(431.8m)*		OVERHEAD			830		1010								*SHOWS HOW MUCH CONDUCTOR (IN METRES) FROM SFY OUT. (90°C)
60L16	LB1	LB2	OVERHEAD	75		400		510				300 CT				
60L17	BND	PFD Tap	OVERHEAD	75	110	580	770	740	880			1200 CT				
60L17	COK	PFD Tap	OVERHEAD	125	130	830	1050	1020	1205			2000 CT				
60L17	IFM	PFD Tap	OVERHEAD	90	105	710	790	850	910							

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Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L17	IFM	NRG	OVERHEAD	60	90	490	680	700	830							
60L17	NRG	PFD	OVERHEAD	60	70	490		700	750							
60L17	PFD	GSP	OVERHEAD			610	875	780	980							
60L17	GSP	Str 11/19	OVERHEAD			440		555								
60L17	Str 11/19	Str 14/12	CABLE	90		808		855								
60L17	Str 14/12	NWR	OVERHEAD			610	870	780	980			1024 IR				
60L18	COK	CQM	OVERHEAD	75	110	580	770	740	880			2000 CT				
60L18	CQM	ESC	OVERHEAD	75	110	580	770	740	880							
60L18	ESC	MRG	OVERHEAD	85		420		515								
60L18	MRG	HNY Tap	OVERHEAD	75	110	400	530	510	600							
60L18	HNY Tap	HNY	OVERHEAD			669	875	707	930			1000 CT			CABLE 200 HRS OVERLOAD	
60L19	SFY	HNY Tap	OVERHEAD	90		732		875		952		1000 CT				
60L19	HNY Tap	HNY	CABLE			669	875	707	930						CABLE 200 HRS OVERLOAD	
60L20	SON	PAV Tap	OVERHEAD			400		525		567		600 CT	1200			
60L20	PAV Tap	PAV	OVERHEAD			114				202					15A fuse	
60L20	PAV Tap	Str.46/6	OVERHEAD			400		525		567			1200		60L20 - 60L29 Bypass located outside CRQ fence staring at Str. 46/4 60L20 - 60L301 Bypass is tapped at the same location	

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Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L20 Overall	SON	CRQ	OVERHEAD			400		525		567		400 CT				
60L21	SON	WDN Tap	OVERHEAD			493		590		627		600 CT	1200			
60L21	WDN	WDN Tap	OVERHEAD			616		691		717					Ambient > 30°C to be expected	
60L21	WDN Tap	BR1	OVERHEAD			493		590		627		800 CT			Ambient > 30°C to be expected	
60L21 Overall	SON	BR1	OVERHEAD			493		590		627					Ambient > 30°C to be expected	
60L22	LAJ	TXL Tap	OVERHEAD	50		380		640		708		554 IR				
60L22	TXL Tap	TXL	OVERHEAD	50		380		640		708					- 600kva transformer 2 phase 25A fuses on disconnect	
60L22	TXL Tap	BRT	OVERHEAD	50		380		640		708						
60L22 Overall	LAJ	BRT	OVERHEAD	50		380		640		708		554 IR				
60L23	SFY	HNY Tap	OVERHEAD	75	100	580	770	740	880			1000 IR				
60L23	(359.2m)*		OVERHEAD			730		940							*SHOWS HOW MUCH CONDUCTOR (IN METRES) FROM SFY OUT.	
60L23	HNY Tap	HNY	OVERHEAD			669	875	707	930						CABLE 200 HRS OVERLOAD	
60L26	COK	BND	OVERHEAD	75	125	580	830	740	930			1200 CT				
60L27	KI1	GDK	CABLE			710	890	755	950			1200 CT				
60L29	60L20 Str. 46/4	CCW Tap	OVERHEAD			427				604					60L20 - 60L29 Bypass located outside CRQ fence	
60L29	CCW Tap	CCW	OVERHEAD	90		493				627						
60L29	CCW Tap	AFT Tap	OVERHEAD	75		427				604						

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Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L29	AFT Tap	AFT	OVERHEAD	90		493				627		200 CT				
60L29	AFT Tap	SBR	OVERHEAD	75		427				604						
60L30	GDK	K11	CABLE			670	760	715	805			1200 CT				
60L31	ING	AWT Tap	OVERHEAD			810	905	940	1020			2000 CT	800			
60L31	AWT Tap	AWT	OVERHEAD			505		605					1200		60D8L31	
60L31	AWT Tap	ANN Tap	OVERHEAD			810	905	940	1020				1200		60D1L31	
60L31	ANN Tap	ANN	OVERHEAD			810	905	940	1020			1200 CT	800			
60L31	ANN Tap	DVM Tap	OVERHEAD			810	905	940	1020							
60L31	DVM Tap	DVM	OVERHEAD			810	905	940	1020				600		DVM 60D1	
60L31	DVM Tap	QBS Tap	OVERHEAD			490		515								
60L31	QBS Tap	QBS	OVERHEAD			661	756	812	885	870	936		1200		60D4L31	
60L31	QBS Tap	TII	OVERHEAD			490		515								
60L32	K11	WCF Tap	OVERHEAD	75	125	750	1080	965	1200			2000 CT				
60L32	WCF Tap	Str 09/04A	CABLE			642	728	692	782						CABLE	
60L32	Str 09/04A	BBS	OVERHEAD	75	125	750	1080	965	1200			1000 CT				
60L32	NAC Tap	SEE	CABLE			460	530	485	560						BASED ON 265 AMPS PRELOADING	
60L32	#3 SW	ANN	OVERHEAD	75	90	490		515				1200 CT				

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	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L32	#3 SW	BBS	OVERHEAD	75	125	440	620	555								
60L33	SEA	YVR	OVERHEAD	75		750		960								
60L35	BND	NEL	OVERHEAD	75	90	750	870	960	1050			1200 CT				
60L35	NWR	NWR Tap	OVERHEAD	90		845		1020					1200			
60L36	BND	NEL	OVERHEAD	117	135	630	870	810	1050			2000 CT				
60L37	KI2	KI1	OVERHEAD	90		870		1050				1500 CT				
60L38	KI2	KI1	OVERHEAD	90		870		1050				1500 CT				
60L39	HPN	LOH	OVERHEAD	75	125	750	1080	965	1220			600 CT				
60L39	LOH	BMP Tap	OVERHEAD	75	125	750	1080	965	1220							
60L39	BMP	BMP Tap	OVERHEAD	75	125	440	620	555	700							
60L39	BND	BMP Tap	OVERHEAD	75	125	730	1050	940	1180			1200 CT				
60L40	HPN	LOH	OVERHEAD	75	125	750	1080	965	1220							
60L40	BND	LOH	OVERHEAD	75	125	730	1050	940	1185			600 CT	800			
60L41	KI1	RSR	CABLE			170		170				2000 CT			CABLE	
60L42	KI2	LF1	OVERHEAD	75		440		555				1500 CT	600			
60L43	KI2	SEA Tap	OVERHEAD	75		1165		1505				1500 CT				
60L43	RIM	SEA Tap	OVERHEAD	75		750		965								

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Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L43	SEA	SEA Tap	CABLE			605		660							CABLE	
60L44	KI2	SEA Tap	OVERHEAD	75		1160		1505				1500 CT				
60L44	RIM	SEA Tap	OVERHEAD	75		750		965								
60L44	SEA	SEA Tap	CABLE			605		660							CABLE	
60L45	KI2	KI1	OVERHEAD	90		870		1050				1500 CT				
60L46	KI2	KI1	OVERHEAD	90		870		1050				1500 CT				
60L47	ALZ	TMO Tap	OVERHEAD	75		900		1190				1200 CT				
60L47	TMO Tap	TMO	OVERHEAD	75		440		555								
60L47	TMO Tap	SMW	OVERHEAD	75		730		940								
60L47	SMW	ABT	OVERHEAD	75		730		940								
60L48	ALZ	TMO Tap	OVERHEAD	75		900		1190				1200 CT				
60L48	TMO Tap	SMW	OVERHEAD	75		750		960								
60L48	ABT	SMW	OVERHEAD	75		750		960								
60L50	MUR	DGR	OVERHEAD			450		480				800 O/C			REFER TO 5T-09	
60L51	MUR	DGR	OVERHEAD			450		480				800 O/C			REFER TO 5T-09	
60L52	MUR	DGR	CABLE			450		480				800 O/C			REFER TO 5T-09	
60L53	MUR	DGR	CABLE			450		480				800 O/C			REFER TO 5T-09	

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	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L54	BND	SFU Tap	OVERHEAD	75		400		510				1200 CT	800			
60L54	SFU	SFU Tap	OVERHEAD	90		500		600								
60L54	PCP	SFU Tap	OVERHEAD			440		555				1200 CT				
60L55	LAJ	JME	OVERHEAD	100		519		592		629		400 CT			Customer owned circuit NORM 40C rating = 482 A	
60L56	CSN	UNY	CABLE	75		590		610							CABLE	
60L57	CSN	UNY POTHEAD	OVERHEAD	90		845		1010		1070					Overhead section	
60L57	UNY POTHEAD	UNY	CABLE	75		463 (568)		490 (601)		490 (601)					Ratings in bracket are for the case where 60L56 is OOS.	
60L57	UNS Tap	UNS	OVERHEAD	75		440		555								
60L58	ARN	TSW Tap	OVERHEAD	75		730		940				1200 CT				
60L58	TSW	TSW Tap	OVERHEAD	75		730		940								
60L58	DPT Tap	TSW Tap	OVERHEAD	75		730		940								
60L58	DPT Tap	WTL Tap	OVERHEAD	75		730		940								
60L58	WTL	WTL Tap	OVERHEAD	75		730		940								
60L58	DPT	WTL Tap	CABLE			590		610							CABLE	
60L59	ARN	ARN Tap	OVERHEAD	75		1160		1505				1200 CT				
60L59	ARN Tap	TSW Tap	OVERHEAD	75		730		940								
60L59	TSW	TSW Tap	OVERHEAD	75		730		940								

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L59	DPT Tap	TSW Tap	OVERHEAD	75		730		940								
60L59	ARN Tap	CAN Tap	OVERHEAD	90		845		1010		1070						
60L59	CAN Tap	CAN	OVERHEAD	75		440		555								
60L59	CAN Tap	TLB Tap	OVERHEAD	90		845		1010		1070						
60L59	TLB Tap	TLB	OVERHEAD	90		845		1010		1070						
60L59	TLB Tap	LNH Tap	OVERHEAD	75		730		940								
60L59	LNH Tap	LNH	OVERHEAD	75		440		555								
60L59	LNH Tap	BCI	OVERHEAD	75		440		555								
60L60	NEL	NWR	OVERHEAD	90	125	730	905	879	1020			2000 CT	1200		NWR 60D23 DS Limit	
60L60	NWR Tap 60L60	NWR Tap 60L17	OVERHEAD			610	870	780	980				1200		NWR 60D23 DS Limit	
60L61	WLT	BRB Tap	OVERHEAD	90	125	847	1051	1020	1182			2000 CT	1200		WLT 60D24 DS Limit	
60L61	NVR	BRB Tap	OVERHEAD	90	125	847	1051	1020	1182			1200 CT	800		NVR 60D23 DS Limit	
60L62	NVR	SWP Tap	OVERHEAD	90	125	847	1051	1020	1182			1200 CT	800		NVR 60D21 DS Limit	
60L62	SWP	SWP Tap	OVERHEAD	75		730		940								
60L62	SWP Tap	LCS Tap	OVERHEAD	90	125	847	1051	1020	1182							
60L62	LCS Tap	LCS	OVERHEAD	90		492		601		635			1200			
60L62	LCS Tap	WLT	OVERHEAD	90	125	847	1051	1020	1182			2000 CT	1200			

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L63	NVR	JRI Tap	OVERHEAD	90	125	870	1080	1050	1220			1200 CT				
60L63	JRI Tap	JRI	OVERHEAD	90		500		590		630			1200 (T-Line switch)			
60L63	JRI Tap	VDK Tap	OVERHEAD	90	125	870	1080	1050	1220							
60L63	VDK Tap	VSD Tap	OVERHEAD	90	125	870	1080	1050	1220							
60L63	VSD Tap	NOR	OVERHEAD	90	125	870	1080	1050	1220			1200 CT	2000			
60L64	WLT	CAP	OVERHEAD	75		777		965				1200 CT	1200			
60L65	CYP	HCT Tap	OVERHEAD	75		1100		1505				2000 CT	1200			
60L65	HCT Tap	JLN	OVERHEAD	75		730		940	1090			1200 CT	1200			
60L66	GLR	CPS Tap	OVERHEAD	75		730		940				1200 CT	800			
60L66	CPS Tap	CPS	CABLE			540		570					1200			
60L66	CPS Tap	CAP	OVERHEAD	75		730		940				1200 CT	800			
60L67	NEL	SCP	OVERHEAD	90		730		879				2000 CT				
60L67	SCP	RO2	OVERHEAD	90		845		1021				1200 CT				
60L68	CKY	UMH Tap	OVERHEAD	90		845		1021				1045 IR			CONDUCTOR RATING @ 500' ELEVATION	
60L68	UMH Tap	00-03 UMH	OVERHEAD	90		845		1021					1200		60D1L68 on UMH Tap 60L68_60L70TD Between UMH and MAM Taps	
60L68	UMH Tap	SQH	OVERHEAD	75		440		555				800 CT				
60L69	HSB	LBY	OVERHEAD	90		500		600				600 CT				

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L69	LBY	PTO	OVERHEAD	90		500		600								
60L69	PTO	FRI Tap	OVERHEAD	90		500		600					1200			
60L69	FRI	FRI Tap	OVERHEAD	50		267		450					1200			
60L69	FRC	FRI Tap	OVERHEAD	90		500		600								
60L69	BTA Tap	FRC Tap	OVERHEAD	90		845		1020								
60L69	BTA	BTA Tap	OVERHEAD	90		425		510								
60L69	SQH	BTA Tap	OVERHEAD	90		845		1020				800 CT	800			
60L70	CKY	MAM Tap	OVERHEAD	75		730		940				1200 CT				
60L70	MAM Tap	00-03 MAM	OVERHEAD	90		883		1027		1085			1200		60D1L70 on MAM Tap 60L68_60L70TD Between UHM and MAM Taps	
60L70	MAM Tap	SQH	OVERHEAD	75		440		555				739 IR				
60L70	00-03 MAM	MAM	OVERHEAD	50		433		744		829		600 CT				
60L71	ING	AWT Tap	OVERHEAD			810	905	940	1020			2000 CT	800			
60L71	AWT Tap	AWT	OVERHEAD			500		600					1200		60D2L71	
60L71	AWT Tap	ANN Tap	OVERHEAD			810	905	940	1020							
60L71	ANN Tap	ANN	OVERHEAD			810	905	940	1020			1200 CT	800			
60L71	ANN Tap	QBS Tap	OVERHEAD			810	905	940	1020							
60L71	QBS Tap	QBS	OVERHEAD			755	834	885	949	936	994		1200		60D3L71	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L71	QBS	SEE Tap	OVERHEAD			810	905	940	1020							
60L71	SEE Tap	SEE	CABLE			460	530	485	560							
60L73	ING	SRY Tap	OVERHEAD	90	125	1050	1320	1300	1510			2000 CT				
60L73	SRY	SRY Tap	OVERHEAD	75		215		290								
60L73	SRY Tap	WRK Tap	CABLE	90		910		960				1200 CT				
60L73	WRK Tap	60RJ1L73	OVERHEAD	90	125	800		1018	1180						WRK tap to 60D1L73	
60L73	WRK Tap	WRK	OVERHEAD	90	125	800		1018	1180							
60L74	ING	SRY Tap	OVERHEAD	90	125	1050	1320	1300	1510			2000 CT				
60L74	SRY	SRY Tap	OVERHEAD	75		215		290								
60L74	SRY Tap	NKL	OVERHEAD			845	1050	1020	1180				1200		O/L 300 HRS MAX	
60L74	NKL	NKL Tap	OVERHEAD	90	125	800		1018	1180			1638 IR				
60L75	CVN	Str 0/0	CABLE			675	965	750	1050			800 CT	1200		200 hour emergency rating	
60L75	Str 0/0	SHL	OVERHEAD			440		555				800 CT	1200			
60L76	HPN	CVN	OVERHEAD			400		510				800 CT				
60L77	NWR	RO2	OVERHEAD	75	125	730	1050	940	1185			1200 CT				
60L79	ING	SCT Tap	OVERHEAD	75	125	1070	1335	1295	1505			2000 CT				
60L79	SCT	SCT Tap	OVERHEAD	75		630		810								

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Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L79	PKL	SCT Tap	OVERHEAD	90	125	730	905	880	1020							
60L80	ING	SCT Tap	OVERHEAD	90	125	1070	1335	1295	1505			2000 CT				
60L80	SCT	SCT Tap	OVERHEAD	75		630		810								
60L80	PKL	SCT Tap	OVERHEAD	90	125	730	905	880	1020							
60L82	RUS	Str 08-07	OVERHEAD	90	125	731	906	880	1018							
60L82	Str 08-07	SVD	OVERHEAD	90		1151		1393				1200 CT				
60L83	KTG	SNY	OVERHEAD	88		635		815				600 CT				
60L85	KI1	Str 02/19	OVERHEAD	75	125	750	1080	965	1200			2000 CT				
60L85	Str 02/19	Str 03/01	CABLE	75		749	873	820	953						Cable	
60L85	Str 03/01	Str 09/4A	OVERHEAD	75	125	750	1080	965	1200							
60L85	Str 09/4A	BBS	OVERHEAD	75	125	750	1080	965	1200			1000 CT				
60L87	KTG	SNY	OVERHEAD	90		645		820				600 CT		1600		
60L89	CYP	HSB	OVERHEAD	75		370		470				800 CT				
60L90	WLT	DCV Tap	OVERHEAD			1355		1645				2000 CT	2000			
60L90	DCV	DCV Tap	CABLE			605		670					1200		CABLE	
60L90	NXC Tap	DCV Tap	OVERHEAD	90		1070		1295								
60L90	NXC	NXC Tap	OVERHEAD	90		870		1050								

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L90	ERW	NXC Tap	OVERHEAD	90		1070		1295								
60L91	WLT	NXC	OVERHEAD	90		849		1015		1073		2000 CT	1200			
60L92	WLT	Str 00/04	OVERHEAD			1380	1726	1654	1926	1747	1999	480 O/C	2000		Conductor changed to Columbine to accommodate temporary bypass to 60L90	
60L92	Str 00/04	DCV	OVERHEAD			730		940				480 O/C	800			
60L93	ALZ	WAH Tap	OVERHEAD	75		730		940				660 IR				
60L93	CHK	WAH Tap	OVERHEAD	75		730		940				600 CT				
60L93	WAH Tap	KEN Tap	OVERHEAD	75		610		780								
60L93	KEN	KEN Tap	OVERHEAD	75		440		555								
60L93	WAH	KEN Tap	OVERHEAD	75		610		780				589 IR				
60L94	ALZ	CHK	OVERHEAD	75		730		940				600 CT				
60L95	WAH	HOP	OVERHEAD	75		730		940				589 IR				
60L97	NOR	JLN	OVERHEAD	75		750		960				1200 CT	800			
60L98	CKY	Str. 12-06 (CTN)	OVERHEAD	90		500		600				1200 CT			Approach circuit to Culliton Creek IPP up to Structure 12-06 (CTN-1)	
60L99	CYP	HCT Tap	OVERHEAD	75		1120		1440				2000 CT	1200			
60L99	HCT Tap	GLR	OVERHEAD	75		730		940				1200 CT	800			
60L99	HCT Tap	HCT	OVERHEAD	75		730		940								
60L100	MLN	NKL Tap	OVERHEAD	75*		1153		1383		1461		2000 CT				

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Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L100	NKL Tap	60RJ1L73	OVERHEAD	90		1030									NKL tap to 60D1L73	
60L100	NKL	NKL Tap	CABLE	90		910		960				1749 IR				
60L101	CVN	PLR	CABLE			406	406			482	482	300 CT	1200			
60L102	CVN	PLR	CABLE			406	406			482	482	300 CT	1200			
60L107	WRK Tap	NKL Tap	OVERHEAD	90	125	800		1018	1180			1200 CT				
60L107	WRK Tap	WRK	OVERHEAD	90	125	800		1018	1180							
60L128	PVO	LCW	OVERHEAD	90		331		383		405		208 O/C				
60L129	LBH	WCH Tap	OVERHEAD	50		505		601		635		522 IR		1200		
60L129	WCH Tap	WCH	OVERHEAD	90		540				648					60D6L129 and 60WT1L129 rated at 1200A	
60L129	WCH Tap	GCL	OVERHEAD	50		505		601		635		500 CT		1200		
60L205	VNT	WDS	OVERHEAD	70		242				331		67 O/C				
60L208	VNT	WWD	OVERHEAD	50		230				420		400 CT				
60L208	WWD	MTE	OVERHEAD	50		230				420						
60L209	SAM	FCO Tap	OVERHEAD	70		239				384		800 CT				
60L209	FCO Tap	FCO	OVERHEAD	50											Customer Owned; -50A Fuse	
60L209	FCO Tap	SCM	OVERHEAD	70		259				363						
60L210	MON	NDR Tap	OVERHEAD	50		175				312		407 IR				

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L210	NDR Tap	NDR	OVERHEAD	50		175				312						
60L210	NDR Tap	NAK	OVERHEAD	50		175				312						
60L218	ILL	WHN	OVERHEAD	90		828				1060		600 CT				
60L219	WHN	PIN	OVERHEAD	90		828				1060		600 CT				
60L223	MCA	MCK Tap	OVERHEAD	90		490				627		67 O/C				
60L223	MCK Tap	GSM	OVERHEAD	90		490				627						
60L225/13L	KCL	SLC	OVERHEAD	90		2093		2547		2690		2000 CT			Fortis L13 Limit = TFR O/L @ KCL @ 168 MVA (1400A) Ambient >30°C to be expected	
60L227/12L	KCL	SLC	OVERHEAD	90		2093		2547		2690		2000 CT			WKP L12 Limit = TFR O/L @ KCL @ 168 MVA (1400A) Ambient >30°C to be expected	
60L270	KBY	SKU Tap	OVERHEAD	70		349		455		490		600 CT				
60L270	SKU Tap	SKU	OVERHEAD	50		231		380		424						
60L270	SKU	CRS	OVERHEAD	90		367		440		465						
60L270	SKU Tap	CRC Tap	OVERHEAD	70		349		455		490						
60L270	CRC Tap	CRC	OVERHEAD	50		231		380		424						
60L270	CRC Tap	CNL Tap	OVERHEAD	70		349		455		490						
60L270	CNL Tap	CNL	OVERHEAD	90		490		590		627						
60L270	CNL Tap	FMT Tap	OVERHEAD	70		349		455		490						
60L270	FMT Tap	FMT	OVERHEAD	90		425		511		540						

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Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L270	FMT Tap	INV Tap	OVERHEAD	70		403		528		570						
60L270	60L271 tie point	60L271	OVERHEAD	90		828		1003		1060					Tie located in Invermere STA. 1200A DS	
60L270	INV Tap	ATH Tap	OVERHEAD	90		828		1003		1060						
60L270	ATH Tap	ATH	OVERHEAD	90		828		1003		1060						
60L270	ATH Tap	INV	OVERHEAD	90		828		1003		1060		603 IR				
60L270 Overall	KBY	INV	OVERHEAD	70		349		453		490						
60L271	INV	ATH Tap	OVERHEAD			629				957		800 CT				
60L271	ATH Tap	ATH	OVERHEAD			433				829						
60L271	ATH Tap	60L270 tie point	OVERHEAD			629				957						
60L271	60L270 tie point	RDM Tap	OVERHEAD			401				567			1200		60D2L271	
60L271	RDM Tap	RDM	OVERHEAD			265				492						
60L271	RDM Tap	SPN Tap	OVERHEAD			401				567			1200		60D3L271	
60L271	SPN Tap	SPN	OVERHEAD			265				492						
60L271	SPN Tap	PSN Tap	OVERHEAD			401				567						
60L271	PSN Tap	PSN	OVERHEAD			265				492						
60L271	PSN Tap	GDN	OVERHEAD			401				567		316 IR				
60L272	KHS	GDN	OVERHEAD	90		730		879		925		800 CT	1200			

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Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L281	NTL	SPD Tap	OVERHEAD	50		435				822		1143 IR				
60L281	SPD Tap	SPD	OVERHEAD	50		435				822						
60L281	SPD Tap	Str 18/07	OVERHEAD	50		435				822						
60L281	Str 18/07	FNE	OVERHEAD	50		435				822		1200 CT			* Terminates at FNE 60D21	
60L282	Str 18/06	FNE	OVERHEAD	75		427				583		1200 CT			* Terminates at FNE 60D22	
60L282	Str 17/11	Str 18/06	OVERHEAD	75		427				583						
60L282	Str 16/11	Str 17/11	OVERHEAD	75		324				433						
60L282	Str 0/16	Str 16/11	OVERHEAD	75		293				395						
60L282	ELK	Str 0/16	OVERHEAD	75		324				433						
60L283	CBK	Str. 7/20	OVERHEAD	50		435				822		1187 IR				
60L283	Str. 7/20	MVL Tap	OVERHEAD	50		435				822						
60L283	MVL Tap	MVL	OVERHEAD	50		435				822						
60L283	MVL Tap	KBY	OVERHEAD	50		435				822		600 CT				
60L284	CBK	SPL Tap	OVERHEAD	50		545				1041		800 CT				
60L284	MYE Tap	MYE	OVERHEAD	50		141				248						
60L285	NTL	SPD	OVERHEAD	50		435				822		800 CT				
60L287	ELK	CFE	OVERHEAD	50		175				312		100 O/C				

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Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L288	Str 0/4	EV1	OVERHEAD	75	75	336	336			438	438					
60L288	Str 0/4	NTL	OVERHEAD	90	90	340	340	403	403	426	426	800 CT				
60L289	CBK	BRM Tap	OVERHEAD	50		265				488		1200 CT				
60L289	BRM Tap	ABN Tap	OVERHEAD	50		265				488						
60L289	ABN	ABN Tap	OVERHEAD	50		265				488		800 CT				
60L290	ELK	WIN	OVERHEAD	50		150				270		600 CT				
60L292	NTL	CMO Tap	OVERHEAD	50		265				488		800 CT				
60L292	CMO Tap	CMO	OVERHEAD	50		265				488						
60L292	CMO Tap	CNT Tap	OVERHEAD	50		115				201						
60L292	CNT Tap	CNT	OVERHEAD	50		115				201						
60L292	CNT Tap	CRW	OVERHEAD													
60L294	ABN Tap	WIN Tap	OVERHEAD	50		265				488						
60L294	WIN Tap	ELK	OVERHEAD	50		265				488		600 CT				
60L295	SPL	SPL Tap	OVERHEAD	50		545				1041		791 IR				
60L295	SPL Tap	JOE	OVERHEAD			545				822		794 IR	600			
60L298	JOE	KBY	OVERHEAD	50		435				822		600 CT				
60L299	CBK	JOE	OVERHEAD	50		545				1041		800 CT				

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Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L300	SCK	MTP Tap	OVERHEAD	90		850		970		1020		1094 IR				
60L300	MTP Tap	GVL Tap	OVERHEAD	90		850				1020						
60L300	GVL	GVL Tap	OVERHEAD	90		493				625						
60L300	MTP	GVL Tap	OVERHEAD	90		850				1020			1200			
60L300	MTP Tap	MGT Tap	OVERHEAD	90		848		1016		1073						
60L300	MGT	MGT Tap	OVERHEAD	50		230				380						
60L300	GBW Tap	MGT Tap	OVERHEAD	90		848		1016		1073						
60L300	GBW	GBW Tap	OVERHEAD	50		450				760						
60L300	GBW Tap	WQL Tap	OVERHEAD	50		230				380						
60L300	WQL	WQL Tap	OVERHEAD	50		280				450						
60L300	BLW Tap(306)	WQL Tap	OVERHEAD	50		230				380						
60L301	HMH	AIN Tap	OVERHEAD	50		265		441				516 IR				
60L301	AIN Tap	AIN	OVERHEAD	90		317		379		401					BCH Portion only.	
60L301	AIN Tap	SMH Tap	OVERHEAD	50		265		441		492					Ambient > 30°C to be expected	
60L301	SMH Tap	SMH	OVERHEAD	50		265		441		492						
60L301	SMH Tap	CLN Tap	OVERHEAD	50		265		441		492					Ambient > 30°C to be expected	
60L301	CLN Tap	CLN	OVERHEAD	50		265		441		492					Ambient > 30°C to be expected	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L301	CLN Tap	60L20 Str. 46/4	OVERHEAD			265		441		492					60L20 - 60L301 Bypass located outside CRQ fence	
60L301 Overall	HMH	CRQ	OVERHEAD	50		265		441		492		400 CT			Ambient > 30°C to be expected	
60L302	SCK	TWT	OVERHEAD	50		450				760		1200 CT				
60L302	WWL	TWT	OVERHEAD	50		450				760						
60L302	WLM	WWL	OVERHEAD	50		450				760		600 CT	600			
60L303	BLW	WPN Tap	OVERHEAD	90		850				1020		1200 CT				
60L303	WPN Tap	SSQ Tap	OVERHEAD	90		500				600						
60L303	SSQ	SSQ Tap	OVERHEAD	90		500				600						
60L303	WPN	SSQ Tap	OVERHEAD	90		500				600						
60L303	CBP Tap	WPN Tap	OVERHEAD	70		675				960						
60L303	CBP Tap	WWQ Tap	OVERHEAD	90		850				1020						
60L303	WWQ	WWQ Tap	OVERHEAD	90		500				600						
60L303	CBP	WWQ Tap	OVERHEAD	90		850				1020						
60L303	CBP Tap	QNL	OVERHEAD	60		580				830		400 CT	600			
60L306	BLW	BLW Tap	OVERHEAD	90		850				1020		582 IR				
60L306	QNL River Crossing		OVERHEAD	90						1044						
60L306	BLW Tap	WFQ Tap	OVERHEAD	90		850				1020			600			

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L306	WFQ	WFQ Tap	OVERHEAD	90		493				625						
60L306	QNL	WFQ Tap	OVERHEAD	90		850				1020		367 IR				
60L308	SCK	WLM	OVERHEAD	50		460				780		533 O/C				
60L309	WLM	NWE	OVERHEAD	90		828		1003		1060		600 CT	600			
60L310	SCK	GBR	OVERHEAD	90		828				1060		2000 CT				
60L327	WSN	WSN Tap	OVERHEAD	50		450				760		691 IR				
60L327	BVY	WSN Tap	OVERHEAD	50		450				760		603 IR				
60L329	TAC	TAC Tap	OVERHEAD	90		828				1060		609 IR				
60L329	TAC Tap	NLV Tap	OVERHEAD	70		347				488			1200			
60L329	NLV	NLV Tap	OVERHEAD	90		493				625						
60L329	NLV Tap	VDF Tap	OVERHEAD	70		347				488						
60L329	VDF	VDF Tap	OVERHEAD	70		347				488						
60L329	VDF Tap	60L358 TIE D/S	OVERHEAD	70		401				567			600			
60L329	TAC Tap	PLT Tap	OVERHEAD	70		401				567						
60L329	PLT	PLT Tap	OVERHEAD	70		401				567						
60L329	PLT Tap	60L341 TIE D/S	OVERHEAD	70		401				567			1200			
60L330	WSN	PVW	OVERHEAD	50		450				760		667 O/C				

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L331	WSN	PCA-PGG	OVERHEAD	90		850				1020		800 O/C			PGG de-commissioned (no load)	
60L331	PCA	PCA-PGG	OVERHEAD	90		850				1020		1200 CT	800		PGG de-commissioned (no load)	
60L331	PCA-PGG	PGG	OVERHEAD	90		500				600					PGG de-commissioned (no load)	
60L332	WSN	PVW	OVERHEAD	90		850				1020		800 O/C				
60L332	NOS	PVW	OVERHEAD	90		850				1020						
60L332	PCA	NOS	OVERHEAD	90		850				1020		1200 CT	800			
60L336	WSN	BCM Tap	OVERHEAD		128	850	1045			1020	1175	1200 CT	1200		CDR O/L LIMIT @ 128 C - 300 hrs	
60L336	BCM	BCM Tap	OVERHEAD		128	850	1045			1020	1175				CDR O/L LIMIT @ 128 C - 300 hrs	
60L336	FMC Tap	BCM Tap	OVERHEAD		128	850	1045			1020	1175		1200		CDR O/L LIMIT @ 128 C - 300 hrs	
60L336	FMC Tap	FMC	OVERHEAD	90		500				600						
60L336	FMC Tap	CRD	OVERHEAD		128	850	1045			1020	1175	1200 CT			CDR O/L LIMIT @ 128 C - 300 hrs	
60L337	WSN	WSN Tap	OVERHEAD	50		280				450		1200 CT	1200			
60L337	CNG	WSN Tap	OVERHEAD	50		280				450						
60L337	UFR	CNG	OVERHEAD	50		280				450						
60L338	WSN	BCM Tap	OVERHEAD		128	850	1045			1020	1175	1200 CT	1200		CDR O/L LIMIT @ 128 C - 300 hrs 60D4L338 Rating: 1200	
60L338	BCM	BCM Tap	OVERHEAD		128	850	1045			1020	1175				CDR O/L LIMIT @ 128 C - 300 hrs	
60L338	BCM Tap	HCR Tap	OVERHEAD		128	850	1045			1020	1175				CDR O/L LIMIT @ 128 C - 300 hrs	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L338	HCR	HCR Tap	OVERHEAD	90		493				625						
60L338	HCR Tap	FMC Tap	OVERHEAD		128	850	1045			1020	1175		1200		CDR O/L LIMIT @ 128 C - 300 hrs 60D1L338 Rating: · 936A at 30C ambient · 1088A at 10C ambient	
60L338	FMC	FMC Tap	OVERHEAD		128	500				600						
60L338	CRD	FMC Tap	OVERHEAD			850	1045			1020	1175	1200 CT	2000	1200	CDR O/L LIMIT @ 128 C - 300 hrs	
60L339	BLW	DKY	OVERHEAD	50		280				450		107 O/C				
60L339	CLB	DKY	OVERHEAD	50		310				500						
60L339	CLB	WSN Tap	OVERHEAD	50		310				500						
60L340	CRD	NWP	OVERHEAD	90		830				1010		1200 CT			CDR RATING @ 90 C	
60L341	FSR	GLN	OVERHEAD	50		280				450		662 IR				
60L341	FSR	FSS	OVERHEAD	50		280				450						
60L341	PLT	FSS	OVERHEAD	50		280				450						
60L342	PGP	CRD	OVERHEAD									267 O/C				
60L343	PGP	CRD	OVERHEAD	90		635				810		1200 CT				
60L344	TAC	VDF-TAC	OVERHEAD	90		828				1060		725 IR				
60L344	VDF-TAC	FM2	OVERHEAD	57		280				447		400 CT				
60L345	HSK	CRD	OVERHEAD	90		493				625		107 O/C				

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L346	ICP	CRD	OVERHEAD									800 CT				
60L347	ICP	CRD	OVERHEAD									800 CT				
60L348	BCC	CRD	OVERHEAD									267 O/C				
60L351	WSN	Str. 00/01	OVERHEAD			1085	1226	1301	1412	1385	1487	1030 IR	1200			
60L351	Str. 00/01	PGI	OVERHEAD			820	934	1008	1096	1071	1152	1200 CT	1200			
60L351	Str. 00/01	BVY	OVERHEAD			450				760		1031 IR	1200			
60L352	GLN	EKO	OVERHEAD	90		725				925		1200 CT				
60L354	BVY	FHS Tap	OVERHEAD	50		450				760		1200 CT				
60L354	FHS	FHS Tap	OVERHEAD	50		450				760						
60L354	CHF	FHS Tap	OVERHEAD	50		450				760						
60L357	BVY	FHS Tap	OVERHEAD	90		828				1060		2000 CT				
60L357	PCA	PCA Tap	OVERHEAD	127		1050				1190		1200 CT	800			
60L357	FHS	PCA Tap	OVERHEAD	127		1050				1190						
60L358	BVY	IPR	OVERHEAD	50		280				450		621 IR				
60L358	VDF	IPR	OVERHEAD	50		280				450						
60L359	TFP	FM2	OVERHEAD	61		360				535		400 CT				
60L383	SKA	TER	OVERHEAD	50		450				760		526 IR	800			

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Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L383	TER	TSC	OVERHEAD	50		280				450			800			
60L383	KAL	TSC	OVERHEAD	50		280				450			800			
60L390	RUP	DIL	OVERHEAD	50		230				380		80 O/C (dir)		800		
60L390	DIL	GRR	OVERHEAD	50		230				380						
60L390	GRR	BRL Tap	OVERHEAD	50		230				380						
60L390	BRL	BRL Tap	OVERHEAD	50		340				340						
60L390	FLS	BRL Tap	OVERHEAD	50		230				380			800			
60L391	RUP	OFD	OVERHEAD	49		430				745		600 CT				
60L392	RUP	PED Tap	OVERHEAD	50		450				760		1200 CT				
60L392	PED	PED Tap	OVERHEAD	50		450				760						
60L392	PRG	PRG Tap	OVERHEAD			880	1000			1085	1175		1200			
60L392	SKL Tap	PED Tap	OVERHEAD			450				760			1200			
60L392	SKL	SKL Tap	OVERHEAD	50		460				780			1200			
60L392	PRG Tap	SKL Tap	OVERHEAD	50		450				760			800			
60L392	RTI	PRG Tap	OVERHEAD	50		450				760			800			
60L393	RUP	OFD	OVERHEAD	49		430				745		600 CT				
60L394	SKA	KAL	OVERHEAD	50		390				650		587 O/C				

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
60L395	RUP	RPG	OVERHEAD	80		754		949		1010		1200 CT				
1L10	VIT	KSH Tap	OVERHEAD			668	730	785	838	830	878	1200 CT	1600		30 minute emergency rating	
1L10	KSH Tap	SHA Tap	OVERHEAD			668	730	785	838	830	878				30 minute emergency rating	
1L10	SHA Tap	GOW	OVERHEAD			568	655	699	769	751	816	800 CT	1200		30 minute emergency rating	
1L11	VIT	KSH Tap	OVERHEAD			664	734	785	842	830	882	1110 IR	1600		30 min emergency rating for conductor	
1L11	KSH Tap	KSH	OVERHEAD	90		725				925						
1L11	GOW	KSH Tap	OVERHEAD			544	633	695	763	748	809	800 CT	1200		30 min emergency rating for conductor	
1L12	GOW	GTP	OVERHEAD			731	787	875	918	924	964	800 CT	800		30 minute emergency rating	
1L14	VIT	KSH Tap	OVERHEAD			736	819	874	939	925	985	2000 CT	1600		30 minute emergency rating for line only	
1L14	KSH Tap	KSH	OVERHEAD	88		725				925						
1L14	KSH Tap	SHA Tap	OVERHEAD			736	819	874	939	925	985				30 minute emergency rating for line only	
1L14	SHA Tap	SHA	OVERHEAD	90		725				925			600			
1L14	SHA Tap	GTP	OVERHEAD			731	787	874	918	924	964	1200 CT	1200		30 minute emergency rating for line only	
1L18	ARN	EBT	OVERHEAD	50		375		642		714		1085 IR @ ARN	600			
1L18	EBT	TBY	OVERHEAD			460		530		530						
1L18	TBY	GLS Tap	OVERHEAD	50		375		642		714						

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L18	GLS Tap	GLS	OVERHEAD	90		713		684		912						
1L18	GLS Tap	MTG	OVERHEAD	50		375		642		714						
1L18	MTG	MBO	OVERHEAD			460		530		530						
1L18	MBO	SAL Tap	OVERHEAD	50		375		642		714						
1L18	SAL Tap	SAL	OVERHEAD	50		375		642		714						
1L18	SAL Tap	VIT	OVERHEAD	50		375		642		714		1200 CT	1200	800	1D12 at SAL rated 800A	
1L18 Overall	ARN	VIT	OVERHEAD	50		375		530		530					1L18 Overall: OH limit summer, UG winter	
1L31	CKY	WFR Tap	OVERHEAD			511	565	606	649	641	680	1600 CT	1200		30 minute emergency rating for conductors	
1L31	WFR Tap	BOX Tap	OVERHEAD			511	565	606	649	641	680		1200	1200	30 minute emergency rating for conductors	
1L31	BOX Tap	GIB	OVERHEAD			278	386	447	515	499	559	1600 CT	1200	1200	30 minute emergency rating for conductors	
1L31	BOX Tap	BOX	OVERHEAD	90		572				689						
1L32	SEC	GIB	OVERHEAD	90	105	484	532	582	620	582	620	800 CT	600	800	30 minute emergency rating	
1L33	SAY	GPT	OVERHEAD	90		504		601		635		1500 CT				
1L33	FWW	GPT	OVERHEAD	90		504		601		635						
1L33	POW	FWW	OVERHEAD	90		504		601		635			600			
1L35	MSA	PHR	OVERHEAD	90		490		590				800 CT	1200			

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Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L35	SEC	PHR	OVERHEAD	90		490		590				800 CT	1200	800		
1L35	MSA tie point	SEC tie point	OVERHEAD	90		493		594					1200		NEW TIE SWITCH	
1L37	MSA	AGAMEM. SOUTH	OVERHEAD	90		504		601		635		800 CT				
1L37	AGAMEM. SOUTH	AGAMEM. NORTH	OVERHEAD			10		10		10					AGAMEMNON CHANNEL Crossing Rating reduced to support charging current only. Study required to support load current.	
1L37	AGAMEM. NORTH	JERVIS SOUTH	OVERHEAD	90		504		601		635						
1L37	JERVIS SOUTH	JERVIS NORTH	OVERHEAD			10		10		10					JERVIS INLET Crossing Rating reduced to support charging current only. Study required to support load current.	
1L37	JERVIS NORTH	SAY	OVERHEAD	90		504		601		635		735 IR				
1L44	SEC	SCG Tap	OVERHEAD			504	542	601	630	635	662	800 CT	1200	800	30 minute emergency rating for line only	
1L44	SCG Tap	COM	OVERHEAD			513	568	608	652	643	683	400 CT	600	800	30 minute emergency rating for line only CT Limit at COM is Derived From (1L45 CT 400A + COM GS CT 400A) 600A DS rating is 1D1L44	
1L48	SAY	GPT Tap	OVERHEAD			1112	1204	1292	1358	1366	1427	3000 CT	1200	2000		
1L48	GPT Tap	FVW	OVERHEAD			803	857	913	959	962	1004		1200	1200		
1L48	FVW	Str. 55/07	OVERHEAD			803	857	913	959	962	1004		600	1200		
1L48	Str. 55/07	POW	OVERHEAD			631	747			811	896				Customer Owned	POW bus links
1L48	GPT Tap	GPT											800		1WT1L48	
1L55	HLD	HVC Tap	OVERHEAD	90		851	--			1091	--	1200 CT	800			
1L55	HVC Tap	HVC	OVERHEAD	90		851	--			1091	--					

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Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L55	HVC Tap	CCD Tap	OVERHEAD	49		254	--			488	--					
1L55	CCD Tap	CCD	OVERHEAD	90		493	--			627	--					
1L55	CCD Tap	LLD	OVERHEAD	49		254	--			488	--					
1L55	LLD	STL	OVERHEAD	49		254	--			488	--					
1L101	JHT	DMR	OVERHEAD	88		625				805		1041 IR	800			
1L101	CMX Tap	CMX	OVERHEAD	90		1065				1375						
1L101	OYR Tap	OYR	OVERHEAD	90		635				810		500 CT				
1L102	PUN	CMX Tap	OVERHEAD			667	737	785	831	830	873	900 CT	600	800	30 minute emergency rating for line only	
1L102	CMX Tap	CBL Tap	OVERHEAD			667	738	785	842	830	882				30 minute emergency rating for line only	
1L102	CBL Tap	JHT	OVERHEAD			686	686	737	789	831	835	1200 CT	1200	1200	30 minute emergency rating for line only	
1L103	JHT	ICG Tap	OVERHEAD			663	734	786	842	831	882	2000 CT	1200		30 minute emergency rating	
1L103	ICG Tap	EFM	OVERHEAD			1334	1486	1593	1713	1683	1793	1200 CT	1200		30 minute emergency rating	
1L103	ICG Tap	ICG	OVERHEAD			1310	1486	1310	1638	1310	1638				30 minute emergency rating Customer owned	
1L104	JHT	ICG Tap	OVERHEAD			662	734	786	842	831	882	2000 CT	1200		30 minute emergency rating	
1L104	ICG Tap	EFM	OVERHEAD			1329	1481	1593	1713	1682	1793	1200 CT	1200		30 minute emergency rating	
1L104	ICG Tap	ICG	OVERHEAD			1310	1481	1310	1638	1310	1638				30 minute emergency rating Customer owned	

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Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L105	DMR	PAL	OVERHEAD			651	700	670	737	789	831	1200 CT	1600	800	30 minute emergency rating	
1L106	PUN	DMR	OVERHEAD			651	700	777	815	822	857	600 CT	800		30 minute emergency rating for conductor	
1L109	VIT	PVO	OVERHEAD			1073	1157	1289	1354	1362	1421	1600 CT	1600		30 minute emergency rating	
1L109	PVO	HWW	OVERHEAD			555	645	701	769	754	815	2000 CT	600		30 minute emergency rating	
1L109	SWN Tap	SWN	OVERHEAD	90		650		780		820		500 CT				
1L110	JPT	NFD	OVERHEAD	70		1069				1529		480 O/C	1200			
1L112	JPT	HWD Tap	OVERHEAD	90		570				730		1200 CT				
1L112	HWD Tap	NEX Tap	OVERHEAD	90		570				730						
1L112	NEX Tap	IPH Tap	OVERHEAD	90		570				730						
1L112	IPH Tap	HMC	OVERHEAD	90		570				730						
1L112	IPH Tap	IPH	OVERHEAD	90		570				730						
1L112	NEX Tap	NEX	OVERHEAD	50		304				571						
1L114	DMR	PAL	OVERHEAD			651	700	775	815	820	857	1200 CT	1600		30 minute emergency rating	
1L115	DMR	LTZ	OVERHEAD	90		635				810		1200 CT				
1L115	LTZ	JPT	OVERHEAD	90		635				810			600		DS Limit: JPT 1D1CB4, 1D2CB4	
1L115	PVL Tap	PVL	OVERHEAD	50		337				635						

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Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L115	QLC Tap	QLC	OVERHEAD	90		635				810						
1L116	DMR	LTZ	OVERHEAD	90		635				810		1200 CT	800		DS Limit: DMR 1D1CB1, 1D2CB1	
1L116	LTZ	JPT	OVERHEAD	90		635				810			600		DS Limit: JPT 1D1CB6, 1D2CB6	
1L116	PVL Tap	PVL	OVERHEAD	50		337				635				800		
1L116	QLC Tap	QLC	OVERHEAD	90		635				810						
1L117	JHT	LDR	OVERHEAD			893	979	1056	1125	1127	1190	900 CT	800			
1L118	JHT	LDR	OVERHEAD			893	979	1056	1125	1127	1190	900 CT	1200		30 minute emergency rating for line only	
1L119	JHT	DMR	OVERHEAD			650	700	754	814	800	855	812 IR	800		30 minute emergency rating	
1L119	CBL Tap	CBL	OVERHEAD	50		320				645		556 IR				
1L119	OYR Tap	OYR	OVERHEAD	90		635				810		426 IR				
1L119	BKB Tap	BKB	OVERHEAD	90		650		780				500 CT				
1L120	SCA	GLD	OVERHEAD			635	707	768	823			1200 CT	1200	800		
1L121	LDR	SCA	OVERHEAD			639	716	740	803	784	842	900 CT	800	800	30 minute emergency rating LDR 1CB5 closed DS Rating: LDR 1D1CB5 and 1D2CB5: 800A LDR 1CB5 open DS Rating: LDR 1D24: 600A CT rating: 900A includes 1.5 RF	
1L122	VIT	PVO	OVERHEAD			977	1053	1172	1231	1238	1292	2000 CT	1600		30 minute emergency rating	
1L122	PVO	HWW	OVERHEAD			651	700	777	815	822	857	2000 CT	600		30 minute emergency rating	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L122	LDY Tap	LDY	OVERHEAD	88		625				805				800		
1L123	JPT	HWD Tap	OVERHEAD			621	697	745	805	792	847	1200 CT	1200		30 minute emergency rating for line only	
1L123	HWD Tap	HWW	OVERHEAD			621	697	745	805	792	847	2000 CT	2000		30 minute emergency rating for line only	
1L123	HWD Tap	HWD	OVERHEAD	90		1050				1350						
1L124	JPT	HWW	OVERHEAD			561	649	700	767	753	813	1200 CT	600		30 minute emergency rating for line only	
1L125	KTS	PML Tap (East)	OVERHEAD			661	874	964	1110	1074	1202	800 CT	2000	1200	30 minute emergency rating for line only	
1L125	PML Tap (East)	PML Tap (West)	OVERHEAD			661	874	964	1110	1074	1202				100 hour emergency rating for line only	
1L125	PML Tap (West)	KGH	OVERHEAD			661	874	964	1110	1074	1202	800 CT	800	1200	100 hour emergency rating for line only	
1L125	PML Tap	PML	OVERHEAD	90		1050				1350						
1L127	PAL	GCL	OVERHEAD			355	467	499	579	555	626	1200 CT	600	1200	30 minute emergency rating	
1L128	JPT	HWW	OVERHEAD	71	86	559	648	700	767	753	814	2000 CT	600		30 minute emergency rating	
1L130	KGH	JUL	OVERHEAD	50		349				580		800 CT				
1L130	MRH Tap	MRH	OVERHEAD	50		150				272						
1L131	GLD	TSV	OVERHEAD	82		585				780		200 CT	800	800		
1L131	MBF Tap	MBF	OVERHEAD	90		635		754						800		
1L131	CMH Tap	CMH	OVERHEAD	90		495				630						

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L134	GLD	GRP	OVERHEAD	50		337				635		1200 CT	800			
1L137	KGH	PHY	OVERHEAD	90		635				810		754 IR @ PHY		1200		
1L138	VIT	LDY Tap	OVERHEAD			622	700	752	812	800	855	2000 CT	1600			
1L138	LDY Tap	LDY	OVERHEAD	88		625				805						
1L138	LDY Tap	MHY Tap	OVERHEAD			622	700	752	812	800	855		1200		1D1L138 (18/7)	
1L138	MHY Tap	MHY	OVERHEAD	88		880				1090						
1L138	MHY Tap	SWN Tap	OVERHEAD			622	700	752	812	800	855					
1L138	SWN Tap	SWN	OVERHEAD	90		650		780				500 CT				
1L138	SWN Tap	HWW	OVERHEAD			622	700	752	812	800	855	2000 CT	2000			
1L139	VIT	CFT	OVERHEAD			635				810		2400 CT	1200			
1L140	VIT	CFT	OVERHEAD	90		635				810		2000 CT	1200			
1L141	PHY	CSS	OVERHEAD			1065	1065	1065	1065	1065	1065	750 CT	1200		PN CT: 800 A CSS Revenue metering CT rating: 750 A	
1L142	GCL	ASH	OVERHEAD			383	496	530	611	588	659	300 CT	600	400	30 minute emergency rating	
1L143	JOR	SOO	OVERHEAD			872	939	1045	1097	1105	1152	2316 IR	1200	800	30 minute emergency rating for line only	
1L143	SOO	CLD	OVERHEAD			872	939	1045	1097	1105	1152	1600 CT	1200	800	30 minute emergency rating for line only	
1L146	CLD Tap	CLD	OVERHEAD	90		850				1090		1200 CT				

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L146	CLD Tap	GOW	OVERHEAD	90		850				1090						
1L146 Overall	CLD	GOW	OVERHEAD	90		850		1033		1090						
1L152	JPT	NFD	OVERHEAD	70		1069				1529		600 CT				
1L157	GLD	WOS Tap	OVERHEAD			621	843	960	1105	1069	1196	800 CT	1200	1200	30 minute emergency rating	Single breaker closed rating: 1200 A GLD 1D1CB7
1L157	WOS Tap	BVC Tap	OVERHEAD			621	843	960	1105	1069	1196				30 minute emergency rating	
1L157	BVC Tap	KTS	OVERHEAD			621	843	960	1105	1069	1196	800 CT	2000	1200	30 minute emergency rating	
1L201	VNT	TIL Tap	OVERHEAD			467	563	608	679	661	724	640 IR @VNT	800	800	30 minute emergency rating for line only	
1L201	TIL Tap	TIL	OVERHEAD			571				728						
1L201	TIL Tap	LU2 Tap	OVERHEAD			467	563	608	679	661	725		1200		30 minute emergency rating for line only	1D1L201
1L201	LU2 Tap	LU2	OVERHEAD			411				625						
1L201	LU2 Tap	MON	OVERHEAD			445	544	603	673	655	718	426 IR @MON	600	800	30 minute emergency rating for line only	
1L202	VNT	LU2 Tap	OVERHEAD			460	546	588	652	638	695	400 CT	1200	800	30 minute emergency rating for line only	
1L202	LU2 Tap	LU2	OVERHEAD			411				625						
1L202	LU2 Tap	MON	OVERHEAD			460	546	588	652	638	695		600	800	30 minute emergency rating for line only	
1L203	SVA	HLD	OVERHEAD			723	787	863	918	912	964	1200 CT	800		30 minute emergency rating for line only	
1L204	SVA	AFN Tap	OVERHEAD			751	829	872	935	922	980	1200 CT	600		30 minute emergency rating	1D1L204

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L204	AFN Tap	TMT Tap	OVERHEAD			751	829	872	935	922	980		600		30 minute emergency rating	1D2L204
1L204	TMT Tap	DUG	OVERHEAD			731	787	872	918	922	964	800 CT	600		30 minute emergency rating	1D3L204
1L205	SVA	HLD	OVERHEAD			496	551	592	635	626	665	1200 CT	800	800	30 minute emergency rating for line only	
1L206	SVA	WKA	OVERHEAD			706	731	844	885	892	930	1200 CT	800		30 minute emergency rating for line only	
1L209	VVW	LF2 Tap	OVERHEAD			502	581	626	682	673	723	671 IR	600		30 minute emergency rating for conductor	
1L209	LF2 Tap	LF2	OVERHEAD	49		292				566					30 minute emergency rating for conductor	
1L209	LF2 Tap	CHS	OVERHEAD			502	581	626	682	673	723		1200		30 minute emergency rating for conductor	
1L209	CHS	STO	OVERHEAD			502	581	626	682	673	723		1200		30 minute emergency rating for conductor	
1L209	STO	SAM	OVERHEAD			502	581	626	682	673	723	800 IR	600			
1L210	BKL	TOK Tap	OVERHEAD	90		493				627		432 IR @ BKL	800			
1L210	TOK	TOK Tap	OVERHEAD	90		493				627						
1L210	TOK Tap	HFY Tap	OVERHEAD	90		493				627						
1L210	HFY	HFY Tap	OVERHEAD	49		254				488						
1L210	HFY Tap	BKP Tap	OVERHEAD	90		493				627			600		1D1L210 DS Limit	
1L210	BKP	BKP Tap	OVERHEAD			491				572			1200		1D9L210 DS Limit	
1L210	BKP Tap	BAR Tap	OVERHEAD			493				627						

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information			Conductor Ratings (A)									Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L210	BAR	BAR Tap	OVERHEAD	90		493				627						
1L210	BAR Tap	DFD Tap	OVERHEAD	88		484				622			600		1D3L210 DS Limit	
1L210	DFD	DFD Tap	OVERHEAD	90		493				627						
1L210	DFD Tap	BLP Tap	OVERHEAD	88		484				622						
1L210	BLP	BLP Tap	OVERHEAD	50		254				488						
1L210	BLP Tap	CLW Tap	OVERHEAD	88		484				622						
1L210	CLW	CLW Tap	OVERHEAD	88		484				622						
1L210	CLW Tap	VBY Tap	OVERHEAD	88		484				622			600		1D4L210 DS Limit	
1L210	VBY	VBY Tap	OVERHEAD	50		254				488			600			
1L210	VBY Tap	TMM Tap	OVERHEAD	49		254				488			600		1D5L210 and 1D6L210 DS Limit	
1L210	TMM	TMM Tap	OVERHEAD	49		254				488						
1L210	AVO	TMM Tap	OVERHEAD	49		254				488		300 CT	600			
1L211	AVO	BLU Tap	OVERHEAD	88		484				622		600 CT	600			
1L211	BLU	BLU Tap	OVERHEAD	91		506				1351						
1L211	BET	BLU Tap	OVERHEAD	91		1052				1347		800 CT	600	1200	1D2L211 DS Limit	
1L212	VLM	REG	OVERHEAD	50		254				488		500 CT				

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L214	VNT	VVW	OVERHEAD			442	543	598	670	652	716	754 IR	600		30 minute emergency rating for line only	
1L218	VNT	RVS Tap	OVERHEAD			595	658	698	745	738	783	1128 IR	800		30 minute emergency rating for line only	
1L218	RVS Tap	RVS	OVERHEAD			595	658	698	749	738	784		600		30 minute emergency rating for line only	
1L218	RVS Tap	RVG	OVERHEAD			595	658	698	749	738	784		600		30 minute emergency rating for line only	
1L218	RVS Tap	ARM	OVERHEAD			595	647	694	730	734	767		600		30 minute emergency rating for line only	
1L218	ARM	END	OVERHEAD			595	647	694	730	734	767		600		30 minute emergency rating for line only	
1L218	END	SAM	OVERHEAD			585	629	698	732	738	769	1128 IR	600		30 minute emergency rating for line only	
1L219	VVW	KWD Tap	OVERHEAD			726	779	820	879	871	924	1200 CT	800		30 minute emergency rating for line only	
1L219	KWD Tap	DUG	OVERHEAD			731	787	820	918	871	964	800 CT	1200		30 minute emergency rating for line only	Single breaker closed operation: DUG 1D2CB6 1200A
1L219	KWD Tap	KWD	OVERHEAD			731	787	820	918	871	964	750 CT	800		30 minute emergency rating for line only	
1L220	WKA	Str. 22/04	OVERHEAD			726	779	835	879	883	924	2000 CT	1200		30 minute emergency rating	
1L220	Str. 22/04	Str. 22/05	CABLE			755	845	915	1010	915	1010		800		216 hour emergency rating	
1L220	Str.22/05	BKL	OVERHEAD			733	814	875	936	925	984	2000 CT	800		30 minute emergency rating	
1L220 Overall	WKA	BKL	OVERHEAD			726	779	835	879	883	924	2000 CT	800		30 minute emergency rating	
1L225	BET	ABA Tap	OVERHEAD	90		1076				1295		300 CT	2000	1200		
1L225	ABA Tap	VLM	OVERHEAD	91		1055				1351						

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L241	VVW	BKL	OVERHEAD			731	787	875	918	924	964	1200 CT	800	800	30 minute emergency rating	
1L242	VVW	DUG	OVERHEAD			731	787	875	918	924	964	800 CT	1200		30 minute emergency rating	
1L243	NIC	STM Tap	OVERHEAD			706	731	844	885	892	930	800 CT	1200		30 minute emergency rating for line only	
1L243	STM Tap	HLD	OVERHEAD			731	787	855	918	905	964	1200 CT	800		30 minute emergency rating for line only	
1L244	NIC	BDM Tap	OVERHEAD	90		710		840		920		1200 CT	1200			
1L244	BDM Tap	BDM	OVERHEAD	90		710				920						
1L244	BDM Tap	WBK	OVERHEAD	90		710		840		920			800			
1L246	WGS	MON	OVERHEAD			651	700	773	815	817	857	300 CT	800		30 min emergency rating for conductor	Line limited to 250 A due to WGS bus cable (rated at 2500 A at 13.8 kV, 59.8 MVA)
1L249	MR2	Str. 0/0	OVERHEAD			745	823	872	936	922	980	1600 CT	1200		30 minute emergency rating for line only CT 1600 includes 2.0 RF	
1L249	Str. 0/0	MIG				209	209	209	209	209	209				Customer owned; emergency rating equal to continuous rating	
1L251	NIC	KPS Tap	OVERHEAD			809	976	1091	1210	1181	1288	1116 IR	1200		30 minute emergency rating for line only Ambient temp >30°C to be expected	
1L251	KPS Tap	KPS	OVERHEAD			497		592		626		600 CT	1200		Customer Owned	
1L251	KPS Tap	PRI Tap	OVERHEAD			809	976	1091	1210	1181	1288		1200		30 minute emergency rating for line only Ambient temp >30°C to be expected	
1L251	PRI Tap	SCO	OVERHEAD			502	556	597	639	631	670	800 CT	1200			
1L254	HLD	MR2	OVERHEAD			717	888	859	995	907	1033	800 CT	1000		30 minute emergency rating	
1L274 (887L)	NTL	LCC Tap	OVERHEAD	75	90	430	495	541	590	579	623	953 IR	600		Ambient temp >30°C to be expected Reference SOO 7T-17 – Limit at NTL 2x50 MVA transformer. 30 minute emergency rating	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L274 (887L)	LCC Tap	LCC	OVERHEAD	90		493		590		627		600 CT			Ambient temp >30°C to be expected	
1L274 (887L)	LCC Tap	EFT	OVERHEAD	50	65	274	378	439	504	489	547		1200		Ambient temp >30°C to be expected 30 minute emergency rating	
1L274 (887L)	EFT	EFD	OVERHEAD	50		265		442		492		600 CT				
1L274 (887L)	EFT	GRH Tap	OVERHEAD	50	65	274	378	439	504	489	547		1200		Ambient temp >30°C to be expected 30 minute emergency rating	
1L274 (887L)	GRH Tap	GRH	OVERHEAD	90		1047		1274		1345		600 CT			230 kV Construction Ambient temp >30°C to be expected	
1L274 (887L)	GRH Tap	BCK	OVERHEAD	50	65	274	378	439	504	489	547		1200		Ambient temp >30°C to be expected 30 minute emergency rating	
1L274 (887L)	BCK	FRO	OVERHEAD	50		265		442		492		600 CT				
1L274 (887L)	BCK	STR 64-8 (BC/AB Border)	OVERHEAD	50	65	387	539	632	726	704	787		1200		Ambient temp >30°C to be expected 30 minute emergency rating	
1L274 (887L)	STR 64-8 (BC / AB Border)	POC (AltaLink)	OVERHEAD	50		300	450	300	450	300	450				Interim – Pending info from AESO	
1L274 (887L) Overall	NTL	POC (AltaLink)	OVERHEAD	50		274	378	439	504	489	547	600 CT			Ambient temp >30°C to be expected Ref. SOO 7T-17 Limit at NTL 2x50 MVA transformer 30 minute emergency rating	
1L275 (786L)	NTL	STR 8-7 (BC / AB Border)	OVERHEAD			527	584	617	664	652	694	1200 CT	600		30 minute emergency rating	
1L275 (786L)	STR 8-7 (BC / AB Border)	COL (AltaLink)	OVERHEAD			414	456			552	607				AltaLink owned section 10 minute emergency rating	Summer is calculated at 32°C and Winter is calculated at 0°C and the limiting element is the transmission line.
1L275 (786L) Overall	NTL	COL (AltaLink)	OVERHEAD			414	456			552	607	1200 CT	600		10 minute emergency rating	
1L348	BMT	DAW	OVERHEAD	90	125	1038	1115	1190	1248	1255	1307	1500 CT	1200		30 minute emergency rating	
1L349	CWD	SLS	OVERHEAD	90		559		674		701		800 CT	600	800		CWD 138kV bus is rated for 600 A
1L350	BMT	DAW	OVERHEAD	90	125	977	1053	1172	1231	1238	1292	2000 CT	1200		30 minute emergency rating	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L351	BMT	TPW	OVERHEAD			580	644	693	743	733	779	2000 CT	1200			
1L354	BMT	Fence	OVERHEAD			506	578	621	677	665	716	800 CT	1200		30 minute emergency rating for line only	
1L354	Fence	BMW	OVERHEAD			494	494	494	494	494	494	600 CT	1200		Metering CT rating shown	
1L357	WSP	FNG	OVERHEAD			712	761	811	851	854	891	200 CT	1200		30 minute emergency rating Single breaker closed CT rating: 200 A WSP 1CT1, 1CT2	
1L358	BMT	STR 47/2 (KIS Tap)	OVERHEAD			596	643	712	748	751	784	2000 CT	1200		60 minute emergency rating for line only	
1L359 (ATCO 7L81)	FNG	Str. 338/00	OVERHEAD			731	813	876	936	925	983	600 CT	1200	1200	30 minute emergency rating for line only	
1L359 (ATCO 7L81)	Str. 338/00	RAINBOW LAKE (ALBERTA)	BUS CONNECTION, CT			605	794	761	798						ATCO owned	
1L360	SBK	SCX	OVERHEAD	90	90	560	560	674	674			1500 CT	1200		OH normal rating the same as emerg rating	
1L360	SCX	TAY	OVERHEAD	90	90	560	560	674	674			1500 CT	1200		OH normal rating the same as emerg rating	
1L361	GMS	CWD	OVERHEAD			588	629	676	710	715	746	800 CT	600		30 minute emergency rating	
1L363	GMS	PPS	OVERHEAD	90	90	560	560	674	674			1200 IR @ GMS	600		1D1CB2 at PPS	
1L364	GMS	PPS Tap	OVERHEAD			581	642	679	728	718	762	1113 IR	1200		30 minute emergency rating for line only	
1L364	PPS	PPS Tap	OVERHEAD	49		290				495						
1L364	PPS Tap	FOX Tap	OVERHEAD			581	642	679	728	718	762		1200		30 minute emergency rating for line only	
1L364	FOX Tap	FOX	OVERHEAD	90		570				725						
1L364	FJN	FOX Tap	OVERHEAD			577	624	670	708	711	746	1113 IR	800		30 minute emergency rating for line only	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L364 Overall	GMS	FJN	OVERHEAD	90		570		682		721		983 IR	800			
1L365	SVY	MWN Tap	OVERHEAD			286	388	450	514	499	556	500 CT	800		30 minute emergency rating	
1L365	MWN Tap	MWN	OVERHEAD			500	535	575	604	609	635		80		30 minute emergency rating	MWN 1D1 Fused DS (80E)
1L365	MWN Tap	KDS	OVERHEAD			286	388	450	514	499	556	544 IR	1200		30 minute emergency rating	
1L366	MFE	MKZ Tap	OVERHEAD			502	556	596	638	630	669	800 CT	800		30 minute emergency rating	
1L366	MKZ Tap	Str. 00/01	OVERHEAD			502	556	596	638	630	669		1200		30 minute emergency rating	
1L366	Str. 00/01	MKZ	OVERHEAD			747				918						
1L366	MKZ Tap	TBN Tap	OVERHEAD			502	556	596	638	630	669		1200		30 minute emergency rating	
1L366	TBN Tap	FCC	OVERHEAD			502	556	596	638	630	669				30 minute emergency rating	
1L367	FJN	SLO Tap	OVERHEAD			565	629	676	710	715	746	800 CT	2000		30 minute emergency rating	
1L367	SLO	SLO Tap	OVERHEAD			300				500			1200			
1L367	SLO Tap	TAY	OVERHEAD			565	624	670	708	711	746	800 CT	1200		30 minute emergency rating	
1L368	MFE	PRS	OVERHEAD	60		350				495		800 CT	800			
1L368	PRS	FFI	OVERHEAD	60		350				495		800 CT				
1L371	FJN	TXB	OVERHEAD	82		520				650		1200 CT		800		
1L373	KDS	MFE	OVERHEAD	95		510				610		1200 CT	800	1200		

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L374	SBK	FJN	OVERHEAD			574	629	676	710	715	746	1200 CT	1200		30 minute emergency rating	
1L375	TAY	NGL Tap	OVERHEAD			585	629	682	731	721	766	800 CT	1200		30 minute emergency rating for line only	
1L375	NGL Tap	Str. 2/7	OVERHEAD			590	650	683	732	722	767		1200		30 minute emergency rating for line only	
1L375	Str. 2/7	NGL	OVERHEAD			590	650	683	732	722	767		1200		30 minute emergency rating for line only Load customer	
1L375	Str. 2/7	FBC	OVERHEAD			560		674		728		800 CT			Load customer	
1L375	NGL Tap	MCM Tap	OVERHEAD			586	647	682	731	721	766		1200		30 minute emergency rating for line only	
1L375	MCM Tap	MCM	OVERHEAD			605	660			760	800				Customer owned	
1L375	MCM Tap	MGP	OVERHEAD			586	647	682	731	721	766	1200 CT	600		30 minute emergency rating for line only Load customer	
1L377	TAY	SEP Tap	OVERHEAD			575	629	679	728	718	763	800 IR	1200		30 minute emergency rating	
1L377	SEP Tap	ET3 Tap	OVERHEAD			575	637	679	728	718	763		1200		30 minute emergency rating	
1L377	ET3 Tap	PLD Tap	OVERHEAD			575	629	679	728	718	763		1200		30 minute emergency rating	
1L377	PLD Tap	DSN Tap	OVERHEAD			575	629	679	728	718	763		1200		30 minute emergency rating	
1L377	DSN Tap	DSN	OVERHEAD			513	513	513	513	513	513		1200			
1L377	DSN Tap	DAW	OVERHEAD			575	637	679	728	718	763	800 IR	1200		30 minute emergency rating	
1L381	AYH	EWL Tap	OVERHEAD	75		430				545		637 IR @ AYH	600	800		
1L381	EWL Tap	MEZ Tap	OVERHEAD	75		430				545						

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L381	MEZ Tap	LNT	OVERHEAD	75		430				545		410 IR @ LNT		800		
1L384	GLN	BRN Tap	OVERHEAD	50		280				450		800 CT	800	600		
1L384	BRN	BRN Tap	OVERHEAD	50		280				450						
1L384	TPY	BRN Tap	OVERHEAD	50		280				450			600	600		
1L385	TKW	SRS	OVERHEAD			280				450		360 O/C	2000			
1L387	SKA	Str 65/03	OVERHEAD	49		417		709		792		511 IR @ SKA		800		
1L387	Str 65/03	AYH	OVERHEAD	49		265				440				800		
1L390	TPY	BAB	OVERHEAD	50		280				450		300 CT	800			
1L391	HUS	HML	OVERHEAD	90		490				595		800 CT	1200			
1L392	HZN	SRS	OVERHEAD	88		485				590		107 O/C @ SRS	800			
1L393	HUS	EQU Tap	OVERHEAD	49		255				440		160 O/C @ HUS	800			
1L393	EQU	EQU Tap	OVERHEAD	49		255				440						
1L393	NHS	EQU Tap	OVERHEAD	49		255				440						
1L396	TKW	HUS	OVERHEAD	90		503		583		618		729 IR @ TKW	800			
1L398	HUS	TPY	OVERHEAD	49		255				440		300 CT	1200			
1L402	LNT	WNR Tap	OVERHEAD	75		430				545		800 CT				
1L402	WNR Tap	STW	OVERHEAD	75		430				545		50 O/C		600		

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
1L402	WNR Tap	WNR	OVERHEAD	50		280				450		200 CT				
2L1	BRT	PEM Tap	OVERHEAD			553	768	896	1031	998	1116	1200 CT	800		30 minute emergency rating	Single breaker closed rating 800A BRT, 2D1CB2, 2D1CB5, 2D2CB5, 2D1CB4
2L1	PEM Tap	RBW Tap	OVERHEAD			553	768	896	1031	998	1116		1200	1200	30 minute emergency rating	
2L1	RBW Tap	FCN	OVERHEAD			553	768	896	1031	998	1116	1200 CT	1200	2000	30 minute emergency rating	
2L2	TIS	RBW Tap	OVERHEAD			1098	1237	1302	1398	1376	1464	3000 CT	3000		30 minute emergency rating	
2L2	RBW Tap	RUT Tap	OVERHEAD			1098	1237	1302	1398	1376	1464		3000		30 minute emergency rating	
2L2	RUT Tap	CKY	OVERHEAD			1045	1120	1201	1263	1270	1327	1600 CT	1200		30 minute emergency rating	Single Breaker Closed DS rating: 1200A - CKY 2D1CB4, 2D1CB6
2L2 Overall	TIS	CKY	OVERHEAD			1045	1120	1201	1263	1270	1327	800 CT	1200		30 minute emergency rating	
2L3	WLT	HPN	OVERHEAD			1045	1120	1201	1263	1270	1327	1200 CT	1200		30 minute emergency rating	
2L4	ING	CAM Tap	OVERHEAD			988	1104	1202	1291			4000 CT	3000			
2L4	CAM	CAM Tap	OVERHEAD			988	1104	1202	1291			4000 CT	2000			
2L4	KI2	CAM Tap	OVERHEAD			988	1104	1201	1263			4000 CT	2000			
2L5	FCN	CKY	OVERHEAD	50	65	609	808	889	1034	1002	1120	1200 CT	1200		30 minute emergency rating	
2L6	ING	SYH Tap	OVERHEAD			2138	2304	2570	2698	2714	2765	3000 CT	2000		30 minute emergency rating	Single Breaker Closed DS Rating – ING 2D1CB5 Rating : 2000 A
2L6	SYH Tap	SYH	OVERHEAD			2184	2573	2605	2914	2752	3037	300 CT	2000		30 minute emergency rating	
2L6	SYH Tap	ARN	OVERHEAD			2138	2304	2570	2698	2714	2765	2000 CT	1600		30 minute emergency rating	Single Breaker Closed DS Rating – ARN 2D2CB10 and 2D1CB11 Rating : 1600 A

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L9	CKY	LYN	OVERHEAD			871	1031	1139	1255	1223	1328	1800 CT	2000		30 minute emergency rating	Single Breaker Closed rating: 1200 A - CKY 2D1CB8, 2D1CB9
2L10	ING	ARN	OVERHEAD			649	842	951	1081	1050	1164	2000 CT	1200		30 minute emergency rating	
2L11	WLT	BUT	OVERHEAD	66		840		1160				2000 CT	1200			
2L12	CKY	ASL Tap	OVERHEAD			803	980	1086	1212	1178	1291	1200 CT (CMS-CKY) 864 IR (CKY-CMS)	1200		30 minute emergency rating	Line Protection: IR 864 when load flows into CMS
2L12	ASL Tap	Str. 02/03	OVERHEAD			803	980	1086	1212	1178	1291		1200		30 minute emergency rating	
2L12	Str. 02/03	ASL	OVERHEAD			806	806	907	907	907	907				Customer owned	
2L12	ASL Tap	CMS	OVERHEAD			803	980	1086	1212	1178	1291	1200 CT (CMS-CKY) 864 IR (CKY-CMS)	1200		30 minute emergency rating	Line Protection: IR 864 when load flows into CMS
2L13	CKY	CYP	OVERHEAD			937	1081	1179	1288	1262	1360	2082 IR	1600		30 minute emergency rating line only	
2L14	CYP	WLT	OVERHEAD			946	1101	1186	1298	1267	1369	1200 CT	1200		30 minute emergency rating	
2L17	LYN	WLT	OVERHEAD			1036	1115	1201	1263	1255	1307	1200 CT	1200		30 minute emergency rating for conductor	
2L19	BRT	BR1	OVERHEAD	50		508		891		993		210 O/C	800			Single breaker closed operation: BRT 2D1CB3 and BRT 2D1CB4 Rating: 800 A
2L20	CSQ	MPT	CABLE			1052	1374	1217	1557	1217	1557	3000 CT			Cable 216 HRS OVERLOAD	
2L22	MDN	WHY	OVERHEAD	90		989		1200		1270		1200 CT @WHY	1200			
2L27	ING	WHY	OVERHEAD	90		989		1200		1270		2000 CT	1200			
2L29	SAY	PSY	OVERHEAD			1357	1476	1580	1663	1671	1747	1200 CT	1200		30 minute emergency rating	
2L29	PSY	JMC	OVERHEAD			1137	1137	1169	1169	1169	1169					

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L31	MUR	CSQ	CABLE			650	900	830	1070	830	1070	2000 CT	1200		CABLE 300 HRS OVERLOAD	
2L32	HPN	MUR	CABLE			935	1185 (1375)	1085	1425 (1615)	1085	1425 (1615)	4000 CT	2000		Cable 100 hr emergency rating (Cable 8 hr emergency rating in parentheses) CT 4000 includes 2.0 RF	Single Breaker Closed DS Rating: HPN 2D1CB8 1200A
2L32	MUR	CSQ	CABLE			800	1025 (1225)	970	1215 (1450)	970	1215 (1450)	2000 CT	2000			Cable 100 hr emergency rating (Cable 8 hr emergency rating in parentheses)
2L33	HPN	CSQ	CABLE			1215	1525	1270	1590	1270	1590	2000 CT	1200		100 minute emergency rating	Single Breaker Closed DS Rating – HPN 2D1CB5 and 2D2CB4 Rating : 1200 A
2L38	MDN	COK	OVERHEAD	90	125	2163	2378	2548	2678	2678	2694	3000 CT @COK	3000		30 minute emergency rating	Single breaker closed operation: COK 2D2CB2 Rating: 2000 A
2L39	COK	HLT	OVERHEAD			1053	1165	1230	1320	1299	1382	2000 CT	3000		30 minute emergency rating	
2L39	HLT	NEL	CABLE			950	1250	950	1250	950	1250	2000 CT	2000		200 hour emergency rating	
2L40	BSY	BND	OVERHEAD			1056	1176	1260	1355	1331	1419	1500 CT	1200		30 minute emergency rating	
2L40	BND	HLT	OVERHEAD			1056	1176	1260	1355	1331	1419	1500 CT	2000		30 minute emergency rating	
2L40	HLT	NEL	CABLE			985	1245	985	1245	985	1245	2000 CT	2000		200 hour emergency rating	
2L41	BRT	TIS	OVERHEAD			1045	1120	1201	1263	1270	1327	1200 CT	800		30 minute emergency rating for line only	Single breaker closed rating: 800A for BRT 2D1CB1 and 2D1CB3; and also 1200A for BRT 2CB1 CT and 2CB3 CT
2L42	TIS	TIS Fence	OVERHEAD			1049	1160	1221	1310	1290	1372	1500 CT (PN) 600 CT (TIS 2MK1CT)	1200		30 minute emergency rating for line only	TIS 2MK1CT
2L42	TIS Fence	ULR	OVERHEAD			806	806	907	907	907	907				Customer owned	
2L44	MPT	SPG	CABLE			1173	1883	1245	1968	1245	1968	3000 CT	2000		Cable 216 HRS OVERLOAD	
2L45	SPG	CSN	CABLE			660	891	812	1018	812	1018	2000 CT	2000		100 Hr Emergency Rating	
2L47	MSA	HSP	OVERHEAD	49		530		940				1200 CT		1200		

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L48	MSA	SAY	OVERHEAD			948	1066	1156	1246	1218	1302	1200 CT	1200		30 minute emergency rating for line only	
2L49	MDN	HPN	OVERHEAD	66		840		1160				2000 CT	1200			
2L50	BSY	HPN	OVERHEAD			759	931	1007	1127	1099	1206	2000 CT	1200		30 minute emergency rating for line only	Single breaker closed DS rating: 1200A for BSY 2D1CB11 and 2D1CB12
2L50	HPN	MUR	CABLE			630	810 (924)	730	885 (985)	730	885 (985)	2000 CT	1200		100 hour emergency rating for cable (8 hour emergency rating for cable)	
2L51	COK	Str. 00/01	OVERHEAD			1955	2173	2273	2453	2400	2566	4000 CT	2000		30 minute emergency rating for line only	
2L51	Str. 00/01	BND	CABLE			1075	1537	1247	1713	1247	1713	1500 CT	2000		300 hour emergency rating for cable only	
2L51	BND	HPN	CABLE			1089	1438	1259	1530	1259	1530	1500 CT	1200		300 hour emergency rating for cable only	Single breaker closed rating: 1200A HPN 2D2CB8
2L52	MDN	COK	OVERHEAD	88		2050	2930	2560	3240			2000 CT @COK	2000			
2L54	MDN	BSY	OVERHEAD			2081	2332	2541	2734			3000 CT	2000			CT 3000 includes 2.0 RF
2L55	MAN	CSN	CABLE			620	855	730	940	730	940	1200 CT	1200		100 Hr Emergency Rating	
2L56	ING	CAM Tap	OVERHEAD			1125	1247	1301	1401	1372	1464	4000 CT	1200		30 minute emergency rating	
2L56	CAM Tap	KNS (the pothead location)	OVERHEAD			1192	1322	1379	1486	1454	1553				30 minute emergency rating	
2L56	KNS (the pothead location)	MAN	CABLE			660	893 (1067)	806	986 (1146)	806	986 (1146)	3000 CT	1200		100 hour emergency rating for cable only (8 hour emergency rating)	Single Breaker Closed Operation: 1200A MAN 2D1CB3
2L57	ING	SYH Tap	OVERHEAD			649	842	951	1081	1050	1164	2000 CT	1200		30 minute emergency rating	
2L57	SYH Tap	SYH	OVERHEAD			649	842	951	1081	1050	1164		300		30 minute emergency rating	
2L57	SYH Tap	ARN	OVERHEAD			727	921	1007	1145	1111	1233	2000 CT	1600		30 minute emergency rating	Single Breaker Closed DS Rating - ARN 2D2CB5 and ARN 2D1CB6 Rating: 1600A

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L58	KI2	STV	OVERHEAD			826	974	1089	1195			4000 CT	2000		30 minute emergency rating	
2L61	MDN	BSY	OVERHEAD			2210	2402	2583	2653	2704	2752	1500 CT	3000		30 minute emergency rating	Single Breaker (BSY 2CB6) Closed CT Rating
2L62	STV	Str. 03/00	OVERHEAD			826	974	1089	1195			4000 CT	2000		30 minute emergency rating	
2L62	Str. 03/00	Str. 02/04	CABLE			927	1063	998	1122	998	1122				100 hours emergency rating	
2L62	Str. 02/04	ARN	OVERHEAD			826	974	1089	1195			2000 CT	2000		30 minute emergency rating	
2L63	ING	SYH Tap	OVERHEAD			2138	2304	2570	2666	2714	2765	2000 CT	3000		30 minute emergency rating	Single Breaker Closed DS Rating – ING 2D2CB3 and 2D1CB4 Rating: 2000 A
2L63	SYH Tap	ARN	OVERHEAD			2196	2378	2548	2666	2694	2765	2000 CT	2000		30 minute emergency rating	
2L64	KI2	KI1	OVERHEAD			1033	1120	1201	1263	1270	1327	2000 CT	2000		30 minute emergency rating for line only	
2L64	KI1	SPG	CABLE			660	935 (1145)	800	1050 (1250)	800	1050 (1250)	2000 CT	3000		Cable 100 hr emergency rating (Cable 8 hr emergency rating in parentheses)	
2L74	ING	FLW	OVERHEAD	80	80	1938	2187	2273	2522	2399	2654	3000 CT	3000		30 minute emergency rating	Single Breaker Closed DS Rating: 2000A
2L75	FLW	MLN	OVERHEAD	80	95	1858	2012	2249	2369	2374	2485	3000 CT	2000		30 minute emergency rating	
2L76	MLN	MLE	OVERHEAD			1858	2012	2249	2369	2374	2485	2500 CT	2000		30 minute emergency rating	
2L77	CBN	ALZ	OVERHEAD	75		1700		2204		2358		2000 CT	1600		Single Breaker Closed DS Rating: 1600A - ALZ 2D1CB4	
2L78	ALZ	ROS	OVERHEAD			1700		2204		2358		2000 CT	2000		FAC-008 derating due to ROS T1: Summer Normal 1092 and 30 min, Emergency 1790; Winter Normal 1295 and 30 min, Emergency 2183 (Refer to 5T-14)	FAC-008 Derating due to ROS T1: Summer Normal 1092 and 30 min Emergency 1790 Winter Normal 1295 and 30 min Emergency 2183 (Refer to 5T-14)
2L79	MLE	CBN	OVERHEAD			1950	2158	2270	2429	2396	2549	3000 CT	2500		30 minute emergency rating	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L86	HMH	KLY	OVERHEAD			991	1126	1200	1306	1275	1372	1200 CT	800	1200	30 minute emergency rating	
2L90	KLY	BRT	OVERHEAD			585	843	1003	1143	1105	1227	1200 CT	1200		30 minute emergency rating Refer to App 2 for Ambient Temperature Adjust rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L91	KLY	BRT	OVERHEAD	50		510		890		993		1176 IR				
2L92	KLY	SVA	OVERHEAD			576	781	878	1014	981	1099	1600 CT	1200		30 minute emergency rating for conductors CT rating: 1600 A includes 2.0 RF	
2L93	KLY	SVA	OVERHEAD			568	832	932	1075	1041	1166	1546 IR	1200		30 minute emergency rating for conductors	
2L94	KLY	SCK	OVERHEAD			547	791	957	1101	1061	1188	800 CT	1200		30 minute emergency rating	
2L95	SCK	RBF	OVERHEAD			515	769	944	1089	1049	1177	800 CT	1200		30 minute emergency rating	
2L96	WSN	BLW	OVERHEAD			817	974	1093	1210	1184	1288	1200 CT	1200		30 minute emergency rating 1200 CT includes 1.5 RF	
2L97	WSN	SVY	OVERHEAD			975	1097	1181	1274	1252	1337	1200 CT	1200	1200	30 minute emergency rating for line	Single Breaker Closed CT Rating
2L97	Fraser River Crossing		OVERHEAD	80						1180						
2L99	SKA	MIN	OVERHEAD			1373	1491	1604	1680	1697	1765	1500 CT	1600		30 minute emergency rating for line only	Single breaker closed operation: MIN 2D2CB3, 2D1CB4, 2D2CB4
2L100	MIN	Str. 01/04	OVERHEAD			1830	2094	2250	2454	2408	2592	1000 CT	2000		30 minute emergency rating for line only	MIN 2CTMK5
2L100	Str. 01/04	KTB	OVERHEAD			670	670			795	795					Customer Owned KTB Transformer TR001AA01
2L101	RUP	SKA	OVERHEAD	50		640		1145		1275		400 CT @RUP	800	800	CDR RATING @ 66 C	
2L102	SKA	BQN	OVERHEAD	90	105	1884	2364	2250	2642	2375	2741	1200 CT	650		30 minute emergency rating	SKA 2LRX22 rating: 1500A BQN Series Cap: 650 A
2L103	MIN	Str. 00/01	OVERHEAD			715	1023	1204	1392	1344	1510	1800 CT	2000		30 minute emergency rating for line only	Single breaker CT ratings: 1800 A includes 1.5 RF

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L103	Str. 00/01	KIT	OVERHEAD			1333	1333	1333	1333	1333	1333	2000 CT	1600		RTA Owned	
2L107	MIN	Str. 01/04	OVERHEAD			1858	2116	2252	2456	2408	2594	1000 CT	2000		30 minute emergency rating	MIN 2CTMK4
2L107	Str. 01/04	KTB	OVERHEAD			670	670			795	795				Customer Owned	KTB Transformer TR001AA02
2L112	NLY	US Border	OVERHEAD			1071	1191	1278	1372	1350	1437	1200 CT	2000	1200	30 minute emergency rating	Note: Upstream station facility NLY PST – T2 rated 1004 A (Summer & Winter)
2L112	US Border	BOUN	OVERHEAD			1200	1200	1401	1401	1492	1492				BPA owned section	Nelway Line CT A Phase
2L113	CBK	NTL	OVERHEAD			1069	1152	1274	1339	1347	1406	800 CT	1200		30 minute emergency rating	
2L123	SAT	HWW Tap	OVERHEAD			1637	1891			2233	2407	3334 IR	3000			
2L123	HWW Tap	HWW	OVERHEAD			1067	1152	1285	1349	1357	1416	3000 CT	2000		CT 3000 includes 2.0 RF	
2L123	HWW Tap	DMR	OVERHEAD			1637	1891			2233	2407	2400 CT	3000		CT 2400 includes 2.0 RF	
2L125	SAT	VIT	OVERHEAD			2138	2304	2570	2698	2714	2832	2000 CT	3000		30 minute emergency rating	
2L126	SAT	PIK	OVERHEAD	80	90	1637	1810			2233	2350	2000 CT				
2L128	SAT	HWW Tap	OVERHEAD			1858	2012	2249	2369	2374	2485	3334 IR	3000		30 minute emergency rating for line only	
2L128	HWW Tap	HWW	OVERHEAD			1069	1152	1285	1349	1357	1416	3000 CT	2000		30 minute emergency rating for line only	
2L128	HWW Tap	DMR	OVERHEAD			1949	2166	2265	2445	2391	2557	3000 CT	3000		30 minute emergency rating for line only	
2L129	ARN	EBT	OVERHEAD			1575	1858	1866	2094	1971	2182	2000 CT	1600		30 minute emergency rating	Single Breaker Closed DS Rating - ARN Bus Breaker DS Rating : 1600 A
2L129	EBT	TBY	CABLE			1509	1990	1509	1990	1509	1990				8 hour emergency rating	When one pump station OOS, Circuit Section De-rated to 658 A (Summer and Winter)

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L129	TBY	MTG	OVERHEAD			1575	1712	1731	1810	1773	1848				30 minute emergency rating	
2L129	MTG	MBO	CABLE			1506	1990	1506	1990	1506	1990				8 hour emergency rating	When one pump station OOS, Circuit Section Derated to 658 A (Summer and Winter)
2L129	MBO	VIT	OVERHEAD			1556	1672	1731	1810	1773	1848	2000 CT	3000		30 minute emergency rating	
2L129 Overall	ARN	VIT				1506	1672	1506	1810	1506	1848	2000 CT	1600		30 minute emergency rating	Single Breaker Closed DS Rating - ARN Bus Breaker DS Rating : 1600 A
2L130	SAT	VIT	OVERHEAD			2138	2304	2570	2698	2714	2832	2000 CT	3000		30 minute emergency rating	Conductor rating is limited by the line connections at SAT
2L131	PIK	KTG	OVERHEAD	80	90	972	1068			1301	1365	1200 CT @KTG			Overload limit at 220 hr/year	PN
2L132	PIK	KTG	OVERHEAD	80	90	972	1068			1301	1365	1200 CT @KTG			Overload limit at 220 hr/year	PN
2L142	HSY	GTP	CABLE			824	967 (1268)	913	1060 (1361)	913	1060 (1361)	1000 CT	1200		200 hour emergency rating for cable only (8 hour emergency rating) 1000 CT includes 2.0 RF	
2L143	HSY	ESQ	OVERHEAD			1133	1609			1204	1677	2000 CT			100 hour emergency rating	
2L144	PIK	GOW	OVERHEAD			1793	2032	2139	2332	2276	2454	2000 CT	3000		30 minute emergency rating	
2L145	PIK	BNT	OVERHEAD			1794	2012	2139	2332	2276	2453	2000 CT	3000		30 minute emergency rating for conductors	
2L145	BNT	ESQ	CABLE			920	1575 (1990)	1140	1610 (2010)	1140	1610 (2010)	2000 CT	2000		Cable 100 hr emergency rating (Cable 8 hr emergency rating in parentheses)	
2L146	GOW	HSY	CABLE			735	1141			870	1280	2000 CT	2000		Emergency rating at 100 hr	
2L154	DMR	GLD	OVERHEAD			1009	1142	1224	1328	1304	1399	665 CT	1200	1200	30 minute emergency rating	Line limited to: 844 A (30C), 1004 A (0C) by T1 and T4 at GLD Single transformer operation: 422 A (30C), 502 A (0C) (T1 or T4) Single transformer CT rating: 665 A includes 1.33 RF (T1 or T4)
2L170	SAT	PIK	OVERHEAD			1777	2012	2135	2328	2271	2449	2000 CT	3000		30 minute emergency rating	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L221	SEV	SEL	BUS			1310	1429	1310	1429	1624	1713		2000		24 hour emergency rating for bus only	
2L222	SEV	SEL	BUS			1310	1429	1310	1429	1624	1713		2000		24 hour emergency rating for bus only	
2L240	ACK	SAM	OVERHEAD			1073	1157	1285	1354	1357	1421	800 CT	1200	1200	30 minute emergency rating for conductors	SAM T4: Summer Normal 377 A and 30 minute emergency 643 A Winter Normal 447 A and 30 minute emergency 753 A (Refer to 5T-14)
2L253	REV	ILL	OVERHEAD			1072	1157	1289	1354	1362	1421	400 CT	1200	1200	CT 400 includes: 100A (ILL T1) 100A (ILL T2) 200A (ILL T4)	Transformer ratings: 72 A (ILL T1) 72 A (ILL T2) 188 A (ILL T4)
2L255	ACK	VNT	OVERHEAD			1069	1152	1283	1349	1354	1416	1200 CT	1200		30 minute emergency rating for conductors	ACK bus cable: Summer 1053 A Winter 1277 A
2L256	ACK	VNT	OVERHEAD			1069	1152	1285	1349	1357	1416	1200 CT	1200		30 minute emergency rating for conductors	ACK bus cable: Summer 1053 A Winter 1277 A
2L258	CBK	INV	OVERHEAD	92		1062				1357		800 CT	1200	1200		
2L259	INV	KHS	OVERHEAD	90		1070		1280		1350		500 CT	2000	1200	Portion of circuit is also 1033.5 MCM BLUEBELL ASC	
2L263	VNT	Str. 00-07	OVERHEAD			1063	1191	1290	1358	1360	1427	2400 CT	1200		30 minute emergency rating 2400 CT includes 2.0 RF	
2L263	Str. 00-07	LEE	OVERHEAD			847	1152			1195	1401				Fortis owned line	Conductor 795 MCM (Drake)
2L264	VNT	Str. 00-06	OVERHEAD			1063	1189	1274	1339	1347	1406	2400 CT	1200		30 minute emergency rating 2400 CT includes 2.0 RF	
2L264	Str. 00-06	LEE	OVERHEAD			847	1152			1195	1401				Fortis owned line	Conductor 795 MCM (Drake)
2L265	NIC	WW	OVERHEAD	90		1045				1345		800 CT @VWV	1200			
2L277 / L71	WHS	Str. 71L114F	OVERHEAD			1173	1200	1200	1200	1200	1200				FortisBC owned	Conductor summer, CT winter
2L277 / L71	Str. 71L114F	NLY Tap	OVERHEAD			1106	1222	1283	1378	1356	1443				30 minute emergency rating	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L277 / L71	NLY Tap	NLY	OVERHEAD			1106	1222	1283	1378	1356	1443	1200 CT	2000	1600	30 minute emergency rating 2D25 normally closed	
2L277 / L71	NLY Tap	Str. 71L114G	OVERHEAD			1106	1222	1283	1378	1356	1443		2000		30 minute emergency rating 2D26 normally open	
2L277 / L71	Str. 71L114G	BDY	OVERHEAD			800	800	800	800	800	800				FortisBC and BPA owned BDY 001352-BCT 3 bushing CT	
2L286 (84L)	SEL	Str. 09/05	OVERHEAD			1309	1412	1567	1656	1654	1738	3000 CT	2000		30 minute emergency rating	
2L286 (84L)	Str. 09/05	WAX	OVERHEAD			1172	1200			1172	1200				Fortis owned line Current transformer	
2L288 / L79	KCL	Str. 79KCL/01	OVERHEAD			1018	1120	1210	1263	1270	1327	2000 CT	2000		30 minute emergency rating	
2L288 / L79	Str. 79KCL/01	BTS	OVERHEAD			847	1152			1195	1401				Fortis BC owned circuit Conductor	
2L289 / L82	SEL	BTS 82-1	OVERHEAD			1158	1285	1373	1457	1449	1531	3737 IR	3150		30 minute emergency rating line only	
2L289 / L82	BTS 82-1	BTS	OVERHEAD			1130	1249			1425	1496				Fortis BC owned	
2L290 / L81	ALH	BTS	OVERHEAD	91		1070		1280		1350					Limiting Section	
2L293	NLY	SEL	OVERHEAD			1073	1157	1283	1354	1354	1421	1200 CT	2000		30 minute emergency rating	
2L294	NLY	AAL	OVERHEAD			1123	1259	1347	1452	1420	1517	1204 IR	1200		30 minute emergency rating	
2L294	AAL	CBK	OVERHEAD			1108	1189	1274	1339	1347	1406	1204 IR	1200	1200	30 minute emergency rating Wavetraps located at AAL and CBK	
2L295	SEL	KCL	OVERHEAD			1073	1157	1289	1354	1362	1421	2000 CT	2000		30 minute emergency rating * Ambient >30°C to be expected	
2L299	SEL	KCL	OVERHEAD			1073	1157	1289	1354	1362	1421	2000 CT	2000		30 minute emergency rating * Ambient >30°C to be expected	
2L307	BLW	QRP	OVERHEAD	90		1050				1275		1500 CT @BLW	1200			

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L308	GMS	DKT	OVERHEAD			1073	1157	1287	1354	1359	1421	1200 CT	2000		30 minute emergency rating	Single Breaker Closed CT Rating – GMS 2CT1 and 2CT3 Rating : 1200 A
2L309	DKT	SNK	OVERHEAD			1073	1157	1283	1354	1354	1421	2000 CT	2000		30 minute emergency rating for line only	
2L312	SLS	SNK	OVERHEAD			1066	1187	1279	1374	1351	1438	2000 CT	2000		30 minute emergency rating for line only	
2L313	SNK	KGP Tap	OVERHEAD			1082	1200	1281	1375	1352	1438	2000 CT	3000		30 minute emergency rating for line only	
2L313	KGP Tap	MNK Tap	OVERHEAD			1082	1200	1281	1375	1352	1438				30 minute emergency rating for line only	
2L313	MNK Tap	MKT	OVERHEAD			1073	1157	1281	1354	1352	1421	2000 CT	2000		30 minute emergency rating for line only	
2L314	DKT	DKW	OVERHEAD			1031	1031	1031	1031	1031	1031	500 CT	1200		Customer owned and BCH operated circuit	2VTCT1 and 2VTCT5
2L315	TLR	Str. GDI/010	OVERHEAD			1008	1120	1199	1288	1267	1348	1200 CT	1200		30 minute. emergency rating for line only	Single breaker closed rating; 1200A for TLR 2D1CB6 and 2D1CB7
2L315	Str. GDI/010	QTY	OVERHEAD			806	806	806	806	806	806				Customer owned Conductor rated at 40°C	
2L320	KDS	KMS	OVERHEAD	75		729				980		643 IR @KDS				
2L322	BLM	TLR	OVERHEAD	91		1055				1280		1200 CT	1200			
2L323	QNT	TLR	OVERHEAD	91		1055				1280		1200 CT	1200			
2L329	SGB	BMT	OVERHEAD	90	125	1954	2106	2344	2462	2476	2584	2000 CT	2000		30 minute emergency rating Double circuit structures with 2L333	
2L330	SLS	LAP	OVERHEAD	90		1055				1280		2000 CT				
2L333	SGB	BMT	OVERHEAD	90	125	1954	2106	2344	2462	2476	2584	2000 CT	2000		30 minute emergency rating Double circuit structures with 2L329	
2L337	MKT	TLR	OVERHEAD			1073	1157	1271	1354	1342	1421	1200 CT	1200		30 minute emergency rating for line only	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
2L339	MKT	MKL	OVERHEAD			1140	1140	1140	1140	1140	1140	1200 CT	2000			
2L340	SLS	SGB	OVERHEAD	90	125	2023	2240	2402	2526	2540	2654	2000 CT	2000		30 minute emergency rating Double circuit structures with 2L342	
2L342	SLS	SGB	OVERHEAD	90	125	2023	2240	2402	2526	2540	2654	2000 CT	2000		30 minute emergency rating Double circuit structures with 2L340	
2L352	SCK	HMH	OVERHEAD			1073	1157	1276	1354	1347	1421	1493 IR	1200		30 minute emergency rating for conductors	
2L353	GLN	TAC	OVERHEAD	91		1055				1280		300 CT @ TAC		1200		
2L354	BLW	RBF	OVERHEAD			574	807	950	1093	1058	1184	800 CT	1200	1200	30 minute emergency rating for line only	
2L374	BQN	TAT	OVERHEAD	90		1736				2228		1200 CT	2000		BQN 2D25 – 2000A TAT 2D21- 2000A	
2L379	BQN	VOL Tap	OVERHEAD			1031	1031	1031	1031	1031	1031	1000 CT	1200		Customer Owned BQN 2CTMK1	
2L379	VOL Tap	VOL	OVERHEAD			1031	1031	1031	1031	1031	1031	50 CT			Customer Owned VOL 2CT1	
2L379	VOL Tap	FKR	OVERHEAD			1031	1031	1031	1031	1031	1031	800 CT			Customer Owned FKR 2CTX-002	
2L391	SBK	SGB	OVERHEAD			1343	1459	1345	1459	1667	1750	2000 CT	2000			
2L392	SBK	SGB	OVERHEAD			1343	1459	1345	1459	1667	1750	2000 CT	2000			
3L2	BRT	SAC Tap	OVERHEAD			1240	1639	1813	2085	2020	2258	800 CT	1600		30 minute emergency rating for conductors Single breaker closed rating: 1200 A - BRT 3CB1, 3CB2	
3L2	SAC Tap	UHT	OVERHEAD			1045	1120	1201	1263	1270	1327	800 CT	2000	2000	30 minute emergency rating for conductors	
3L3	WAH	ROS	OVERHEAD			1045	1120	1201	1263	1270	1327	600 CT	1600		30 minute emergency rating Over all circuit rating is limited by WAH T1 Rating: 122 A (Summer Normal and Overload) and 145 A (Winter Normal and Overload) Single breaker closed (ROS 3CB3) rating: 1200 A	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
3L5	UHT	ROS	OVERHEAD			1045	1120	1201	1263	1270	1327	1200 CT	1600		30 minute emergency rating for conductors	
3L13	BRT	BR2	OVERHEAD	50		2018	2106	2320	2438	2454	2564	800 O/C	1200		30 minute emergency rating Overhead limited by line connections at BR2 and BRT	Single Breaker Closed CB Rating – BRT 3CB1 and 3CB6 Breaker Rating : 1200 A (DS rated at 1600 A)
3L14	BRT	BR2	OVERHEAD	50		2018	2106	2320	2438	2454	2564	800 CT	1200		30 minute emergency rating Overhead limited by line connections at BR2 and BRT	Single Breaker Closed CB Rating – BRT 3CB1 and 3CB6 Breaker Rating : 1200 A (DS rated at 1600 A)
3L15	BRT	BR1	OVERHEAD			1135	1565	1812	2084	2019	2257	1200 CT	1600		30 minute emergency rating	
3L16	BRT	BR1	OVERHEAD			1954	2106	2320	2438	2454	2564	1200 CT	1600		30 minute emergency rating	
5L1	GMS	KDY	OVERHEAD			2244	2792	3160	3540	3444	3784	3000 CT	3000		30 minute emergency rating for line only KDY 5CX1 Emergency Capabilities: 2530 A for 8 hours in 12 hour period; 3105 A for 30 minutes in a 6 hour period; 3450 A for 10 minutes in a 2 hour period	KDY 5CX1 Continuous Ratings - 2300 A
5L1	KDY	WSN	OVERHEAD			2396	2964	3356	3744	3656	4004	3000 CT	3000		30 minute emergency rating for line only KDY 5CX1 Emergency Capabilities: 2530 A for 8 hours in 12 hour period; 3105 A for 30 minutes in a 6 hour period; 3450 A for 10 minutes in a 2 hour period	KDY 5CX1 Continuous Ratings - 2300 A
5L2	GMS	KDY	OVERHEAD			2204	2760	3132	3516	3420	3764	3000 CT	3000		30 minute emergency rating for line only KDY 5CX2 Emergency Capabilities: 2530 A for 8 hours in 12 hour period; 3105 A for 30 minutes in a 6 hour period; 3450 A for 10 minutes in a 2 hour period	KDY 5CX2 Continuous Ratings - 2300 A
5L2	KDY	WSN	OVERHEAD			2352	2932	3324	3720	3632	3984	3000 CT	3000		30 minute emergency rating for line only KDY 5CX2 Emergency Capabilities: 2530 A for 8 hours in 12 hour period; 3105 A for 30 minutes in a 6 hour period; 3450 A for 10 minutes in a 2 hour period	KDY 5CX2 Continuous Ratings - 2300 A
5L3	PCN	KDS	OVERHEAD			2200	2756	3132	3516	3420	3760	3000 CT	3000		30 minute emergency rating for conductor only	
5L4	GMS	PCN	OVERHEAD			2658	3316	3592	4004	3892	4268	3000 CT	3000		30 minute emergency rating	
5L5	SBK	PCN	OVERHEAD			3716	4024	4475	4738	4724	4970	3000 CT	3000		30 minute emergency rating for the line only	
5L6	SBK	PCN	OVERHEAD			3716	4024	4475	4738	4724	4970	3000 CT	3000		30 minute emergency rating for the line only	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
5L7	KDS	WSN	OVERHEAD			2564	3096	3464	3840	3752	4088	3000 CT	3000		30 minute emergency rating for line only KDY 5CX3 Emergency Capabilities: 2530 A for 8 hours in 12 hour period; 3105 A for 30 minutes in a 6 hour period; 3450 A for 10 minutes in a 2 hour period	KDY 5CX3 Continuous Ratings - 2300 A
5L11	WSN	MLS	OVERHEAD			2564	3026	3320	3648	3556	3856	3000 CT	3000		30 minute emergency rating for line only MLS 5CX1 Emergency Capabilities: 2145 A for 8 hours in 12 hour period; 2633 A for 30 minutes in a 6 hour period; 2925 A for 10 minutes in a 2 hour period	MLS 5CX1 Continuous Ratings - 1950 A Single breaker closed CT rating
5L11	MLS	KLY	OVERHEAD			2564	3088	3448	3820	3736	4068	3000 CT	3000		30 minute emergency rating for line only MLS 5CX1 Emergency Capabilities: 2145 A for 8 hours in 12 hour period; 2633 A for 30 minutes in a 6 hour period; 2925 A for 10 minutes in a 2 hour period	MLS 5CX1 Continuous Ratings - 1950 A Single breaker closed CT rating
5L12	WSN	MLS	OVERHEAD			2684	3184	3532	3896	3812	4136	3000 CT	3000		30 minute emergency rating for line only MLS 5CX2 Emergency Capabilities: 2145 A for 8 hours in 12 hour period; 2633 A for 30 minutes in a 6 hour period; 2925 A for 10 minutes in a 2 hour period	MLS 5CX2 Continuous Ratings - 1950 A Single breaker closed CT rating
5L12	MLS	KLY	OVERHEAD			2684	3184	3532	3896	3812	4136	3000 CT	3000		30 minute emergency rating for line only MLS 5CX2 Emergency Capabilities: 2145 A for 8 hours in 12 hour period; 2633 A for 30 minutes in a 6 hour period; 2925 A for 10 minutes in a 2 hour period	MLS 5CX2 Continuous Ratings - 1950 A Single breaker closed CT rating
5L13	WSN	MLS	OVERHEAD			3620	4024	4476	4738	4726	4970	3000 CT	3000		30 minute emergency rating for line only MLS 5CX3 Emergency Capabilities: 2145 A for 8 hours in 12 hour period; 2633 A for 30 minutes in a 6 hour period; 2925 A for 10 minutes in a 2 hour period	MLS 5CX3 Continuous Ratings - 1950 A Single breaker closed CT rating
5L13	MLS	KLY	OVERHEAD			3620	4024	4432	4738	4676	4970	3000 CT	3000		30 minute emergency rating for line only MLS 5CX3 Emergency Capabilities: 2145 A for 8 hours in 12 hour period; 2633 A for 30 minutes in a 6 hour period; 2925 A for 10 minutes in a 2 hour period	MLS 5CX3 Continuous Ratings - 1950 A Single breaker closed CT rating
5L29	MSA	CCB	OVERHEAD			1800	2496	2856	3304	3188	3584	3000 CT	3000		30 minute emergency rating	
5L29	CCB	TXE	CABLE			1321 1410	1962	1410	2200	1410	2200	2000 CT			1 hour emergency rating CT for cable monitoring	Summer: 1321 A without shore cooling, 1410 A with shore cooling
5L29	TXE	TIR	OVERHEAD			1868	2600	3008	3472	3360	3764				30 minute emergency rating	
5L29	TIR	TXW	OVERHEAD			1868	2600	3008	3472	3360	3764				30 minute emergency rating	
5L29	TXW	NCT	CABLE			1321 1410	1962	1410	2200	1410	2200	2000 CT			1 hour emergency rating CT for cable monitoring	Summer: 1321 A without shore cooling, 1410 A with shore cooling

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
5L29	NCT	DMR	OVERHEAD			1864	2608	3032	3496	3388	3792	2 x 1500 CT	3000		Single Breaker Closed CT Rating: 1500 A DMR CT403, CT404, CT435, CT436	
5L30	CKY	MSA	OVERHEAD	91		3238		3901		4071		3000 CT	3000		Emergency operation utilizing 2L9/1L31 and 230 kV (see 5L30-T06-B2) for either 5L30 or 5L32 is limited by thermal rating of 1L31: 261 A summer, 441 A winter at 49°C Single Breaker Closed CT Rating	
5L31	MSA	CCB	OVERHEAD			1804	2496	2856	3304	3192	3584	3000 CT	3000		30 minute emergency rating	
5L31	CCB	TXE	CABLE			1321 1410	1962	1410	2200	1410	2200	2000 CT			1 hour emergency rating CT for cable monitoring	Summer: 1321 A without shore cooling, 1410 A with shore cooling
5L31	TXE	TIR	OVERHEAD			1880	2608	3012	3472	3364	3768	CT			30 minute emergency rating	
5L31	TIR	TXW	OVERHEAD			1880	2608	3012	3472	3364	3768	CT			30 minute emergency rating	
5L31	TXW	NCT	CABLE			1321 1410	1962	1410	2200	1410	2200	2000 CT			1 hour emergency rating CT for cable monitoring	Summer: 1321 A without shore cooling, 1410 A with shore cooling
5L31	NCT	DMR	OVERHEAD			1864	2608	3032	3496	3388	3792	2 x 1500 CT	3000		Single breaker closed CT rating: 1500A DMR CT375, CT376, CT409, CT410	
5L32	CKY	MSA	OVERHEAD	91		3238		3901		4071		3000 CT	3000		Emergency operation utilizing 2L9/1L31 and 230 kV (see 5L30-T06-B2) for either 5L30 or 5L32 is limited by thermal rating of 1L31: 261 A summer, 441 A winter at 49°C Single Breaker Closed CT Rating	
5L40	ING	CBN	OVERHEAD			2772	3260	3524	3904	3820	4160	3000 CT	3000		30 minute emergency rating Single Breaker Closed CT Rating	
5L41	CBN	CHP	OVERHEAD			2743	3162	3370	3697	3607	3906	3000 CT	3000		30 minute emergency rating for line only CHP 5CX1 Emergency Capabilities: 2090 A for 8 hours in 12 hour period; 2565 A for 30 minutes in a 6 hour period; 2850 A for 10 minutes in a 2 hour period	CHP 5CX1 Continuous Ratings - 1900 A
5L41	CHP	KLY	OVERHEAD			2790	3236	3543	3878	3796	4101	3000 CT	3000		30 minute emergency rating for line only CHP 5CX1 Emergency Capabilities: 2090 A for 8 hours in 12 hour period; 2565 A for 30 minutes in a 6 hour period; 2850 A for 10 minutes in a 2 hour period	CHP 5CX1 Continuous Ratings - 1900 A

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
5L42	KLY	CRK	OVERHEAD			2328	2856	3180	3544	3444	3771	3000 CT	3000		30 minute emergency rating for conductor CRK Continuous RMS Rating: 2180A CRK Overload Capabilities: 2398 A for 8 hours in 12-hour. 2943 A for ½ hour in a 6 hour period 3270 A for 10 minutes in a 2 hour period Single Breaker Closed CT Rating	CRK RESTRICTION - 2180 A CRK temporary overload capability available as specified
5L42	CRK	CKY	OVERHEAD			2384	2964	3348	3748	3656	4008	3000 CT	3000		30 minute emergency rating for conductor CRK Continuous RMS Rating: 2180A CRK Overload Capabilities: 2398 A for 8 hours in 12-hour. 2943 A for ½ hour in a 6 hour period 3270 A for 10 minutes in a 2 hour period Single Breaker Closed CT Rating	CRK RESTRICTION - 2180 A CRK temporary overload capability available as specified
5L44	MDN	ING	OVERHEAD			2628	3161	3523	3902	3816	4156	3000 CT	3000		30 minute emergency rating for line only	
5L45	CKY	MDN	OVERHEAD			2305	2852	3175	3562	3466	3812	3000 CT	3000		30 minute emergency rating for line only	
5L51	ING	US Border	OVERHEAD			3198	3724	4040	4404	4308	4640	3000 CT	3000		30 minute emergency rating	
5L51	US Border	CUST	OVERHEAD			4080		4650		4920					BPA owned section	
5L52	ING	US Border	OVERHEAD			2990	3510	3848	4240	4135	4489	3000 CT	3000		30 minute emergency rating	
5L52	US Border	CUST	OVERHEAD			3030		3660		3930					BPA owned section	
5L61	WSN	GLN	OVERHEAD			2214	2892	3176	3600	3500	3872	3000 CT	3000		30 minute emergency rating for line only Single Breaker Closed CT Rating	
5L62	TKW	GLN	OVERHEAD			2424	2988	3264	3672	3576	3936	3000 CT	3000		30 minute emergency rating for line only Single Breaker Closed CT Rating	
5L63	SKA	TKW	OVERHEAD			2232	2796	3092	3492	3392	3748	2 x 800 CT	3000		30 minute emergency rating for line only PN rating for single breaker operation: 800 A for SKA 5CT2 & 5CT12	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
5L71	MCA	SYA	OVERHEAD			2332	2920	3312	3716	3616	3980	3000 CT	4000		30 minute emergency rating for conductor SYA 5CX1 continuous rating: 3000A SYA 5CX1 Emergency Capabilities: 3300 A for 8 hours in 12 hour 3750 A for 1 hours in 8 hour 4050 A for 30 minutes in 6 hour 4500 A for 10 minutes in 2 hour	SYA 5CX1: 3000 A SYA 5CB1: 3000 A SYA 5BP1: 3000 A
5L71	SYA	NIC	OVERHEAD			2492	3096	3496	3916	3816	4188	3000 CT	3000		30 minute emergency rating for conductor SYA 5CX1 continuous rating: 3000A SYA 5CX1 Emergency Capabilities: 3300 A for 8 hours in 12 hour 3750 A for 1 hours in 8 hour 4050 A for 30 minutes in 6 hour 4500 A for 10 minutes in 2 hour	NIC 5D24: 3000A
5L72	MCA	SYA	OVERHEAD			2332	2920	3312	3716	3616	3980	3000 CT	4000		30 minute emergency rating for conductor SYA 5CX2 Continuous ratings: 3000 A SYA 5CX2 Emergency Capabilities: 3300 A for 8 hours in 12 hour 3750 A for 1 hours in 8 hour 4050 A for 30 minutes in 6 hour 4500 A for 10 minutes in 2 hour	SYA 5CX2: 3000 A SYA 5CB2: 3000 A SYA 5BP2: 3000 A
5L72	SYA	NIC	OVERHEAD			2492	3096	3496	3916	3816	4188	3000 CT	3000		30 minute emergency rating for conductor SYA 5CX2 Continuous ratings: 3000 A SYA 5CX2 Emergency Capabilities: 3300 A for 8 hours in 12 hour 3750 A for 1 hours in 8 hour 4050 A for 30 minutes in 6 hour 4500 A for 10 minutes in 2 hour	NIC 5D23: 3000A
5L75	REV	ACK	OVERHEAD			3130	3626	3913	4293	4180	4527	3000 CT	3000		Ambient > 30°C to be expected 30 minute emergency rating for line only Single Breaker Closed CT Rating	
5L76	ACK	NIC	OVERHEAD			2660	3291	3646	4067	3969	4327	3000 CT	3000		30 minute emergency rating	
5L77	REV	ACK	OVERHEAD			2428	3061	3443	3877	3750	4140	3000 CT	3000		Ambient > 30°C to be expected 30 minute emergency rating for line only Single Breaker Closed CT Rating	
5L79	NIC	ACK	OVERHEAD			3378	3699	3895	4159	4129	4372	3000 CT	3000		30 minute emergency rating for line only Ambient >30C to be expected	
5L81	NIC	AMC	OVERHEAD			2428	3004	3343	3751	3649	4014	3000 CT	3000		30 minute emergency rating for conductor AMC continous rating: 2120 A AMC Overload Capabilities: -2332 A for 8 hrs in 12 hour period -2862 A for 30 minute in a 6 hour period -3180 A for 10 minute in a 2 hour period	AMC CONTINUOUS RESTRICTION - 2120 A AMC temporary overload capability available as specified.

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
5L81	AMC	ING	OVERHEAD			2305	2850	3169	3556	3459	3805	3000 CT	3000		30 minute emergency rating for conductor AMC continuous rating: 2120 A AMC Overload Capabilities: -2332 A for 8 hrs in 12 hour period -2862 A for 30 minute in a 6 hour period -3180 A for 10 minute in a 2 hour period	AMC CONTINUOUS RESTRICTION - 2120 A AMC temporary overload capability available as specified.
5L82	NIC	AMC	OVERHEAD			2452	3024	3348	3756	3654	4020	3000 CT	3000		30 min emergency rating for conductor AMC Continuous Rating: 2120A AMC Overload Capabilities: -2332 A for 8 hours in a 12-hour period -2862 A for 30 minutes in a 6-hour period -3180 A for 10 minutes in a 2-hour period	AMC CONTINUOUS RESTRICTION - 2120 A AMC Temporary overload capability available as specified.
5L82	AMC	MDN	OVERHEAD			2452	3024	3348	3756	3654	4020	3000 CT	3000		30 min emergency rating for conductor AMC Continuous Rating: 2120A AMC Overload Capabilities: -2332 A for 8 hours in a 12-hour period -2862 A for 30 minutes in a 6-hour period -3180 A for 10 minutes in a 2-hour period	AMC CONTINUOUS RESTRICTION - 2120 A AMC Temporary overload capability available as specified.
5L83	NIC	RYC	OVERHEAD			3716	4024	4473	4738	4721	4970	3000 CT	3000		30 minute emergency rating	RYC Equipment Continues ratings: RYC 5BP, 5CB1, 5CX1 , CTs rated at 3000 A
5L83	RYC	MDN	OVERHEAD			3716	4024	3602	4154	4011	4498	3000 CT	3000		30 minute emergency rating	RYC Equipment Continues ratings: RYC 5BP, 5CB1, 5CX1 , CTs rated at 3000 A NIC 5D28 rated 3000 A
5L87	KLY	GUI	OVERHEAD			3716	4024	4498	4738	4746	4970	3000 CT	3000		Ambient >30°C to be expected 30 minute emergency rating for line only GUI 5CX1 Emergency Capabilities: 2640 A for 8 hours in 12 hour period; 3240 A for 30 minutes in a 6 hour period; 3600 A for 10 minutes in a 2 hour period	GUI 5CX1 Continuous Ratings - 2400 A Single Breaker Closed CT Rating
5L87	GUI	NIC	OVERHEAD			3716	4024	4498	4738	4746	4970	3000 CT	3000		Ambient >30°C to be expected 30 minute emergency rating for line only GUI 5CX1 Emergency Capabilities: 2640 A for 8 hours in 12 hour period; 3240 A for 30 minutes in a 6 hour period; 3600 A for 10 minutes in a 2 hour period	GUI 5CX1 Continuous Ratings - 2400 A Single Breaker Closed CT Rating
5L91	SEL	ACK	OVERHEAD			2511	3100	3460	3873	3776	4144	3000 CT	3000		30 minute emergency rating Ambient >30°C to be expected	Single Breaker Closed CT Rating : 3000 A
5L92	SEL	CBK	OVERHEAD			2954	3400	3668	4011	3924	4237	2874 IR	3000		30 minute emergency rating	
5L94 (1201L)	CBK	BC-AB Border	OVERHEAD			2410	2904	3127	3492	3427	3752	2915 IR	3000		30 minute emergency rating for line only	

APPENDIX 1 - Ratings for all Transmission Circuits 60 kV or Higher

Transmission Circuits Information				Conductor Ratings (A)								Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Conductor Temp (°C)		Summer (30°C)		Winter (10°C)		Winter (0°C)		PN	DS	WT		
	A	B		Norm	Emerg	Norm	Emerg	Norm	Emerg	Norm	Emerg					
5L94 (1201L)	BC-AB Border	BNS	OVERHEAD			1411	1835			1600	2400				Altalink owned 10 minute emergency rating	Conductor (summer), CT (winter)
5L96	SEL	VAS	OVERHEAD			3637	4024	4430	4738	4668	4958	3000 CT	3000		30 minute emergency rating for line only Ambient > 30°C to be expected	Single Breaker Closed CT Rating
5L98	VAS	NIC	OVERHEAD			3531	3910	4174	4474	4406	4682	3000 CT	3000		30 minute emergency rating Ambient >30°C to be expected	Single Breaker Closed CT Rating : 3000 A NIC 5D31 rated 3000 A

APPENDIX 2 - Ambient Temperature Adjusted Ratings for Select Bulk Electric System Transmission Circuits

Transmission Circuits Information				Conductor Ratings (A)					Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Ambient Temp (°C)	Summer Normal Rating	Summer Emergency Rating	Winter Normal Rating	Winter Emergency Rating	PN	DS	WT		
	A	B											
2L90	KLY	BRT	OVERHEAD	-10			1195	1305	1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	-5			1151	1267	1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	0	1035	1184	1105	1227	1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	5	976	1136	1057	1186	1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	10	912	1085	1003	1143	1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	15	844	1030	941	1097	1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	20	768	972	874	1049	1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	25	683	910			1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	30	585	842			1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	35	464	768			1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A
2L90	KLY	BRT	OVERHEAD	40	297	684			1200 CT	1200		30 minute emergency rating	Single breaker closed operation: BRT 2D1CB1 rating: 800 A BRT 2D2CB1 rating: 800 A

APPENDIX 2 - Ambient Temperature Adjusted Ratings for Select Bulk Electric System Transmission Circuits

Transmission Circuits Information				Conductor Ratings (A)					Equipment Rating (A)			Comments	Limitation
Circuit	Circuit Section Terminals		Limiting Section Type	Ambient Temp (°C)	Summer Normal Rating	Summer Emergency Rating	Winter Normal Rating	Winter Emergency Rating	PN	DS	WT		
	A	B											
2L103	MIN	Str. 00/01	OVERHEAD	-10			1469	1617	1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	-5			1408	1565	1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	0			1344	1510	1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	5			1276	1452	1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	10			1204	1392	1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	15	1031	1253	1126	1329	1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	20	938	1182			1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	25	835	1106			1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	30	715	1023			1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	35	571	932			1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF
2L103	MIN	Str. 00/01	OVERHEAD	40	370	830			1800 CT	2000		30 minute emergency rating	Single breaker CT ratings: 1800 A includes 1.5 RF