

Table 1: Forecast Base Case (No Alexco) Grid Capacity Requirement (2013-2030)

Years	Non-Industrial Peak after DSM/SSE (MW)	Existing Installed Plant (MW)			N-1 Requirement (MW)	N-1 surplus/deficit (MW)	Unit
		Hydro	Diesel	Total			
2013	72.8	72.0	42.5	114.5	109.8	4.7	
2014	74.8	72.0	39.0	111.0	111.8	-0.8	Whitehorse diesel #1 (Mirrfees)
2015	76.5	72.0	34.5	106.5	113.5	-7.0	Whitehorse diesel #2 (Mirrfees)
2016	78.0	72.0	34.5	106.5	115.0	-8.5	
2017	79.4	72.0	33.6	105.6	116.4	-10.9	Dawson diesel #2 (Caterpillar)
2018	80.9	72.0	32.9	104.9	117.9	-13.0	Dawson diesel #1 (Caterpillar)
2019	82.3	72.0	30.3	102.3	119.3	-17.0	Faro Diesel #3 (Caterpillar), Mayo diesel #1 & #2 (Caterpillar)
2020	83.9	72.0	28.2	100.2	120.9	-20.7	Faro Diesel #5 (Caterpillar), Dawson diesel #3 (Caterpillar)
2021	85.6	72.0	19.7	91.7	122.6	-31.0	Faro Diesel #1 (Mirrfees), Whitehorse diesel #3 (Mirrfees)
2022	87.5	72.0	19.7	91.7	124.5	-32.8	
2023	89.4	72.0	19.7	91.7	126.4	-34.7	
2024	91.3	72.0	19.7	91.7	128.3	-36.6	
2025	93.3	72.0	12.7	84.7	130.3	-45.6	Whitehorse diesel #4, #5, #6 (EMD)
2026	95.6	72.0	9.7	81.7	132.6	-50.9	Whitehorse diesel #7 (Caterpillar)
2027	97.9	72.0	6.9	78.9	134.9	-56.0	Faro Diesel #7 (Caterpillar)
2028	100.3	72.0	6.9	78.9	137.3	-58.5	
2029	102.8	72.0	6.9	78.9	139.8	-61.0	
2030	105.4	72.0	6.9	78.9	142.4	-63.5	

- Forecast Total Peak is sum of industrial and non-industrial peak. Please see Table C-4 of Appendix C of Part 3 application, Base Case no Alexco.
- Non-industrial peak load on grid, after assumed Demand Side Management (DSM), less 1 MW for assumed Haines Junction load. See Appendix C of Part 3 application.
- Capacity planning requirements with N-1 reserve capacity (Forecast Non-Industrial Peak plus 37 MW for Aishihik hydro generation capacity [N-1 event is loss of transmission to the Aishihik hydro generation - also means loss of Haines Junction diesel capacity]).
- Existing winter capacity in 2013 is 114.49 MW excluding Fish Lake hydro and Haines Junction diesel (see Table 2-3, Yukon Energy 20-Year Resource Plan: 2011-2030, December 2011). Reductions after 2013 reflect planned retirements of diesel engine units and the de-rated capacities of these units at this time (e.g., Mirrfees WD1 and WD2 have de-rated capacity of 8 MW versus rated capacity of 9.07 MW).

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