



NYISO ICAP Demand Curve Reset: Updates to Gross CONE Inputs



NYISO Installed Capacity Working Group

April 22, 2020

Introductions



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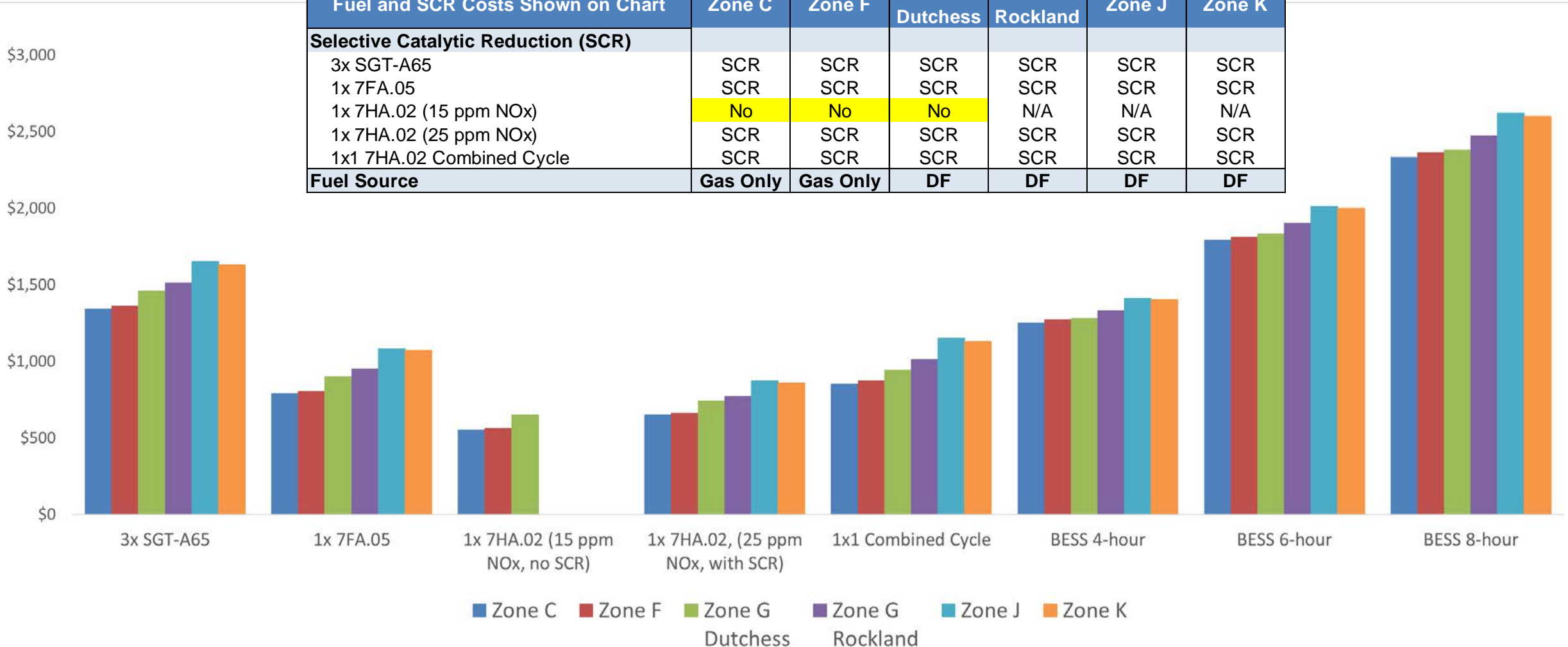
Agenda

- ▶ Overview of updates and refinement since preliminary estimates (presented on February 25, 2020)
- ▶ Capital Cost Updates
- ▶ O&M Cost Updates

CAPITAL COST ESTIMATES - EPC SCOPE UPDATES

Capital Cost Overview – EPC Cost Per kW

Fuel and SCR Costs Shown on Chart	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K
Selective Catalytic Reduction (SCR)						
3x SGT-A65	SCR	SCR	SCR	SCR	SCR	SCR
1x 7FA.05	SCR	SCR	SCR	SCR	SCR	SCR
1x 7HA.02 (15 ppm NOx)	No	No	No	N/A	N/A	N/A
1x 7HA.02 (25 ppm NOx)	SCR	SCR	SCR	SCR	SCR	SCR
1x1 7HA.02 Combined Cycle	SCR	SCR	SCR	SCR	SCR	SCR
Fuel Source	Gas Only	Gas Only	DF	DF	DF	DF



Capital Cost Assumption for Noise Mitigation

- ▶ Preliminary capital cost estimates did not consider noise mitigation based on site acres assumed for DCR
- ▶ Updates to assumptions
 - 2/25/2020 ICAPWG meeting: certain stakeholders recommended further consideration of the need for noise mitigation for fossil plant options, including housing of turbines indoor
 - 3/26/2020 ICAPWG meeting: based on further review of applicable noise requirements and site size assumptions presented, updated cost estimates to include appropriate noise mitigation
- ▶ Results (see slides 7-13 for more information)
 - Power island building included for all fossil plant technology options, all zones
 - \$1 million allowance included for sound walls on all fossil technology options, all zones
 - Low noise fans for air cooled condenser on informational combined cycle option, all zones
 - Battery energy storage system (BESS) options include allowances for sound walls, all zones. See slides 11-13 for more information.

Capital Cost Update: 7HA.02 (15 ppm Option)

- ▶ 7HA.02 15ppm design provides option to consider for plant design without selective catalytic reduction (SCR) emissions controls
- ▶ Recommend further consideration of the 7HA.02 15ppm plant design for following locations, based on applicable environmental requirements
 - Load Zone C
 - Load Zone F
 - Load Zone G (Dutchess County)
- ▶ Recommend consideration of the 7HA.02 25ppm design with SCR for locations with more stringent environmental requirements
 - Load Zone G (Rockland County)
 - NYC (Load Zone J)
 - LI (Load Zone K)
- ▶ See Slides 9-10 for further information regarding 7HA.02 option cost estimates with and without SCR emissions controls

Capital Cost Update Summary 3x SGT-A65

3x SGT-A65	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$213	\$215	\$219	\$227	\$248	\$245	
Add GT Building, \$MM	\$11	\$11	\$12	\$12	\$13	\$13	Noise mitigation
Add Sound Wall Allowance, \$MM	\$1	\$1	\$1	\$1	\$1	\$1	Noise mitigation
Gas Only Adjustment	(\$11)	(\$11)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Proposed EPC Cost, \$MM*	\$213	\$216	\$231	\$240	\$261	\$258	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$74	\$74	\$74	\$75	\$67	\$63	
Add ERC	\$0.4	\$0.4	\$0.4	\$2.5	\$2.5	\$2.5	Omission
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$34.1	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Gas Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$10.7	\$0.0	NYC Scope Adjustment
Remove Fuel Oil Inventory and Testing	(\$6.1)	(\$6.1)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Resultant Net BR/Contingency Adjustment	(\$0.3)	(\$0.5)	\$0.7	\$0.8	\$3.2	\$0.8	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$68	\$68	\$75	\$78	\$122	\$67	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$286	\$289	\$293	\$302	\$315	\$308	Without AFUDC
Proposed Total, \$MM	\$281	\$284	\$307	\$318	\$383	\$325	Without AFUDC
<i>Percent Difference, %</i>	<i>-1.8%</i>	<i>-1.9%</i>	<i>4.7%</i>	<i>5.3%</i>	<i>21.6%</i>	<i>5.6%</i>	

*All options include SCR. Zone C and Zone F are gas only. Other zones are dual fuel.

Capital Cost Update Summary 1x 7F.05

1x 7F.05	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$171	\$174	\$178	\$189	\$217	\$214	
Add GT Building, \$MM	\$9	\$9	\$9	\$9	\$10	\$10	Noise mitigation
Add Sound Wall Allowance, \$MM	\$1	\$1	\$1	\$1	\$1	\$1	Noise mitigation
Gas Only Adjustment	(\$17)	(\$17)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Proposed EPC Cost, \$MM*	\$164	\$167	\$188	\$199	\$228	\$225	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$68	\$68	\$68	\$69	\$62	\$62	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Gas Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$10.7	\$0.0	NYC Scope Adjustment
Remove Fuel Oil Inventory and Testing	(\$7.2)	(\$7.2)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Resultant Net BR/Contingency Adjustment	(\$0.8)	(\$0.8)	\$0.6	\$0.6	\$3.0	\$0.6	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$60	\$60	\$69	\$70	\$113	\$62	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$239	\$242	\$246	\$258	\$279	\$275	Without AFUDC
Proposed Total, \$MM	\$224	\$227	\$257	\$269	\$341	\$287	Without AFUDC
<i>Percent Difference, %</i>	<i>-6.3%</i>	<i>-6.2%</i>	<i>4.4%</i>	<i>4.2%</i>	<i>22.1%</i>	<i>4.3%</i>	

*All options include SCR. Zone C and Zone F are gas only. Other zones are dual fuel.

Capital Cost Update Summary 1x 7HA.02

1x HA.02	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$238	\$241	\$244	\$255	\$289	\$286	
Remove SCR (Use 15 ppm NOx GT)	(\$43)	(\$43)	\$0	\$0	\$0	\$0	15 ppm GT in Zones C, F, G (Dutchess)
Add GT Building, \$MM	\$11	\$11	\$12	\$12	\$13	\$13	Noise mitigation
Add Sound Wall Allowance, \$MM	\$1	\$1	\$1	\$1	\$1	\$1	Noise mitigation
Gas Only Adjustment	(\$25)	(\$25)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Proposed EPC Cost, \$MM*	\$181	\$184	\$257	\$267	\$302	\$299	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$81	\$81	\$81	\$82	\$73	\$75	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Gas Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$9.2	\$0.0	NYC Scope Adjustment
Remove Fuel Oil Inventory and Testing	(\$10.6)	(\$10.6)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Resultant Net BR/Contingency Adjustment	(\$3.6)	(\$3.6)	\$0.7	\$0.7	\$3.1	\$0.8	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$66	\$67	\$82	\$83	\$122	\$75	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$318	\$321	\$325	\$337	\$361	\$360	Without AFUDC
Proposed Total, \$MM	\$247	\$250	\$339	\$350	\$424	\$375	Without AFUDC
<i>Percent Difference, %</i>	<i>-22.3%</i>	<i>-22.1%</i>	<i>4.1%</i>	<i>4.0%</i>	<i>17.4%</i>	<i>4.1%</i>	

*Zone C and Zone F are gas only. Other zones are dual fuel.

Capital Cost Update Summary 1x1 7HA.02 (Informational Only)

1x1 HA.02	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$513	\$526	\$544	\$586	\$669	\$663	
Add Power Island Building, \$MM	\$23	\$23	\$24	\$24	\$27	\$26	Noise mitigation
Add Sound Wall Allowance, \$MM	\$1	\$1	\$1	\$1	\$1	\$1	Noise mitigation
Gas Only Adjustment	(\$25)	(\$25)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Proposed EPC Cost, \$MM*	\$512	\$524	\$569	\$611	\$696	\$690	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$119	\$119	\$120	\$124	\$121	\$130	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$34.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Gas Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$9.2	\$0.0	NYC Scope Adjustment
Remove Fuel Oil Inventory and Testing	(\$11.5)	(\$11.5)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Resultant Net BR/Contingency Adjustment	(\$0.7)	(\$0.7)	\$1.4	\$1.4	\$3.9	\$1.5	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$106	\$107	\$122	\$125	\$173	\$131	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$632	\$645	\$664	\$710	\$790	\$793	Without AFUDC
Proposed Total, \$MM	\$618	\$631	\$690	\$736	\$870	\$822	Without AFUDC
<i>Percent Difference, %</i>	<i>-2.2%</i>	<i>-2.1%</i>	<i>4.0%</i>	<i>3.7%</i>	<i>10.0%</i>	<i>3.6%</i>	

*All options include SCR Zone C and Zone F are gas only. Other zones are dual fuel.

Capital Cost Update Summary BESS 4-Hour

BESS 4-Hour	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$250	\$253	\$255	\$265	\$281	\$279	
Add Sound Wall Allowance, \$MM	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	Noise mitigation
Proposed EPC Cost, \$MM*	\$251	\$253	\$256	\$265	\$281	\$279	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$40	\$40	\$40	\$40	\$36	\$32	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Resultant Net BR/Contingency Adjustment	\$0.0	\$0.0	\$0.0	\$0.0	\$2.0	\$0.0	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$40	\$40	\$40	\$40	\$75	\$32	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$290	\$292	\$295	\$305	\$317	\$311	Without AFUDC
Proposed Total, \$MM	\$290	\$293	\$295	\$306	\$356	\$311	Without AFUDC
<i>Percent Difference, %</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>12.4%</i>	<i>0.2%</i>	

Capital Cost Update Summary BESS 6-Hour

BESS 6-Hour	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$358	\$362	\$365	\$379	\$402	\$399	
Add Sound Wall Allowance, \$MM	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	Noise mitigation
Proposed EPC Cost, \$MM*	\$359	\$362	\$366	\$380	\$402	\$400	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$46	\$46	\$46	\$47	\$44	\$39	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Resultant Net BR/Contingency Adjustment	\$0.0	\$0.0	\$0.0	\$0.0	\$1.9	\$0.0	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$46	\$46	\$47	\$47	\$82	\$39	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$404	\$408	\$411	\$426	\$445	\$438	Without AFUDC
Proposed Total, \$MM	\$405	\$409	\$412	\$427	\$485	\$439	Without AFUDC
<i>Percent Difference, %</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>8.8%</i>	<i>0.2%</i>	

Capital Cost Update Summary BESS 8-Hour

BESS 8-Hour	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$466	\$471	\$475	\$493	\$523	\$520	
Add Sound Wall Allowance, \$MM	\$0.9	\$0.9	\$0.9	\$0.9	\$0.9	\$0.9	Noise mitigation
Proposed EPC Cost, \$MM*	\$467	\$471	\$476	\$494	\$524	\$521	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$53	\$53	\$53	\$54	\$51	\$46	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Resultant Net BR/Contingency Adjustment	\$0.0	\$0.1	\$0.1	\$0.0	\$2.1	\$0.0	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$53	\$53	\$53	\$54	\$90	\$46	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$519	\$523	\$528	\$547	\$574	\$566	Without AFUDC
Proposed Total, \$MM	\$519	\$524	\$529	\$548	\$613	\$567	Without AFUDC
<i>Percent Difference, %</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>6.9%</i>	<i>0.2%</i>	

CAPITAL COST ESTIMATES – OWNER'S SCOPE
UPDATES

Electrical Interconnection Preliminary Assumptions

- ▶ Overview of assumptions for preliminary costs presented at the February 2020 25, ICAPWG meeting:
- ▶ Load Zones C, F, G (Dutchess County), and G (Rockland County)
 - 345 kV
 - \$11 million total for 3 miles
- ▶ Load Zone J
 - 345 kV
 - \$5.2 million total for 1 mile
- ▶ Load Zone K
 - 138 kV
 - \$6.5 million total for 3 miles

Electrical Interconnection Proposed Changes

- ▶ No Proposed Changes for Load Zones C, F, G (Dutchess County), G (Rockland County), or K
- ▶ Proposed Changes for Load Zone J
 - 2/25/2020 ICAPWG meeting: certain stakeholders contended that the preliminary cost estimate NYC was too low; recommended cost increase to align with likely need for undergrounding of generation lead
 - 3/26/2020 ICAPWG meeting: based on further review of BMcD's prior experience, BMcD estimated overhead and underground costs for transmission in NYC. BMcD proposed to equalize proposed cost estimate for Load Zone J with the cost estimate for upstate options
 - BMcD proposes \$8.9 million for Load Zone J allowance. Estimate based on overhead line, which is consistent with assumption from 2016 DCR. See slides 23-29 for more information.

Electrical Interconnection	Zone J
2020 DCR Preliminary Allowance 2/25	\$5.2
2020 DCR Preliminary Allowance 3/26	\$11.0
2020 DCR Proposed Allowance	\$8.9

Switchyard Preliminary Assumptions

- ▶ Overview of assumptions for preliminary costs presented at February 25, 2020 ICAPWG meeting
- ▶ Cost varies by voltage and number of positions
- ▶ Assumes one position per generator step up transformer (GSU) and line in/out
 - 5 position ring bus for 3x SGT-A65
 - 3 position ring bus for 1x 7F.05 and 1x 7HA.02
 - 4 position breaker-and-a-half for 1x1 7HA.02
- ▶ Voltage
 - 345 kV for Load Zones C, F, G (Dutchess County), G (Rockland County, and J
 - 138 kV for Load Zone K
- ▶ Assumed air insulated switchgear (AIS) for all zones
 - Three position ring bus with gas insulated switchgear (GIS) was the assumed design for all zones in the 2016 demand curve reset (DCR)
 - Assumed costs from 2016 DCR do not align with BMcD's experience with GIS

Switchyard Cost Updates

- ▶ No Proposed Changes for Zones C, F, G (Dutchess County), G (Rockland County), or K Switchyard Costs
 - Assumes that a developer would lease sufficient land to avoid GIS
 - Plant areas currently assumed for simple cycle and combined cycle options selected to accommodate the use of AIS technology
 - Site area assumptions for BESS options have been updated; preliminary sizing omitted consideration of switchyard (See “O&M Cost Estimate Updates” section for further information)
- ▶ Stakeholder feedback from 2/25/2020 and 3/26/2020 ICAPWG meetings
 - Suggested preliminary allowance was insufficient for Load Zone J
 - Suggested GIS switchgear should be assumed for Load Zone J based on recent history and spatial constraints
 - Concerns raised about the need to maintain consistency between switchyard assumptions and land use assumptions.
- ▶ Additional review of assumptions and BMcD’s experience with substations in dense areas identified the need to update the assumed switchyard assumptions and associated costs for Load Zone J

Switchyard Cost Updates (cont.)

- ▶ Propose GIS substation for Load Zone J only
- ▶ Site area assumptions revised for Load Zone J to reflect GIS switchyard (see Slides 23-29 for further information on updated switchyard costs)
 - Simple cycle site area reduced from 15 acres to 12 acres
 - Combined cycle site area reduced from 30 acres to 27 acres
 - The updated land assumptions for NYC are in line with 2016 DCR assumptions, which also assumed GIS equipment

Zone J Switchyard	3x SGT-A65	1x 7F.05	1x 7HA.02	1x1 7HA.02
2020 DCR Preliminary Allowance 2/25	\$17.9	\$10.8	\$10.8	\$19.9
2020 DCR Preliminary Allowance 3/26	\$53.1	\$50.8	\$50.8	\$61.6
2020 DCR Proposed Allowance*	\$52.0	\$43.8	\$43.8	\$54.6

*Updates between Interim allowance and proposed allowance are due to removal of scope overlap with EPC.

Gas Interconnection Preliminary Assumptions

- ▶ Overview of assumptions for preliminary costs presented at the February 25, 2020 ICAPWG meeting:
- ▶ Load Zones C, F, G (Dutchess County), G (Rockland County), and K
 - 5 miles
 - \$180,000 per inch diameter, per mile
 - \$3.5 million for metering and regulation
- ▶ Load Zone J
 - 1 mile
 - \$360,000 per inch diameter, per mile
 - \$5 million for metering and regulation
- ▶ Pipe Diameter
 - 12" for 3x SGT-A65 and 1x 7F.05
 - 16" for 1x 7HA.02 and 1x1 7HA.02

Gas Interconnection Cost Updates

- ▶ No proposed changes for Load Zones C, F, G (Dutchess County), G (Rockland County), or K
- ▶ Preliminary estimates in line with 2016 DCR costs for Load Zones C, F, G (Dutchess County), G (Rockland County), and K
 - 2016 DCR: \$15.6 million all technologies, all zones
 - 2020 preliminary cost estimates:
 - \$14.3 million for 3x SGT-A65 and 1x 7F.05
 - \$17.9 million for 1x 7HA.02 and 1x1 7HA.02
- ▶ Updates are proposed for Load Zone J gas interconnection costs
 - 2/25/2020 ICAPWG meeting: certain stakeholders recommended further review of the assumed gas interconnection cost in NYC; contended that preliminary cost estimate was too low
 - BMcD conducted additional review based on its prior experience; further assessment indicated that an adjustment to the preliminary cost estimate for NYC would be warranted
 - Updated estimates for NYC (see Slides 23-26 for additional information)
 - \$5 million for metering and regulation (unchanged from preliminary estimate)
 - \$15 million per mile for 12” or 16” piping; effectively reflects an increase in the “per inch diameter, per mile” estimate for NYC to account for experience of higher costs in Load Zone J

Gas Interconnection Cost Updates (cont.)

Zone J Gas Interconnection	3x SGT-A65	1x 7F.05	1x 7HA.02	1x1 7HA.02
2016 DCR Allowance*	\$15.6	\$15.6	\$15.6	\$15.6
2020 DCR Preliminary Allowance 2/25	\$9.3	\$9.3	\$10.8	\$10.8
2020 DCR Preliminary Allowance 3/26**	\$14.3	\$14.3	\$17.9	\$17.9
2020 DCR Proposed Allowance***	\$20.0	\$20.0	\$20.0	\$20.0

*Gas turbine selection for aeroderivative and combined cycle options were different in 2016 DCR.

**Interim proposed allowance for zone J (1 mile) matched the proposed allowance for other zones (5 miles)

***Zone J proposed allowance of \$5 mil for M&R station plus \$15 mil per mile allowance for 12" or 16" pipe

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Owner's Costs							
Preliminary Owner's Costs, \$MM	\$68	\$68	\$68	\$69	\$62	\$62	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Gas Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$10.7	\$0.0	NYC Scope Adjustment
Remove Fuel Oil Inventory and Testing	(\$7.2)	(\$7.2)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Resultant Net BR/Contingency Adjustment	(\$0.8)	(\$0.8)	\$0.6	\$0.6	\$3.0	\$0.6	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$60	\$60	\$69	\$70	\$113	\$62	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$239	\$242	\$246	\$258	\$279	\$275	Without AFUDC
Proposed Total, \$MM	\$224	\$227	\$257	\$269	\$341	\$287	Without AFUDC
<i>Percent Difference, %</i>	<i>-6.3%</i>	<i>-6.2%</i>	<i>4.4%</i>	<i>4.2%</i>	<i>22.1%</i>	<i>4.3%</i>	

*All options include SCR. Zone C and Zone F are gas only. Other zones are dual fuel.

Capital Cost Update Summary 1x 7HA.02

1x HA.02	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$238	\$241	\$244	\$255	\$289	\$286	
Remove SCR (Use 15 ppm NOx GT)	(\$43)	(\$43)	\$0	\$0	\$0	\$0	15 ppm GT in Zones C, F, G (Dutchess)
Add GT Building, \$MM	\$11	\$11	\$12	\$12	\$13	\$13	Noise mitigation
Add Sound Wall Allowance, \$MM	\$1	\$1	\$1	\$1	\$1	\$1	Noise mitigation
Gas Only Adjustment	(\$25)	(\$25)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Proposed EPC Cost, \$MM*	\$181	\$184	\$257	\$267	\$302	\$299	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$81	\$81	\$81	\$82	\$73	\$75	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Gas Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$9.2	\$0.0	NYC Scope Adjustment
Remove Fuel Oil Inventory and Testing	(\$10.6)	(\$10.6)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Resultant Net BR/Contingency Adjustment	(\$3.6)	(\$3.6)	\$0.7	\$0.7	\$3.1	\$0.8	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$66	\$67	\$82	\$83	\$122	\$75	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$318	\$321	\$325	\$337	\$361	\$360	Without AFUDC
Proposed Total, \$MM	\$247	\$250	\$339	\$350	\$424	\$375	Without AFUDC
<i>Percent Difference, %</i>	<i>-22.3%</i>	<i>-22.1%</i>	<i>4.1%</i>	<i>4.0%</i>	<i>17.4%</i>	<i>4.1%</i>	

*Zone C and Zone F are gas only. Other zones are dual fuel.

Capital Cost Update Summary 1x1 7HA.02 (Informational Only)

1x1 HA.02	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$513	\$526	\$544	\$586	\$669	\$663	
Add Power Island Building, \$MM	\$23	\$23	\$24	\$24	\$27	\$26	Noise mitigation
Add Sound Wall Allowance, \$MM	\$1	\$1	\$1	\$1	\$1	\$1	Noise mitigation
Gas Only Adjustment	(\$25)	(\$25)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Proposed EPC Cost, \$MM*	\$512	\$524	\$569	\$611	\$696	\$690	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$119	\$119	\$120	\$124	\$121	\$130	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$34.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Net Adjustment for Gas Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$9.2	\$0.0	NYC Scope Adjustment
Remove Fuel Oil Inventory and Testing	(\$11.5)	(\$11.5)	\$0	\$0	\$0	\$0	Gas only for Load Zones C and F
Resultant Net BR/Contingency Adjustment	(\$0.7)	(\$0.7)	\$1.4	\$1.4	\$3.9	\$1.5	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$106	\$107	\$122	\$125	\$173	\$131	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$632	\$645	\$664	\$710	\$790	\$793	Without AFUDC
Proposed Total, \$MM	\$618	\$631	\$690	\$736	\$870	\$822	Without AFUDC
<i>Percent Difference, %</i>	<i>-2.2%</i>	<i>-2.1%</i>	<i>4.0%</i>	<i>3.7%</i>	<i>10.0%</i>	<i>3.6%</i>	

*All options include SCR Zone C and Zone F are gas only. Other zones are dual fuel.

Capital Cost Update Summary BESS 4-Hour

BESS 4-Hour	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$250	\$253	\$255	\$265	\$281	\$279	
Add Sound Wall Allowance, \$MM	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	Noise mitigation
Proposed EPC Cost, \$MM*	\$251	\$253	\$256	\$265	\$281	\$279	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$40	\$40	\$40	\$40	\$36	\$32	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Resultant Net BR/Contingency Adjustment	\$0.0	\$0.0	\$0.0	\$0.0	\$2.0	\$0.0	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$40	\$40	\$40	\$40	\$75	\$32	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$290	\$292	\$295	\$305	\$317	\$311	Without AFUDC
Proposed Total, \$MM	\$290	\$293	\$295	\$306	\$356	\$311	Without AFUDC
<i>Percent Difference, %</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>12.4%</i>	<i>0.2%</i>	

Capital Cost Update Summary BESS 6-Hour

BESS 6-Hour	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$358	\$362	\$365	\$379	\$402	\$399	
Add Sound Wall Allowance, \$MM	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	\$0.7	Noise mitigation
Proposed EPC Cost, \$MM*	\$359	\$362	\$366	\$380	\$402	\$400	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$46	\$46	\$46	\$47	\$44	\$39	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Resultant Net BR/Contingency Adjustment	\$0.0	\$0.0	\$0.0	\$0.0	\$1.9	\$0.0	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$46	\$46	\$47	\$47	\$82	\$39	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$404	\$408	\$411	\$426	\$445	\$438	Without AFUDC
Proposed Total, \$MM	\$405	\$409	\$412	\$427	\$485	\$439	Without AFUDC
<i>Percent Difference, %</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>8.8%</i>	<i>0.2%</i>	

Capital Cost Update Summary BESS 8-Hour

BESS 8-Hour	Zone C	Zone F	Zone G Dutchess	Zone G Rockland	Zone J	Zone K	NOTES
EPC Capital Cost							
Preliminary EPC, \$MM*	\$466	\$471	\$475	\$493	\$523	\$520	
Add Sound Wall Allowance, \$MM	\$0.9	\$0.9	\$0.9	\$0.9	\$0.9	\$0.9	Noise mitigation
Proposed EPC Cost, \$MM*	\$467	\$471	\$476	\$494	\$524	\$521	
Owner's Costs							
Preliminary Owner's Costs, \$MM	\$53	\$53	\$53	\$54	\$51	\$46	
Net Adjustment for Switchyard	\$0.0	\$0.0	\$0.0	\$0.0	\$33.0	\$0.0	NYC Scope Adjustment
Net Adjustment for Elec. Interconnection	\$0.0	\$0.0	\$0.0	\$0.0	\$3.7	\$0.0	NYC Scope Adjustment
Resultant Net BR/Contingency Adjustment	\$0.0	\$0.1	\$0.1	\$0.0	\$2.1	\$0.0	Percentage Change Based on Edits
Proposed Owner's Cost \$MM	\$53	\$53	\$53	\$54	\$90	\$46	
Total Cost (w/o AFUDC)							
Preliminary Total, \$MM	\$519	\$523	\$528	\$547	\$574	\$566	Without AFUDC
Proposed Total, \$MM	\$519	\$524	\$529	\$548	\$613	\$567	Without AFUDC
<i>Percent Difference, %</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>0.2%</i>	<i>6.9%</i>	<i>0.2%</i>	

O&M COST ESTIMATE UPDATES

Land Lease Assumptions

- ▶ Topic: Lease Cost Assumptions for NYC
- ▶ Feedback from 2/25/2020 ICAPWG meeting: consider reviewing and/or revising lease costs (\$/acre) for NYC
- ▶ Preliminary cost assumption was \$270,000 per acre, based on escalating the value assumed from 2016 DCR
- ▶ Action:
 - Reviewed commercial appraisal for rent pricing at power plant property in NYC
 - Site valuation was approximately \$500,000 per acre
 - Subject site valuation was in the middle of the range of 6 recent comparable transactions
 - BMcD reviewed public tax records to identify valuations for sites in the vicinity of existing power plants and substations.
- ▶ Results:
 - The range of land valuations found in public tax records did not suggest a reliable trend to warrant changing the land lease cost.
 - BMcD proposes to maintain the \$270,000 per acre lease cost assumption in NYC

Land Lease (cont.)

- ▶ Topic: Land Area Assumptions
- ▶ 3/26/2020 ICAPWG meeting: certain stakeholders raised the need to maintain consistency between substation design assumptions and land use assumptions.
- ▶ Proposed site area assumption updates are reflected in the table below
 - Land area assumptions for simple cycle and combined cycle options in NYC were reduced to reflect GIS substation assumption
 - Preliminary land area assumptions for BESS did not properly account for an AIS substation. BESS preliminary land area omitted AIS substation. Propose adding 3 acres to the land area assumption for BESS options in all zones except Load Zone J.

Land Lease (cont.)

Load Zone J Land Lease Costs	Preliminary Acres	Proposed Acres	Cost per Acre	Annual Cost Change
Simple Cycle Options	15	12	\$270,000	(\$810,000)
Combined Cycle Option	30	27	\$270,000	(\$810,000)
BESS 4-hour	9	9	\$270,000	\$0
BESS 6-hour	12	12	\$270,000	\$0
BESS 8-hour	15	15	\$270,000	\$0

Load Zone K Land Lease Costs	Preliminary Acres	Proposed Acres	Cost per Acre	Annual Cost Change
Simple Cycle Options	15	15	\$26,000	\$0
Combined Cycle Option	30	30	\$26,000	\$0
BESS 4-hour	9	12	\$26,000	\$78,000
BESS 6-hour	12	15	\$26,000	\$78,000
BESS 8-hour	15	18	\$26,000	\$78,000

Load Zones C, F, G Land Lease Costs	Preliminary Acres	Proposed Acres	Cost per Acre	Annual Cost Change
Simple Cycle Options	15	15	\$22,000	\$0
Combined Cycle Option	30	30	\$22,000	\$0
BESS 4-hour	9	12	\$22,000	\$66,000
BESS 6-hour	12	15	\$22,000	\$66,000
BESS 8-hour	15	18	\$22,000	\$66,000

BESS O&M Update (Unchanged from 3/26/2020 Presentation)

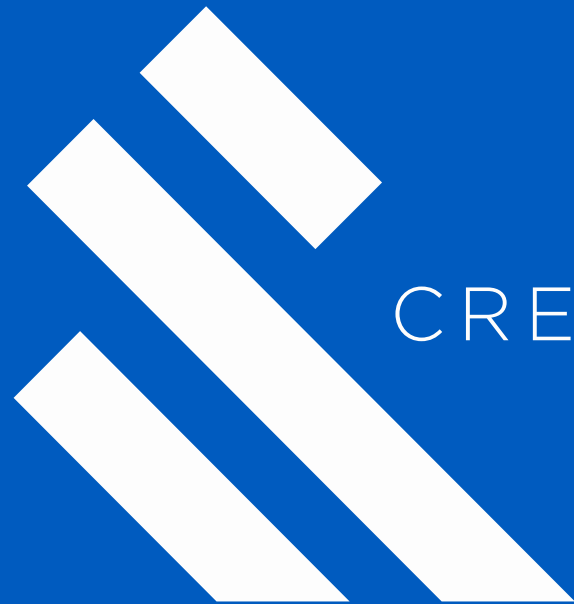
- ▶ Topic: BESS Augmentation and VOM Costs
- ▶ Feedback: Consider potential need to revise augmentation assumptions and related variable O&M cost estimate.
- ▶ Variable O&M
 - Models the augmentation for assumed performance guarantee
 - Levelized cost to account for 2% energy degradation per year
 - Assumes 365 cycles per year
- ▶ Results
 - 2% degradation per year is consistent with market observations for 20-year life, air-cooled NMC chemistry, 4-hour batteries
 - Additional details provided on the next slide



BESS O&M Update (Unchanged from 3/26/2020 Presentation)

- ▶ Model identifies four augmentation events
 - Each approx. 13% of year zero MWh
 - Considers publicly available forward pricing curves
 - Considers “learning” by installer
- ▶ Total augmentation cost is levelized over 20 years
- ▶ Escalation is not included
- ▶ BMcD has updated the variable O&M cost to \$12.00/MWh (lower than preliminary \$14.50/MWh value)
 - Preliminary value was based on commercial contract reviews
 - Updated value remains within the range of commercial contracts reviewed

Variable O&M / Augmentation	
Cycles per Year	365
Degradation % per Year	2%
Levelized Cost per Year, \$MM	\$3.5
MWh per Year	292,000
\$/MWh	\$12.00
\$/kWh (Net Installed Year 0)	\$4.40
\$/kW-yr (Net Installed Year 0)	\$17.50



CREATE AMAZING.

APPENDIX A: PROPOSED PERFORMANCE ESTIMATES

Proposed Performance Estimates: 3x SGT-A65

3x Siemens SGT-A65	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
Spring-Fall (ISO) Performance						
Ambient Temperature, °F	59.0	59.0	59.0	59.0	59.0	59.0
Relative Humidity, %	60%	60%	60%	60%	60%	60%
Net Plant Output, kW	184,700	184,700	184,800	184,800	184,900	184,900
Net Plant Heat Rate, Btu/kWh (HHV)	9,430	9,430	9,430	9,430	9,420	9,420
Heat Input, MMBtu/h (HHV)	1,740	1,740	1,740	1,740	1,740	1,740
ICAP Performance						
Ambient Temperature, °F	90.0	90.0	90.0	90.0	90.0	90.0
Relative Humidity, %	70%	70%	70%	70%	70%	70%
Net Plant Output, kW	158,600	158,600	158,700	158,700	158,700	158,700
Net Plant Heat Rate, Btu/kWh (HHV)	9,730	9,730	9,730	9,730	9,720	9,720
Heat Input, MMBtu/h (HHV)	1,540	1,540	1,540	1,540	1,540	1,540

Proposed Performance Estimates: 1x 7F.05

1x GE 7F.05	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
Spring-Fall (ISO) Performance						
Ambient Temperature, °F	59.0	59.0	59.0	59.0	59.0	59.0
Relative Humidity, %	60%	60%	60%	60%	60%	60%
Net Plant Output, kW	219,800	221,000	221,900	221,900	223,000	223,100
Net Plant Heat Rate, Btu/kWh (HHV)	10,160	10,160	10,160	10,160	10,160	10,160
Heat Input, MMBtu/h (HHV)	2,260	2,270	2,280	2,280	2,300	2,300
ICAP Performance						
Ambient Temperature, °F	90.0	90.0	90.0	90.0	90.0	90.0
Relative Humidity, %	70%	70%	70%	70%	70%	70%
Net Plant Output, kW	207,100	208,200	209,100	209,100	210,200	210,200
Net Plant Heat Rate, Btu/kWh (HHV)	10,360	10,360	10,360	10,360	10,360	10,360
Heat Input, MMBtu/h (HHV)	2,170	2,180	2,190	2,190	2,210	2,210

Proposed Performance Estimates: 1x 7HA.02 (25 ppm)

1x GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
Spring-Fall (ISO) Performance						
Ambient Temperature, °F	59.0	59.0	59.0	59.0	59.0	59.0
Relative Humidity, %	60%	60%	60%	60%	60%	60%
Net Plant Output, kW	359,500	361,400	362,900	362,900	364,800	364,900
Net Plant Heat Rate, Btu/kWh (HHV)	9,340	9,340	9,340	9,340	9,340	9,340
Heat Input, MMBtu/h (HHV)	3,400	3,420	3,430	3,430	3,450	3,450
ICAP Performance						
Ambient Temperature, °F	90.0	90.0	90.0	90.0	90.0	90.0
Relative Humidity, %	70%	70%	70%	70%	70%	70%
Net Plant Output, kW	343,700	345,600	347,000	347,000	348,800	348,800
Net Plant Heat Rate, Btu/kWh (HHV)	9,460	9,460	9,460	9,460	9,460	9,460
Heat Input, MMBtu/h (HHV)	3,290	3,310	3,320	3,320	3,340	3,340

Proposed Performance Estimates: 1x 7HA.02 (15 ppm)

1x GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess
Spring-Fall (ISO) Performance			
Ambient Temperature, °F	59.0	59.0	59.0
Relative Humidity, %	60%	60%	60%
Net Plant Output, kW	340,400	342,200	343,500
Net Plant Heat Rate, Btu/kWh (HHV)	9,340	9,230	9,340
Heat Input, MMBtu/h (HHV)	3,180	3,160	3,210
ICAP Performance			
Ambient Temperature, °F	90.0	90.0	90.0
Relative Humidity, %	70%	70%	70%
Net Plant Output, kW	326,700	328,500	329,900
Net Plant Heat Rate, Btu/kWh (HHV)	9,490	9,380	9,490
Heat Input, MMBtu/h (HHV)	3,100	3,080	3,130

Proposed Performance Estimates: 1x1 7HA.02 CC (Informational Only)

1x1 Combined Cycle GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
Spring-Fall (ISO) Performance						
Ambient Temperature, °F	59.0	59.0	59.0	59.0	59.0	59.0
Relative Humidity, %	60%	60%	60%	60%	60%	60%
Net Plant Output, kW	520,400	532,900	535,000	535,000	536,800	537,600
Net Plant Heat Rate, Btu/kWh (HHV)	6,300	6,300	6,300	6,300	6,310	6,300
Heat Input, MMBtu/h (HHV)	3,280	3,360	3,370	3,370	3,390	3,390
Incremental Duct Fired Performance with Evaporative Coolers @ Spring / Fall						
Incremental Duct Fired Output, kW	99,900	100,400	99,400	99,400	99,800	104,400
Incremental Heat Rate, Btu/kWh (HHV)	8,850	8,830	8,830	8,830	8,810	8,860
Incremental Heat Input, MMBtu/h (HHV)	880	890	880	880	880	920
ICAP Performance						
Ambient Temperature, °F	90.0	90.0	90.0	90.0	90.0	90.0
Relative Humidity, %	70%	70%	70%	70%	70%	70%
Net Plant Output, kW	495,100	498,500	500,600	500,600	502,200	502,500
Net Plant Heat Rate, Btu/kWh (HHV)	6,410	6,400	6,400	6,400	6,410	6,410
Heat Input, MMBtu/h (HHV)	3,170	3,190	3,200	3,200	3,220	3,220
Incremental Duct Fired Performance with Evaporative Coolers @ Spring / Fall						
Incremental Duct Fired Output, kW	103,800	104,200	103,200	103,200	102,900	107,700
Incremental Heat Rate, Btu/kWh (HHV)	8,530	8,540	8,550	8,550	8,600	8,530
Incremental Heat Input, MMBtu/h (HHV)	890	890	880	880	880	920

APPENDIX B: Proposed CAPITAL COST ESTIMATE
UPDATES

Proposed Capital Cost: 3x SGT-A65

3x Siemens SGT-A65	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
EPC Project Capital Costs, 2020 MM\$	\$213	\$216	\$231	\$240	\$261	\$258
Owner's Costs, 2020 MM\$	\$68	\$68	\$75	\$78	\$122	\$67
Owner's Project Development	\$0.4	\$0.4	\$0.4	\$0.4	\$0.5	\$0.4
Owner's Operational Personnel Prior to COD	\$0.4	\$0.4	\$0.4	\$0.4	\$0.6	\$0.5
Owner's Engineer	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Owner's Project Management	\$1.1	\$1.1	\$1.1	\$1.1	\$1.5	\$1.2
Owner's Legal Costs	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Owner's Start-up Engineering and Commissioning	\$0.3	\$0.3	\$0.3	\$0.3	\$0.4	\$0.3
Construction Power and Water	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Permitting and Licensing Fees	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Switchyard	\$17.1	\$17.1	\$17.1	\$17.1	\$52.0	\$9.3
Electrical Interconnection and Deliverability	\$11.0	\$11.0	\$11.0	\$11.0	\$8.9	\$6.5
Gas Interconnection and Reinforcement	\$14.3	\$14.3	\$14.3	\$14.3	\$20.0	\$14.3
System Deliverability Upgrade Costs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Emission Reduction Credits	\$0.4	\$0.4	\$0.4	\$2.5	\$2.5	\$2.5
Political Concessions & Area Development Fees	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Startup/Testing (Fuel & Consumables)	\$0.7	\$0.7	\$2.6	\$2.6	\$2.6	\$2.6
Initial Fuel Inventory	\$0.0	\$0.0	\$4.2	\$4.2	\$4.2	\$4.2
Site Security	\$0.6	\$0.6	\$0.6	\$0.6	\$0.8	\$0.6
Operating Spare Parts	\$3.1	\$3.1	\$3.1	\$3.1	\$3.1	\$3.1
Builders Risk Insurance (0.45% of EPC Costs)	\$1.0	\$1.0	\$1.0	\$1.1	\$1.2	\$1.2
Owner's Contingency (5% for Screening)	\$13.4	\$13.5	\$14.6	\$15.1	\$18.3	\$15.5
AFUDC, 2020 MM\$	\$20	\$20	\$21	\$22	\$27	\$23
EPC Portion	\$14.9	\$15.1	\$16.2	\$16.8	\$18.3	\$18.1
Non-EPC Portion	\$4.7	\$4.8	\$5.3	\$5.4	\$8.5	\$4.7
Total Project Costs, 2020 MM\$	\$301	\$303	\$328	\$340	\$410	\$348
CAPITAL COST ADD / DEDUCT FOR GAS ONLY						
Capital Costs, 2020 MM\$	\$11.3	\$11.3	(\$11.3)	(\$11.3)	(\$12.3)	(\$12.3)
Owner's Costs, 2020 MM\$	\$7.0	\$7.0	(\$7.0)	(\$7.0)	(\$7.1)	(\$7.1)
CAPITAL COST ADD / DEDUCT TO REMOVE SCR/CO						
Capital Costs, 2020 MM\$	(\$17.1)	(\$17.1)	(\$17.1)	(\$17.1)	(\$20.4)	(\$20.4)
Owner's Costs, 2020 MM\$	(\$0.9)	(\$0.9)	(\$0.9)	(\$0.9)	(\$1.1)	(\$1.1)

Proposed Capital Cost: 1x 7F.05

1x GE 7F.05	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
EPC Project Capital Costs, 2020 MM\$	\$164	\$167	\$188	\$199	\$228	\$225
Owner's Costs, 2020 MM\$	\$60	\$60	\$69	\$70	\$113	\$62
Owner's Project Development	\$0.4	\$0.4	\$0.4	\$0.4	\$0.5	\$0.4
Owner's Operational Personnel Prior to COD	\$0.4	\$0.4	\$0.4	\$0.4	\$0.6	\$0.5
Owner's Engineer	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Owner's Project Management	\$1.1	\$1.1	\$1.1	\$1.1	\$1.5	\$1.2
Owner's Legal Costs	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Owner's Start-up Engineering and Commissioning	\$0.3	\$0.3	\$0.3	\$0.3	\$0.4	\$0.3
Construction Power and Water	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Permitting and Licensing Fees	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Switchyard	\$10.3	\$10.3	\$10.3	\$10.3	\$43.8	\$5.6
Electrical Interconnection and Deliverability	\$11.0	\$11.0	\$11.0	\$11.0	\$8.9	\$6.5
Gas Interconnection and Reinforcement	\$14.3	\$14.3	\$14.3	\$14.3	\$20.0	\$14.3
System Deliverability Upgrade Costs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Emission Reduction Credits	\$0.1	\$0.1	\$0.1	\$0.3	\$0.3	\$0.3
Political Concessions & Area Development Fees	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Startup/Testing (Fuel & Consumables)	\$0.8	\$0.8	\$3.1	\$3.1	\$3.1	\$3.1
Initial Fuel Inventory	\$0.0	\$0.0	\$4.9	\$4.9	\$4.9	\$4.9
Site Security	\$0.6	\$0.6	\$0.6	\$0.6	\$0.8	\$0.6
Operating Spare Parts	\$5.5	\$5.5	\$5.5	\$5.5	\$5.5	\$5.5
Builders Risk Insurance (0.45% of EPC Costs)	\$0.7	\$0.8	\$0.9	\$0.9	\$1.0	\$1.0
Owner's Contingency (5% for Screening)	\$10.7	\$10.8	\$12.3	\$12.8	\$16.2	\$13.7
AFUDC, 2020 MM\$	\$16	\$16	\$18	\$19	\$24	\$20
EPC Portion	\$11.5	\$11.7	\$13.2	\$14.0	\$16.0	\$15.7
Non-EPC Portion	\$4.2	\$4.2	\$4.8	\$4.9	\$7.9	\$4.4
Total Project Costs, 2020 MM\$	\$240	\$243	\$275	\$288	\$364	\$307
CAPITAL COST ADD / DEDUCT FOR GAS ONLY						
Capital Costs, 2020 MM\$	\$16.9	\$16.9	(\$16.9)	(\$16.9)	(\$20.1)	(\$20.1)
Owner's Costs, 2020 MM\$	\$8.5	\$8.5	(\$8.5)	(\$8.5)	(\$8.6)	(\$8.6)
CAPITAL COST ADD / DEDUCT TO REMOVE SCR/CO						
Capital Costs, 2020 MM\$	(\$20.6)	(\$20.6)	(\$20.6)	(\$20.6)	(\$24.0)	(\$24.0)
Owner's Costs, 2020 MM\$	(\$1.1)	(\$1.1)	(\$1.1)	(\$1.1)	(\$1.3)	(\$1.3)

Proposed Capital Cost: 1x 7HA.02 (25 ppm NOx)

1x GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
EPC Project Capital Costs, 2020 MM\$	\$224	\$227	\$257	\$267	\$302	\$299
Owner's Costs, 2020 MM\$	\$69	\$69	\$82	\$83	\$122	\$75
Owner's Project Development	\$0.4	\$0.4	\$0.4	\$0.4	\$0.5	\$0.4
Owner's Operational Personnel Prior to COD	\$0.4	\$0.4	\$0.4	\$0.4	\$0.6	\$0.5
Owner's Engineer	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Owner's Project Management	\$1.1	\$1.1	\$1.1	\$1.1	\$1.5	\$1.2
Owner's Legal Costs	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Owner's Start-up Engineering and Commissioning	\$0.3	\$0.3	\$0.3	\$0.3	\$0.4	\$0.3
Construction Power and Water	\$0.6	\$0.6	\$0.6	\$0.6	\$0.7	\$0.6
Permitting and Licensing Fees	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Switchyard	\$10.3	\$10.3	\$10.3	\$10.3	\$43.8	\$5.6
Electrical Interconnection and Deliverability	\$11.0	\$11.0	\$11.0	\$11.0	\$8.9	\$6.5
Gas Interconnection and Reinforcement	\$17.9	\$17.9	\$17.9	\$17.9	\$20.0	\$17.9
System Deliverability Upgrade Costs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Emission Reduction Credits	\$0.1	\$0.1	\$0.1	\$0.4	\$0.4	\$0.4
Political Concessions & Area Development Fees	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Startup/Testing (Fuel & Consumables)	\$1.2	\$1.2	\$4.5	\$4.5	\$4.5	\$4.5
Initial Fuel Inventory	\$0.0	\$0.0	\$7.2	\$7.2	\$7.2	\$7.2
Site Security	\$0.6	\$0.6	\$0.6	\$0.6	\$0.8	\$0.6
Operating Spare Parts	\$6.5	\$6.5	\$6.5	\$6.5	\$6.5	\$6.5
Builders Risk Insurance (0.45% of EPC Costs)	\$1.0	\$1.0	\$1.2	\$1.2	\$1.4	\$1.4
Owner's Contingency (5% for Screening)	\$14.0	\$14.1	\$16.1	\$16.7	\$20.2	\$17.9
AFUDC, 2020 MM\$	\$21	\$21	\$24	\$24	\$30	\$26
EPC Portion	\$15.7	\$15.9	\$18.0	\$18.7	\$21.2	\$21.0
Non-EPC Portion	\$4.8	\$4.8	\$5.7	\$5.8	\$8.5	\$5.3
Total Project Costs, 2020 MM\$	\$313	\$317	\$362	\$374	\$454	\$401
CAPITAL COST ADD / DEDUCT FOR GAS ONLY						
Capital Costs, 2020 MM\$	\$25.4	\$25.4	(\$25.4)	(\$25.4)	(\$30.2)	(\$30.2)
Owner's Costs, 2020 MM\$	\$12.5	\$12.5	(\$12.5)	(\$12.5)	(\$12.7)	(\$12.7)

Proposed Capital Cost: 1x 7HA.02 (15 ppm NOx)

1x GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess
EPC Project Capital Costs, 2020 MM\$	\$181	\$184	\$214
Owner's Costs, 2020 MM\$	\$66	\$67	\$79
Owner's Project Development	\$0.4	\$0.4	\$0.4
Owner's Operational Personnel Prior to COD	\$0.4	\$0.4	\$0.4
Owner's Engineer	\$1.0	\$1.0	\$1.0
Owner's Project Management	\$1.1	\$1.1	\$1.1
Owner's Legal Costs	\$1.0	\$1.0	\$1.0
Owner's Start-up Engineering and Commissioning	\$0.3	\$0.3	\$0.3
Construction Power and Water	\$0.6	\$0.6	\$0.6
Permitting and Licensing Fees	\$1.0	\$1.0	\$1.0
Switchyard	\$10.3	\$10.3	\$10.3
Electrical Interconnection and Deliverability	\$11.0	\$11.0	\$11.0
Gas Interconnection and Reinforcement	\$17.9	\$17.9	\$17.9
System Deliverability Upgrade Costs	\$0.0	\$0.0	\$0.0
Emission Reduction Credits	\$0.1	\$0.1	\$0.1
Political Concessions & Area Development Fees	\$0.5	\$0.5	\$0.5
Startup/Testing (Fuel & Consumables)	\$1.2	\$1.2	\$4.5
Initial Fuel Inventory	\$0.0	\$0.0	\$7.2
Site Security	\$0.6	\$0.6	\$0.6
Operating Spare Parts	\$6.5	\$6.5	\$6.5
Builders Risk Insurance (0.45% of EPC Costs)	\$0.8	\$0.8	\$1.0
Owner's Contingency (5% for Screening)	\$11.8	\$11.9	\$14.0
AFUDC, 2020 MM\$	\$17	\$18	\$21
EPC Portion	\$12.7	\$12.9	\$15.0
Non-EPC Portion	\$4.6	\$4.7	\$5.5
Total Project Costs, 2020 MM\$	\$264	\$268	\$313
CAPITAL COST ADD / DEDUCT FOR GAS ONLY			
Capital Costs, 2020 MM\$	\$25.4	\$25.4	(\$25.4)
Owner's Costs, 2020 MM\$	\$12.5	\$12.5	(\$12.5)

Proposed Capital Cost: 1x1 7HA.02 CC (Informational Only)

1x1 Combined Cycle GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
EPC Project Capital Costs, 2020 MM\$	\$512	\$524	\$569	\$611	\$696	\$690
Owner's Costs, 2020 MM\$	\$106	\$107	\$122	\$125	\$173	\$131
Owner's Project Development	\$3.5	\$3.5	\$3.5	\$3.5	\$4.6	\$3.9
Owner's Operational Personnel Prior to COD	\$2.4	\$2.4	\$2.4	\$2.4	\$3.1	\$2.6
Owner's Engineer	\$2.6	\$2.6	\$2.6	\$2.6	\$3.4	\$2.9
Owner's Project Management	\$4.8	\$4.8	\$4.8	\$4.8	\$6.2	\$5.3
Owner's Legal Costs	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Owner's Start-up Engineering and Commissioning	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Sales Tax	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Power and Water	\$1.5	\$1.5	\$1.5	\$1.5	\$2.0	\$1.7
Permitting and Licensing Fees	\$1.0	\$1.0	\$1.0	\$1.0	\$1.3	\$1.1
Switchyard	\$18.9	\$18.9	\$18.9	\$18.9	\$54.6	\$18.9
Electrical Interconnection and Deliverability	\$11.0	\$11.0	\$11.0	\$11.0	\$8.9	\$11.0
Gas Interconnection and Reinforcement	\$17.9	\$17.9	\$17.9	\$17.9	\$20.0	\$17.9
System Deliverability Upgrade Costs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Emission Reduction Credits	\$0.2	\$0.2	\$0.2	\$1.1	\$1.1	\$1.1
Political Concessions & Area Development Fees	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Startup/Testing (Fuel & Consumables)	\$1.2	\$1.2	\$5.5	\$5.5	\$5.5	\$5.5
Initial Fuel Inventory	\$0.0	\$0.0	\$7.2	\$7.2	\$7.2	\$7.2
Site Security	\$1.1	\$1.1	\$1.1	\$1.1	\$1.4	\$1.2
Operating Spare Parts	\$6.5	\$6.5	\$6.5	\$6.5	\$6.5	\$6.5
Builders Risk Insurance (0.45% of EPC Costs)	\$2.3	\$2.4	\$2.6	\$2.8	\$3.1	\$3.1
Owner's Contingency (5% for Screening)	\$29.4	\$30.1	\$32.9	\$35.1	\$41.4	\$39.1
AFUDC, 2020 MM\$	\$43	\$44	\$48	\$52	\$61	\$58
EPC Portion	\$35.8	\$36.7	\$39.8	\$42.8	\$48.8	\$48.3
Non-EPC Portion	\$7.4	\$7.5	\$8.5	\$8.7	\$12.1	\$9.2
Total Project Costs, 2020 MM\$	\$661	\$675	\$739	\$788	\$930	\$879
CAPITAL COST ADD / DEDUCT FOR GAS ONLY						
Capital Costs, 2020 MM\$	\$25.4	\$25.4	(\$25.4)	(\$25.4)	(\$30.2)	(\$30.2)
Owner's Costs, 2020 MM\$	\$13.5	\$13.5	(\$13.5)	(\$13.5)	(\$13.8)	(\$13.8)

Proposed Capital Cost: BESS 4-Hour

200 MW BESS (4-Hour)	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
EPC Project Capital Costs, 2020 MM\$	\$251	\$253	\$256	\$265	\$281	\$279
Owner's Costs, 2020 MM\$	\$40	\$40	\$40	\$40	\$75	\$32
Owner's Project Development	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2
Owner's Operational Personnel Prior to COD	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1
Owner's Engineer	\$0.2	\$0.2	\$0.2	\$0.2	\$0.3	\$0.2
Owner's Project Management	\$0.4	\$0.4	\$0.4	\$0.4	\$0.5	\$0.4
Owner's Legal Costs	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Owner's Start-up Engineering and Commissioning	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1
Land	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Power and Water	\$0.5	\$0.5	\$0.5	\$0.5	\$0.6	\$0.5
Permitting and Licensing Fees	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3
Switchyard	\$10.3	\$10.3	\$10.3	\$10.3	\$43.8	\$5.6
Electrical Interconnection and Deliverability	\$11.0	\$11.0	\$11.0	\$11.0	\$8.9	\$6.5
Gas Interconnection and Reinforcement	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
System Deliverability Upgrade Costs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Emission Reduction Credits	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Political Concessions & Area Development Fees	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1
Startup/Testing (Fuel & Consumables)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Initial Fuel Inventory	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Site Security	\$0.4	\$0.4	\$0.4	\$0.4	\$0.5	\$0.4
Operating Spare Parts	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8
Builders Risk Insurance (0.45% of Construction Costs)	\$1.1	\$1.1	\$1.2	\$1.2	\$1.3	\$1.3
Owner's Contingency (5% for Screening Purposes)	\$13.8	\$14.0	\$14.1	\$14.6	\$17.0	\$14.8
AFUDC, 2020 MM\$	\$20	\$21	\$21	\$21	\$25	\$22
EPC Portion	\$17.6	\$17.7	\$17.9	\$18.6	\$19.7	\$19.6
Non-EPC Portion	\$2.8	\$2.8	\$2.8	\$2.8	\$5.3	\$2.2
Total Project Costs, 2020 MM\$	\$311	\$313	\$316	\$327	\$381	\$333

Proposed Capital Cost: BESS 6-Hour

200 MW BESS (6-Hour)	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
EPC Project Capital Costs, 2020 MM\$	\$359	\$362	\$366	\$380	\$402	\$400
Owner's Costs, 2020 MM\$	\$46	\$46	\$47	\$47	\$82	\$39
Owner's Project Development	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2
Owner's Operational Personnel Prior to COD	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1
Owner's Engineer	\$0.2	\$0.2	\$0.2	\$0.2	\$0.3	\$0.3
Owner's Project Management	\$0.4	\$0.4	\$0.4	\$0.4	\$0.5	\$0.5
Owner's Legal Costs	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Owner's Start-up Engineering and Commissioning	\$0.1	\$0.1	\$0.1	\$0.1	\$0.2	\$0.2
Land	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Power and Water	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Permitting and Licensing Fees	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3
Switchyard	\$10.3	\$10.3	\$10.3	\$10.3	\$43.8	\$5.6
Electrical Interconnection and Deliverability	\$11.0	\$11.0	\$11.0	\$11.0	\$8.9	\$6.5
Gas Interconnection and Reinforcement	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
System Deliverability Upgrade Costs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Emission Reduction Credits	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Political Concessions & Area Development Fees	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1
Startup/Testing (Fuel & Consumables)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Initial Fuel Inventory	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Site Security	\$0.4	\$0.4	\$0.4	\$0.4	\$0.6	\$0.5
Operating Spare Parts	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1
Builders Risk Insurance (0.45% of Construction Costs)	\$1.6	\$1.6	\$1.7	\$1.7	\$1.8	\$1.8
Owner's Contingency (5% for Screening Purposes)	\$19.3	\$19.5	\$19.6	\$20.3	\$23.1	\$20.9
AFUDC, 2020 MM\$	\$28	\$29	\$29	\$30	\$34	\$31
EPC Portion	\$25.1	\$25.4	\$25.6	\$26.6	\$28.2	\$28.0
Non-EPC Portion	\$3.2	\$3.2	\$3.3	\$3.3	\$5.8	\$2.7
Total Project Costs, 2020 MM\$	\$433	\$437	\$441	\$457	\$519	\$470

Proposed Capital Cost: BESS 8-Hour

200 MW BESS (8-Hour)	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
EPC Project Capital Costs, 2020 MM\$	\$467	\$471	\$476	\$494	\$524	\$521
Owner's Costs, 2020 MM\$	\$53	\$53	\$53	\$54	\$90	\$46
Owner's Project Development	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2
Owner's Operational Personnel Prior to COD	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1
Owner's Engineer	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3
Owner's Project Management	\$0.5	\$0.5	\$0.5	\$0.5	\$0.6	\$0.5
Owner's Legal Costs	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Owner's Start-up Engineering and Commissioning	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2	\$0.2
Land	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Power and Water	\$0.6	\$0.6	\$0.6	\$0.6	\$0.7	\$0.6
Permitting and Licensing Fees	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3
Switchyard	\$10.3	\$10.3	\$10.3	\$10.3	\$43.8	\$5.6
Electrical Interconnection and Deliverability	\$11.0	\$11.0	\$11.0	\$11.0	\$8.9	\$6.5
Gas Interconnection and Reinforcement	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
System Deliverability Upgrade Costs	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Emission Reduction Credits	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Political Concessions & Area Development Fees	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1
Startup/Testing (Fuel & Consumables)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Initial Fuel Inventory	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Site Security	\$0.5	\$0.5	\$0.5	\$0.5	\$0.7	\$0.6
Operating Spare Parts	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5
Builders Risk Insurance (0.45% of Construction Costs)	\$2.1	\$2.1	\$2.1	\$2.2	\$2.4	\$2.3
Owner's Contingency (5% for Screening Purposes)	\$24.7	\$25.0	\$25.2	\$26.1	\$29.2	\$27.0
AFUDC, 2020 MM\$	\$36	\$37	\$37	\$38	\$43	\$40
EPC Portion	\$32.7	\$33.0	\$33.3	\$34.6	\$36.6	\$36.4
Non-EPC Portion	\$3.7	\$3.7	\$3.7	\$3.8	\$6.3	\$3.2
Total Project Costs, 2020 MM\$	\$556	\$561	\$566	\$587	\$656	\$607

APPENDIX C: Proposed O&M ESTIMATE UPDATES

Proposed O&M Estimate: 3x SGT-A65

3x Siemens SGT-A65	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
FIXED O&M COSTS						
Fixed O&M Cost - LABOR, 2020\$MM/Yr	\$0.90	\$1.00	\$1.30	\$1.30	\$1.70	\$1.50
Fixed O&M Cost - OTHER, 2020\$MM/Yr	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10
Site Leasing Allowance, 2020\$/MM/Yr	\$0.3	\$0.3	\$0.3	\$0.3	\$3.2	\$0.4
Property Insurance Allowance, 2020\$MM/Yr	\$1.3	\$1.3	\$1.4	\$1.4	\$1.6	\$1.6
LEVELIZED MAJOR MAINTENANCE COSTS						
Major Maintenance Cost, 2020\$/GT-hr or \$/engine-hr	\$190	\$190	\$190	\$190	\$190	\$190
Major Maintenance Cost, 2020\$/GT-start	N/A	N/A	N/A	N/A	N/A	N/A
Major Maintenance Cost, 2020\$/MWh	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - GAS OPERATION						
Total Variable O&M Cost, 2020\$/MWh	\$10.07	\$9.95	\$9.85	\$9.85	\$10.17	\$9.72
Water Related O&M, \$/MWh	\$8.35	\$8.22	\$8.12	\$8.12	\$8.44	\$7.99
SCR Related Costs, \$/MWh	\$0.82	\$0.83	\$0.83	\$0.83	\$0.83	\$0.83
Other Consumables and Variable O&M, \$/MWh	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - FUEL OIL OPERATION						
Total Variable O&M Cost, 2020\$/MWh	\$10.20	\$10.00	\$9.90	\$9.90	\$10.21	\$9.79
Water Related O&M, \$/MWh	\$8.20	\$8.10	\$8.00	\$8.00	\$8.28	\$7.86
SCR Related Costs, \$/MWh	\$1.00	\$1.00	\$1.00	\$1.00	\$1.03	\$1.03
Other Consumables and Variable O&M, \$/MWh	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90

Proposed O&M Estimate: 1x 7F.05

1x GE 7F.05	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
FIXED O&M COSTS						
Fixed O&M Cost - LABOR, 2020\$MM/Yr	\$0.90	\$1.00	\$1.30	\$1.30	\$1.70	\$1.50
Fixed O&M Cost - OTHER, 2020\$MM/Yr	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10
Site Leasing Allowance, 2020\$/MM/Yr	\$0.3	\$0.3	\$0.3	\$0.3	\$3.2	\$0.4
Property Insurance Allowance, 2020\$MM/Yr	\$1.0	\$1.0	\$1.1	\$1.2	\$1.4	\$1.3
LEVELIZED MAJOR MAINTENANCE COSTS						
Major Maintenance Cost, 2020\$/GT-hr or \$/engine-hr	\$350	\$350	\$350	\$350	\$350	\$350
Major Maintenance Cost, 2020\$/GT-start	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500	\$9,500
Major Maintenance Cost, 2020\$/MWh	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - GAS OPERATION						
Total Variable O&M Cost, 2020\$/MWh	\$1.48	\$1.48	\$1.48	\$1.48	\$1.50	\$1.48
Water Related O&M, \$/MWh	\$0.00	\$0.00	\$0.00	\$0.00	\$0.02	\$0.00
SCR Related Costs, \$/MWh	\$0.58	\$0.58	\$0.58	\$0.58	\$0.57	\$0.57
Other Consumables and Variable O&M, \$/MWh	\$0.90	\$0.90	\$0.90	\$0.90	\$0.91	\$0.91
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - FUEL OIL OPERATION						
Total Variable O&M Cost, 2020\$/MWh	\$8.80	\$8.80	\$8.80	\$8.80	\$9.17	\$8.79
Water Related O&M, \$/MWh	\$7.10	\$7.10	\$7.10	\$7.10	\$7.48	\$7.11
SCR Related Costs, \$/MWh	\$0.80	\$0.80	\$0.80	\$0.80	\$0.79	\$0.79
Other Consumables and Variable O&M, \$/MWh	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.89

Proposed O&M Estimate: 1x 7HA.02 (25 ppm NOx)

1x GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
FIXED O&M COSTS						
Fixed O&M Cost - LABOR, 2020\$MM/Yr	\$0.90	\$1.00	\$1.30	\$1.30	\$1.70	\$1.50
Fixed O&M Cost - OTHER, 2020\$MM/Yr	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50
Site Leasing Allowance, 2020\$/MM/Yr	\$0.3	\$0.3	\$0.3	\$0.3	\$3.2	\$0.4
Property Insurance Allowance, 2020\$MM/Yr	\$1.3	\$1.4	\$1.5	\$1.6	\$1.8	\$1.8
LEVELIZED MAJOR MAINTENANCE COSTS						
Major Maintenance Cost, 2020\$/GT-hr or \$/engine-hr	\$600	\$600	\$600	\$600	\$600	\$600
Major Maintenance Cost, 2020\$/GT-start	\$16,200	\$16,200	\$16,200	\$16,200	\$16,200	\$16,200
Major Maintenance Cost, 2020\$/MWh	\$1.60	\$1.60	\$1.60	\$1.60	\$1.60	\$1.60
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - GAS OPERATION						
Total Variable O&M Cost, 2020\$/MWh	\$1.37	\$1.27	\$1.27	\$1.27	\$1.39	\$1.27
Water Related O&M, \$/MWh	\$0.00	\$0.00	\$0.00	\$0.00	\$0.02	\$0.00
SCR Related Costs, \$/MWh	\$0.47	\$0.37	\$0.37	\$0.37	\$0.48	\$0.37
Other Consumables and Variable O&M, \$/MWh	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - FUEL OIL OPERATION						
Total Variable O&M Cost, 2020\$/MWh	\$10.90	\$10.90	\$10.90	\$10.90	\$11.44	\$10.90
Water Related O&M, \$/MWh	\$9.30	\$9.30	\$9.30	\$9.30	\$9.83	\$9.30
SCR Related Costs, \$/MWh	\$0.80	\$0.80	\$0.80	\$0.80	\$0.70	\$0.80
Other Consumables and Variable O&M, \$/MWh	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90

Proposed O&M Estimate: 1x 7HA.02 (15 ppm NOx)

1x GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess
FIXED O&M COSTS			
Fixed O&M Cost - LABOR, 2020\$MM/Yr	\$0.90	\$1.00	\$1.30
Fixed O&M Cost - OTHER, 2020\$MM/Yr	\$1.50	\$1.50	\$1.50
Site Leasing Allowance, 2020\$/MM/Yr	\$0.3	\$0.3	\$0.3
Property Insurance Allowance, 2020\$MM/Yr	\$1.1	\$1.1	\$1.3
LEVELIZED MAJOR MAINTENANCE COSTS			
Major Maintenance Cost, 2020\$/GT-hr or \$/engine-hr	\$600	\$600	\$600
Major Maintenance Cost, 2020\$/GT-start	\$16,200	\$16,200	\$16,200
Major Maintenance Cost, 2020\$/MWh	\$1.60	\$1.60	\$1.60
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - GAS OPERATION			
Total Variable O&M Cost, 2020\$/MWh	\$0.90	\$0.90	\$0.90
Water Related O&M, \$/MWh	\$0.00	\$0.00	\$0.00
SCR Related Costs, \$/MWh	\$0.00	\$0.00	\$0.00
Other Consumables and Variable O&M, \$/MWh	\$0.90	\$0.90	\$0.90
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - FUEL OIL OPERATION			
Total Variable O&M Cost, 2020\$/MWh	\$10.20	\$10.20	\$10.20
Water Related O&M, \$/MWh	\$9.30	\$9.30	\$9.30
SCR Related Costs, \$/MWh	\$0.00	\$0.00	\$0.00
Other Consumables and Variable O&M, \$/MWh	\$0.90	\$0.90	\$0.90

Proposed O&M Estimate: 1x1 7HA.02 CC (Informational Only)

1x1 Combined Cycle GE 7HA.02	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
FIXED O&M COSTS						
Fixed O&M Cost - LABOR, 2020\$MM/Yr	\$2.8	\$3.1	\$4.1	\$4.1	\$5.3	\$4.7
Fixed O&M Cost - OTHER, 2020\$MM/Yr	\$2.1	\$2.1	\$2.1	\$2.1	\$2.1	\$2.1
Site Leasing Allowance, 2020\$/MM/Yr	\$0.7	\$0.7	\$0.7	\$0.7	\$7.3	\$0.8
Property Insurance Allowance, 2020\$MM/Yr	\$3.1	\$3.1	\$3.4	\$3.7	\$4.2	\$4.1
LEVELIZED CAPITAL MAINTENANCE COSTS						
Major Maintenance Cost, 2020 \$/GT-hr	\$600	\$600	\$600	\$600	\$600	\$600
Major Maintenance Cost, 2020 \$/MWh	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - GAS OPERATION						
Total Variable O&M Cost, 2020 \$/MWh	\$1.55	\$1.55	\$1.55	\$1.55	\$1.57	\$1.54
Water Related O&M (\$/MWh)	\$0.01	\$0.01	\$0.01	\$0.01	\$0.03	\$0.01
SCR Related Costs, \$/MWh	\$0.32	\$0.32	\$0.32	\$0.32	\$0.32	\$0.32
Other Consumables and Variable O&M (\$/MWh)	\$1.22	\$1.22	\$1.22	\$1.22	\$1.22	\$1.21
Incremental Duct Fired Variable O&M, 2020 \$/MWh (excl)	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60
Water Related O&M (\$/MWh)	\$0.03	\$0.03	\$0.03	\$0.03	\$0.06	\$0.03
SCR Reagent, \$/MWh	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13
Other Consumables and Variable O&M (\$/MWh)	\$0.44	\$0.44	\$0.44	\$0.44	\$0.41	\$0.44
NON-FUEL VARIABLE O&M COSTS (EXCLUDES MAJOR MAINTENANCE) - FUEL OIL OPERATION						
Total Variable O&M Cost, 2020 \$/MWh	\$1.70	\$1.70	\$1.70	\$1.70	\$2.09	\$1.72
Water Related O&M (\$/MWh)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.40	\$0.02
SCR Related Costs, \$/MWh	\$0.50	\$0.50	\$0.50	\$0.50	\$0.46	\$0.48
Other Consumables and Variable O&M (\$/MWh)	\$1.20	\$1.20	\$1.20	\$1.20	\$1.23	\$1.22

Proposed O&M Estimates: BESS (4, 6, and 8 Hour)

200 MW BESS (4-Hour)	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
FIXED O&M COSTS						
Fixed O&M Cost - Assumes LTSA with Integrator/OEM, 2020\$/MM/Yr	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0
Site Leasing Allowance, 2020\$/MM/Yr	\$0.3	\$0.3	\$0.3	\$0.3	\$2.4	\$0.3
Property Insurance Allowance, 2020\$/MM/Yr	\$1.5	\$1.5	\$1.5	\$1.6	\$1.7	\$1.7
CAPACITY AUGMENTATION (Modeled as VARIABLE O&M COSTS)						
Capacity Augmentation (via LTSA) for 20 Years Levelized, 2020 \$/MWh	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00

200 MW BESS (6-Hour)	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
FIXED O&M COSTS						
Fixed O&M Cost - Assumes LTSA with Integrator/OEM, 2020\$/MM/Yr	\$1.2	\$1.2	\$1.2	\$1.2	\$1.2	\$1.2
Site Leasing Allowance, 2020\$/MM/Yr	\$0.3	\$0.3	\$0.3	\$0.3	\$3.2	\$0.4
Property Insurance Allowance, 2020\$/MM/Yr	\$2.2	\$2.2	\$2.2	\$2.3	\$2.4	\$2.4
CAPACITY AUGMENTATION (Modeled as VARIABLE O&M COSTS)						
Capacity Augmentation (via LTSA) for 20 Years Levelized, 2020 \$/MWh	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00

200 MW BESS (8-Hour)	ZONE C	ZONE F	ZONE G - Dutchess	ZONE G - Rockland	ZONE J	ZONE K
FIXED O&M COSTS						
Fixed O&M Cost - Assumes LTSA with Integrator/OEM, 2020\$/MM/Yr	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5
Site Leasing Allowance, 2020\$/MM/Yr	\$0.4	\$0.4	\$0.4	\$0.4	\$4.1	\$0.5
Property Insurance Allowance, 2020\$/MM/Yr	\$2.8	\$2.8	\$2.9	\$3.0	\$3.1	\$3.1
CAPACITY AUGMENTATION (Modeled as VARIABLE O&M COSTS)						
Capacity Augmentation (via LTSA) for 20 Years Levelized, 2020 \$/MWh	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00