



MARCH 14, 2014

Transmission Assumptions

Transmission Options

Generation Alternative	Capacity (MW)	Location	Retired Units	Transmission Cost		Comment
				High (\$M)	Base (\$M)	
LM6000	50	HRM	TC1 or TC2	2	0	High: no TC retirement
LMS2500	34	HRM	TC1 or TC2	2	0	High: no TC retirement
LMS100	100	HRM	TC1 or TC2	2	0	High: no TC retirement
CC 150	150	HRM	TC1 or TC2	12	0	High: no TC retirement+2nd Harbour Crossing 138 kV line
CC250	250	HRM	TC1 & TC2	12	0	High: no TC retirement+2nd Harbour Crossing 138 kV line
CC250	250	HRM		20	3	Base: Brushy Hill gas lateral. High: Burnside+Spider Lake sub.
PC 360	360	Point Tupper	LG2	425	285	Base: 345kV Hastings-Spider Lake. High:Base+2nd 345 kV tie line NS-NB
PC 450	450	Point Tupper	LG2 & LG3	425	285	Base: 345kV Hastings-Spider Lake. High:Base+2nd 345 kV tie line NS-NB
Firm Import	100	From NB			45	SVC and upgrade 138 kV lines in NB & NS
Firm Import	300	From NB		440	230	Base:SVC+345kV NS-NB. High: Base+345kV Salisbury-Coleson Cove
CAES	100	Debert			20	230kV Debert-Onslow
Wind	200	Mainland			30	230kV and 138kV connections for Wind Farms
CAES+Wind	300	Deb+Main			50	230kV and 138kV connections for CAES and Wind Farms
PSH	177	Wreck Cove	LG2	265	130	Base:230kV WC-Hastings. High:345kV WC-Hastings-Onslow-Brushy Hill

Transmission Options

- System upgrades associated with the Maritime Link are in service. The Maritime Link retires one Lingan unit.
- Transmission Facility estimates were completed as if resource options were independent of each other and the cost cannot be used to sum up any combination of options.
- Any new generation in Cape Breton will supply load growth east of Onslow. This will require an increase in CBX (Cape Breton Export), ONI (Onslow Import) and ONS (Onslow South).
- Any net generation unit larger than Point Aconi net will require additional operating reserve (cost not included here).
- Transmission cost does not include generator transformer and station service cost which can be in the range of \$4M - \$12M.
- Back-up and Load Following for non-dispatchable renewables is assumed to be provided within NS and not included in Network Upgrades cost estimates. If back-up source is external to NS then a second NS-NB tie is required.
- Transmission cost for generation options east of Onslow includes corresponding ONS upgrades.
- The cost estimate is preliminary and in the range of -10% to +30%. In some cases, unforeseen system requirements may increase the cost significantly as complete system impact studies are not performed.