

# Alberta Remedial Actions Schemes

Date: Jan. 19, 2024

APS			
#	Scheme Name	Owner(s)	Scheme Function
11	Bennett 520S Underfrequency And Power Scheme	AltaLink	Protect AIES from external under frequency events
12	Bennett 520S Undervoltage & Power Scheme	AltaLink	Mitigate voltage instability affects to WECC and Alberta systems from failure of BC Hydro RASs under high BCH export to USA
20	Anderson 801s 240 kV Line 9L933, 9L934 and 9L950 Thermal Protection Scheme to Sheerness Plant	ATCO Electric, Other MP	Mitigates overloads on each line by sending alarm and trip to the Sheerness Plant.
25	Brazeau 62s Generation Tripping Scheme	AltaLink	Protects 138 kV system load from overload by tripping generation in post Category B of 995L.
27	562S Cypress McNeil Power and Undervoltage Scheme	ATCO Electric, AltaLink	Mitigates voltage instability in southeast AIES during export energy schedule to Saskatchewan
28	163S Amoco Empress Reverse Power and Undervoltage Scheme	AltaLink	Mitigates voltage instability in southeast AIES in post C5 of 240 kV lines between 132s Ware Junction and 163s Amoco Empress
29	McNeil (840s) Under Voltage Runback Scheme	ATCO Electric	Mitigates voltage instability in southeast AIES during export energy schedule to Saskatchewan.
33	Cypress (T562s) Reverse Power and Undervoltage Scheme	AltaLink	Mitigate voltage instability in southeast AIES in post C5 of 240 kV lines between 132s Ware Junction and 562s Cypress.
36	Garden City 226s WAGF Trip Scheme	AltaLink	Protects 225L line from potential overload in post 863L open end at 618s Riverbend.
37	Peigan 59s - 616L Overload Mitigation Scheme	AltaLink	Protects line from overload by runback and/or trip generation.
40	Coleman 799s - 786L Overload Mitigation Scheme	AltaLink, Other MP	Protects line from overload by runback and/or trip generation.
42	225LW-385S Overload Mitigation Scheme	AltaLink	Protect line from overload by opening local breaker or tripping generation
43	Stirling 67s - 508L Load Trip Scheme	AltaLink	Protects area load from voltage collapse.
47	Obed Mountain Coal 411s - Load Trip Scheme	AltaLink	Protects area load from low voltage under extreme contingencies.
49	Summit 653s 752L Overload Mitigation Scheme	AltaLink	Protects line from overload by runback and/or trip generation.
50	Summit 653s 688L Overload Mitigation Scheme	AltaLink	Protects line from overload by runback and/or trip generation.
51	East Airdrie 199S 688L and 631L Overload Mitigation Scheme	AltaLink	Protects line from overload by runback and/or trip generation.
112	Cypress 562s - Power/Under & Over Frequency Scheme	AltaLink	Mitigates potential generation or load trips in AIES during over or under frequency excursions

The AESO RAS List is posted for information purposes only. As such, the AESO makes no warranties or representation as to the accuracy, completeness, or fitness for any particular purpose with respect to the information contained within the AESO RAS List, whether expressed or implied. While the AESO has made every attempt to ensure information contained in the AESO RAS List is obtained from reliable sources, the AESO is not responsible for any errors or omissions. Any reliance placed on the information contained in the AESO RAS List is at the reader's sole risk. Where this is a conflict between the information contained in the AESO RAS List and the definition of a "remedial action scheme" in the AESO's Consolidated Authoritative Document Glossary, the definition takes precedence. If you have any questions in regards to the list and its content, please email your inquiry to [RAS@aeso.ca](mailto:RAS@aeso.ca)

<b>APS #</b>	<b>Scheme Name</b>	<b>Owner(s)</b>	<b>Scheme Function</b>
120	Grassland I-282s AIPac Load Trip Scheme	AltaLink	Protect area load from under voltage in post AI-Pac generation trip.
126	Magrath 225s Generation Trip Scheme	AltaLink	Mitigates overload on 225L.
129	Goose Lake 103s 613L Overload Mitigation Scheme	AltaLink	Mitigates overload on 613L and 240 kV outages.
134	Central East Transfer Out Overload Mitigation Scheme	ATCO Electric, AltaLink	Mitigate potential overload and other reliability concerns in the area
136	Direct Transfer Trip to MATL on Loss of 1201L	AltaLink	Ensures compliance with Category A, B and C events.
137	120S MATL Local Detection Scheme	Other MP	Ensures compliance with Category A, B and C events.
141	498S Voltage Instability Mitigation	AltaLink	Mitigates potential voltage instability under peak load conditions.
142	799L Overload and 77S Low Voltage Mitigation	AltaLink	Mitigates potential voltage instability and overload under peak load conditions.
145	Shepard RAS - Mitigation of 138 kV Thermal Constraints on ENMAX System	Enmax	Mitigates overload on ENMAX 138 kV system.
151	223S Strome Low Voltage Mitigation	AltaLink	Mitigates low voltage
154	876L Overload Mitigation	TransAlta Corporation	Mitigates 876L overload
155	Kearl Voltage Stability Mitigation (P2179)	ATCO Electric	Mitigates low voltage and voltage stability
157	Chestermere 419S Load Shed Scheme	AltaLink	Mitigate overload, low voltage and voltage instability.
158	Ksituan 754S Voltage Stability Mitigation (normally disabled)	ATCO Electric	Mitigate voltage instability on the area's 144 kV system
159	936S Norberg Under Voltage Mitigation	ATCO Electric	Mitigates low voltage on the area's 144 kV system
160	Bighorn Instability Mitigation Scheme	AltaLink	Protect generator from instability.
162	7L81 Flow and Related 791s Undervoltage Mitigation	ATCO Electric	Under Voltage Mitigation
163	Vista 1029S Under Voltage Mitigation Scheme	Other MP	Under Voltage Mitigation
164	CBW Area 240 kV Contingency Mitigation	AltaLink	Protects local area system against the loss of various 240 kV lines
167	Coaldale 254S – 820L Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation and opening line
168	Taber 83S – 172L Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation and opening line
169	725LW-674S Overload Mitigation	City of Lethbridge	Mitigate potential overload by tripping generation
170	1005L-356S Overload Mitigation	AltaLink	Mitigate potential overload by tripping generation
171	H.R. Milner 740S Overload and Transient Instability Mitigation	ATCO Electric	Mitigate overload and transient instability.
172	Garneau – Meadowlark Reconfiguration Scheme	EPCOR	re-configure 72 kV system to mitigate overload

The AESO RAS List is posted for information purposes only. As such, the AESO makes no warranties or representation as to the accuracy, completeness, or fitness for any particular purpose with respect to the information contained within the AESO RAS List, whether expressed or implied. While the AESO has made every attempt to ensure information contained in the AESO RAS List is obtained from reliable sources, the AESO is not responsible for any errors or omissions. Any reliance placed on the information contained in the AESO RAS List is at the reader's sole risk. Where this is a conflict between the information contained in the AESO RAS List and the definition of a "remedial action scheme" in the AESO's Consolidated Authoritative Document Glossary, the definition takes precedence. If you have any questions in regards to the list and its content, please email your inquiry to [RAS@aeso.ca](mailto:RAS@aeso.ca)

<b>APS #</b>	<b>Scheme Name</b>	<b>Owner(s)</b>	<b>Scheme Function</b>
173	880L-321S Overload Mitigation Scheme	AltaLink, City of Medicine Hat	Mitigate potential overload by tripping generation
174	Queenstown 504S – 161L Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation
175	Milo 356S – 924L/927L Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation
178	172L (370S-181S) Overload Mitigation	AltaLink	Mitigate potential overload by tripping generation
179	765L overload mitigation scheme	AltaLink	Mitigate overload
180	879L Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation
181	610L Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation
182	1005L Outage and 940L Contingency Mitigation Scheme	AltaLink	Avoid project radially connected to MATL line
185	890L overload mitigation scheme	AltaLink	Mitigate potential overload by tripping generation
186	T1 and T2 - 39S Bickerdike Overload Mitigation	AltaLink	Mitigate potential overload by tripping generation
187	Any two 240 kV lines (1084L, 1135L and 1168L) contingency related mitigation	AltaLink	Mitigate potential overload by tripping generation
188	740L (Bickerdike to Edson) overload mitigation scheme	AltaLink	Mitigate potential overload by tripping generation
189	202L overload mitigation scheme	AltaLink	Mitigate potential overload by tripping generation
190	720L overload mitigation scheme	AltaLink	Mitigate potential overload by tripping generation
194	Chestermere 419S Area Overload Mitigation and Generation Tripping Scheme	AltaLink	Mitigate potential overload by tripping generation
195	763L Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation
198	225LE-385S Overload Mitigation Scheme	AltaLink	Protect line from overload by tripping generation
200	901T-801S Anderson Overload Mitigation	ATCO Electric	Mitigates potential overload and other reliability concerns in the area.
201	7L224-774S Overload Mitigation Scheme	ATCO Electric	Mitigates potential overload in the area.
202	7L171-804S Overload Mitigation	ATCO Electric	Mitigates potential overload and other reliability concerns in the area.
203	7L128-963S Overload Mitigation	ATCO Electric	Mitigates potential overload in the area.
207	658L-562S Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation
208	668L-562S Overload Mitigation Scheme	AltaLink	Mitigate potential overload by tripping generation
215	9L16-755S Overload Mitigation Scheme	ATCO Electric	Mitigates potential overload in the area.
604	Windy Point/Oldman River Tripping Scheme	AltaLink	Protects area lines from overload by tripping generation
605	Summerview Tripping Scheme	AltaLink	Protects area lines from overload by tripping generation

The AESO RAS List is posted for information purposes only. As such, the AESO makes no warranties or representation as to the accuracy, completeness, or fitness for any particular purpose with respect to the information contained within the AESO RAS List, whether expressed or implied. While the AESO has made every attempt to ensure information contained in the AESO RAS List is obtained from reliable sources, the AESO is not responsible for any errors or omissions. Any reliance placed on the information contained in the AESO RAS List is at the reader's sole risk. Where this is a conflict between the information contained in the AESO RAS List and the definition of a "remedial action scheme" in the AESO's Consolidated Authoritative Document Glossary, the definition takes precedence. If you have any questions in regards to the list and its content, please email your inquiry to [RAS@aeso.ca](mailto:RAS@aeso.ca)

## Revision History

Posting Date	Description of Changes
2024 -01-19	<b>Administrative amendments:</b> <b>Added RAS:</b> <ul style="list-style-type: none"> <li>• #42 225LW-385S Overload Mitigation Scheme</li> <li>• #51 East Airdrie 199S 688L and 631L Overload Mitigation Scheme</li> <li>• #167 Coaldale 254S – 820L Overload Mitigation Scheme</li> <li>• #194 Chestermere 419S Area Overload Mitigation and Generation Tripping Scheme</li> <li>• #195 763L Overload Mitigation Scheme</li> <li>• #198 225LE-385S Overload Mitigation Scheme</li> </ul> <b>Removed RAS:</b> <ul style="list-style-type: none"> <li>• #199 - 7L159-948S Overload Mitigation</li> </ul>
2023-07-05	<b>Administrative amendments:</b> <b>Added RAS:</b> <ul style="list-style-type: none"> <li>• #185 890L overload mitigation scheme</li> <li>• #186 T1 and T2 – Bickerdike Overload Mitigation</li> <li>• #187 Any two 240 KV lines (1084L,1135L and 1168L) contingency related mitigation</li> <li>• #188 740L (Bickerdike to Edson) overload mitigation scheme</li> <li>• #189 202 overload mitigation scheme</li> <li>• #190 720L overload mitigation scheme</li> </ul>
2023-03-24	<b>Administrative amendments:</b> <b>Added RAS:</b> <ul style="list-style-type: none"> <li>• #174 - Queenstown 504S-161L Overload Mitigation Scheme</li> <li>• #199 - 7L159-948S Overload Mitigation</li> <li>• #201 - 7L224 Overload Mitigation</li> <li>• #203 - 7L128-963S Overload Mitigation</li> </ul> <b>Removed RAS:</b> <ul style="list-style-type: none"> <li>• #121 - Bigstone 86S-Overload Mitigation Scheme</li> </ul>
2022-16-11	<b>Administrative amendments:</b> <b>Added RAS:</b> <ul style="list-style-type: none"> <li>• #134 Central East Transfer Out Overload Mitigation Scheme. <ul style="list-style-type: none"> <li>○ RAS #134 Central East Transfer Out Overload Mitigation Scheme is a consolidation of RAS/Scheme #134, #138 and #139 to mitigate overload on 174L, 7L50, 901T-766S and other reliability concerns.</li> </ul> </li> <li>• #172 Garneau-Meadowlark Reconfiguration Scheme</li> <li>• #175 Milo 356S -924L/927L Overload Mitigation Scheme</li> <li>• #178 172L(370S-181S) Overload Mitigation</li> <li>• #200 901T – 801S Anderson Overload Mitigation</li> <li>• #202 7L171-804S Overload Mitigation</li> <li>• #207 658L-562S Overload Mitigation Scheme</li> <li>• #208 668L-562S Overload Mitigation Scheme</li> </ul>

Posting Date	Description of Changes
	<b>Removed RAS:</b> <ul style="list-style-type: none"> <li>• #46 Bickerdike 39S-740L Load Trip Scheme disabled at AESO direction.</li> <li>• #138 7L50-526S Buffalo Creek Overload Mitigation Scheme. <ul style="list-style-type: none"> <li>○ Replaced with RAS #134 Central East Transfer Out Overload Mitigation Scheme.</li> </ul> </li> <li>• #139 901T-766s Nevis Overload Mitigation Scheme. <ul style="list-style-type: none"> <li>○ Replaced with RAS #134 Central East Transfer Out Overload Mitigation Scheme.</li> </ul> </li> <li>• #166 463L-15S Overload Mitigation was salvaged. <ul style="list-style-type: none"> <li>○ Replaced with RAS #178 172L(370S-181S) Overload Mitigation.</li> </ul> </li> </ul>
2022-22-06	<b>Administrative amendments</b> <b>Added RAS:</b> <ul style="list-style-type: none"> <li>• #181 610L Overload Mitigation Scheme</li> <li>• #154 876L Overload Mitigation</li> </ul> <b>Removed RAS:</b> <ul style="list-style-type: none"> <li>• # 133 Beddington 162s Overload Mitigation Scheme</li> </ul>
2022-25-04	<b>Administrative amendments</b> <b>Added RAS:</b> <ul style="list-style-type: none"> <li>• #170 1005L-356S Overload Mitigation</li> <li>• #179 765L overload mitigation scheme</li> <li>• #180 879L Overload Mitigation Scheme</li> <li>• #182 1005L Outage and 940L Contingency Mitigation Scheme</li> </ul> <b>Removed RAS:</b> <ul style="list-style-type: none"> <li>• #149 EATL HVDC</li> <li>• #150 WATL HVDC</li> <li>• #153 Mitigation of 138 kV Thermal Constraints on ENMAX System at SS-65</li> </ul>
2021-27-05	<b>Administrative amendments</b> <b>Added RAS:</b> <ul style="list-style-type: none"> <li>• #173 - 880L-321S Overload Mitigation Scheme</li> </ul>
2021-24-03	<b>Administrative amendments</b> <b>Added RAS:</b> <ul style="list-style-type: none"> <li>• #11 - Bennett 520S Underfrequency And Power Scheme</li> <li>• #12 - Bennett 520S Undervoltage &amp; Power Scheme</li> <li>• #112 - Cypress 562s - Power/Under &amp; Over Frequency Scheme</li> <li>• #160 -Bighorn Instability Mitigation Scheme</li> <li>• #166 - 463L-15S Overload Mitigation</li> <li>• #168 - 172L-83S Overload Mitigation</li> <li>• #169 - 725LW-674S Overload Mitigation</li> </ul>