

EIPC Gas-Electric System Interface Study

Sensitivities in Set #1 for Analysis Prior to SSC Mid-Point Meeting with Set#2 to be Discussed Further at that Meeting

Updated: 5/28/2014

Requested =>	Discuss as part of Set #2
Approved =>	Approved as part of Set #1

<<All sensitivities run on #0 (prime) cases

#	Sensitivity Case Short-Description	Reference Gas Demand Scenario	High Gas Demand Scenario	Low Gas Demand Scenario	Run in 2018 RGD' Case	Run in 2018 HGD' Case	Run in 2018 LGD' Case	Run in 2023 RGD' Case	Run in 2023 HGD' Case	Run in 2023 LGD' Case	Comments
0	Adjust for significant changes since the Roll-up Case creation	RGD'	HGD'	LGD'	YES	YES	YES	YES	YES	YES	All subsequent sensitivities start from these cases
1	Adjust the basis adder for the natural gas prices to reflect market pricing on a peak day				YES	YES	YES	YES	YES	YES	
2	Remove incremental/decremental gas price changes from the High & Low Gas Demand Scenarios					YES	YES		YES	YES	May not be needed based on Scenario assumptions and results of sensitivity #1
3	Significantly lower delivered natural gas prices		in HGD		YES			YES			Webinar feedback was higher priority
4	Deactivation of additional coal and nuclear - add gas fired resources		in HGD								
5a	Deactivation of additional coal and nuclear - add wind and				YES		YES	YES		YES	Webinar feedback was higher priority
5b	Deactivation of additional coal and nuclear - Quebec hydro							YES		YES	Webinar feedback was higher priority
5c	Deactivation of additional coal and nuclear - add EE/DR				YES		YES	YES		YES	Webinar feedback was higher priority
6	Increased electric and gas EE/DR, including potential increase in dispatchable gas-side DR during the Peak Heating Season			in LGD							
7	Combination of #5 and #6	same as #5		same as #5							Already included in LGD Scenario - not needed
8	Extend nuclear licenses			See Note			YES			YES	Counterpose to #9 NOTE: Running this sensitivity was deferred until after further discussion on modeling assumptions at the June SSC meeting.
9	All Ontario nuclear units to-be-refurbished reach the end of life after 2018 and before 2023 + retirement of Indian Point 2/3 by end of 2015					YES			YES		Webinar feedback was higher priority

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10	Inclusion of new transmission build-out sensitivity – interconnection queue (?)	included in each sensitivity									Not Needed
11	Energy East pipeline does not proceed	defer to second set									Would decrease gas delivery in Ontario
12	Significantly higher natural gas prices, including significant new environmental regulations that raise prices in shale producing basins	in LGD		in LGD							
13	Increased infrastructure to enable additional Marcellus/Utica flows to neighboring PPAs				YES			YES			May require a follow-up sensitivity depending on results
14	Increased underground gas storage availability (quantity and deliverability)				YES			YES			2014 experience shows additional storage could be worthwhile
15	Increased electric storage availability				YES			YES			Is this really viable? Will it make a difference? Need guidance on inputs.
16	Increased sendout from Canaport and Distrigas LNG import terminals		would need higher gas prices		YES			YES			Regional stakeholder request
17	backup fuel inventory sensitivity (applicable to dual fuel units), high and low (e.g. 30-day backup fuel inventory, 5-day backup fuel inventory)				YES			YES			Needs further definition of possible impact

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18	High electric load growth		in HGD		YES			YES			Running in Set #1 may reduce additional sensitivities
19	High industrial natural gas demand		in HGD		YES			YES			May address #28 which came up on the March 21 webinar
20	#4 + #18 + #19 = will require information on locations of LDC increased demand – active coordination with LDCs needed (MDD - suggested deletion of this Sensitivity)		in HGD		YES			YES			May not be needed based on results from #18 and #19
21	Low electric load growth (economic stagnation)			in LGD	YES			YES			May not be needed based on results from #18 and #19
22	Low industrial natural gas demand (Should be combined with low electric growth?) – How to determine locations for additional demand?			in LGD	YES			YES			May not be needed based on results from #18 and #19
23	High/Increased LNG exports, e.g., along the Gulf of Mexico or Atlantic Seaboard			does not fit scenario	Date?			Date?			Needs further discussion and results of #16 may help in the discussion
24	Extreme weather – higher priority due to recent experience (cold snap)		in HGD								
25	Delayed restart of Ontario nuclear units and no nuclear refurbishment – The nuclear units reach end of life and are retired			moved to new #9							
26	Additional coal and nuclear retirements + oil retirements in New England + the postponement / cancellation of certain proposed transmission projects including Northern Pass Transmission (Run same case as #4 + remove transmission?)		in HGD								
27	Additional coal retirements + retirement of Indian Point 2/3 + significant delay in the restart of nuclear units in Ontario (Run same case as #4)		in HGD								
28	Increased RCI Gas Demand				YES	YES		YES	YES		Placeholder added during March 21, 2014 Webinar
29	System restoration after a blackout event under high gas demand										Submitted after webinar - needs further discussion. May not be a sensitivity but a standalone study.
30	Lower oil prices so that all dual fuel units across the Study Region run on backup fuel rather than gas	See Comment	See Comment		YES	YES		Depend- ing on 2018 results	Depend- ing on 2018 results		Added by PPAs. Allows for testing of impact of pipeline constraints on gas-only generation to address gas-only generation reliability.