Rhode Island Renewable Energy Growth Program:

Research, Analysis, & Discussion in Support of Final 2023 Program Year Ceiling Price Recommendations

October 24, 2022

Sustainable Energy Advantage, LLC
Mondre Energy, Inc.

Summary Results, Solar Classes (¢/kWh)

Technology	Tariff Term (Yrs.)	Size Range kW (Modeled Size kW)	2022 Approved CP	2023 1st Draft Proposed CP	2023 2nd Draft CP (Including Post-Tariff Revenue)	2023 2nd Draft CP (No Post-Tariff Revenue)	2023 3nd Draft CP (Post-Tariff Revenue)	% Change (2022→ 2023)	2023 3nd Draft CP (No Post-Tariff Revenue)	% Change (2022→ 2023)
Small Solar I	15	0-15 (5.8)	31.05	29.85	27.75	32.25	**27.75**	**-11%**	**31.25**	**1%**
Small Solar II	20	>15-25 (25)	27.55	25.95	26.15	26.85	**26.15**	**-5%**	**26.65**	**-3%**
Medium Solar	20	>25-250 (250)	24.45	23.65	25.25	26.25	**25.65†**	**6%**	**25.65†**	**6%**
Commercial I	20	>250-500 (500)	19.25	19.35	21.75	22.65	**22.05**	**15%**	**22.35**	**16%**
Commercial I CRDG	20	>250-500 (500)	22.14	22.25*	24.35	25.35	**24.75†**	**12%**	**24.75†**	**12%**
Commercial II	20	>500-1,000 (1,000)	15.75	16.45	18.35	19.35	**18.65**	**18%**	**19.15**	**22%**
Commercial II CRDG	20	>500-1,000 (1,000)	18.11	18.92*	21.10*	22.25*	**21.45***	**18%**	**21.95**	**21%**
Large Solar	20	>1,000-5,000 (5,000)	10.95	12.55	14.15	15.95	**14.35**	**31%**	**15.45**	**41%**
Large Solar CRDG	20	>1,000-5,000 (5,000)	12.59	14.43*	16.27*	18.34*	**16.50***	**31%**	**17.77***	**41%**

*This is the maximum CRDG Ceiling Price allowed by law. For the CPs excluding post-tariff revenue, the calculated 2023 values are 22.45 for Commercial CRDG >500-1,000 and 19.05 for Large CRDG. For the CPs including post-tariff revenue, the calculated 2023 values are 18.25 for Large CRDG. Note, however, that this CP would allow cost-competitive projects (bidding below the CP) access to > a 15% premium compared to actual project costs.

†The following values are identical because, on an after-tax basis, and under the assumptions for post-tariff revenue utilized, such revenue only provides slightly more compensation than is needed on an after-tax basis to cover the projects operating costs. Given that this value is incurred in years 21-25, the contribution to the project's margin is heavily discounted, and thus does not contribute materially to the project's IRR. As a result, assuming the project has no post-tariff revenue produces the exact same ceiling price.

Summary Results, Non-Solar Classes (¢/kWh)

Technology	Tariff Term (Years)	Size Range kW (Modeled Size kW)	2022 Approved CP	2023 1st Draft Proposed CP	2023 2nd Draft CP (Including Post-Tariff Revenue)	2023 2nd Draft CP (No Post-Tariff Revenue)	2023 3nd Draft CP (Including Post-Tariff Revenue)	% Change (2022➔ 2023)	2023 3nd Draft CP (No Post-Tariff Revenue)	% Change (2022➔ 2023)
Wind	20	<=5,000 (3,000)	22.4	19.10*	18.55	20.25	**19.15**	**-15%**	**19.95**	**-11%**
Wind - CRDG	20	<=5,000 (3,000)	24.6	21.15*	20.55	22.35	**21.15**	**-14%**	**21.75**	**-12%**
Hydro	20	<=5,000 (500)	37.15	39.85	38.35	39.95	**31.75**	**-15%**	**32.15**	**-14%**
Anaerobic Digestion	20	<=5,000 (750)	25.55	19.65	18.65	18.65	**18.85†**	**-26%**	**18.85†**	**-26%**

*Average of (1) 90% bonus depreciation and (2) no bonus depreciation
†The following values are identical because anaerobic digestion projects have a useful life that is the same duration as their REG tariff term (20 years), and thus are not assumed to operate long enough to receive post-tariff revenue.

Overview of Key Stakeholder Feedback and Modeling Implications

Interest Rate on Term Debt (1)

- Ecogy Energy (Ecogy) has argued that utilizing Treasury bill values from September understates potential interest rates, given significant increase in 10- and 20-year treasury bill values since that time
- **SEA agrees this is a concern**, and understands that it may continue to be a concern so long as the Federal Reserve continues with active monetary tightening
- **M.I.: Revise interest rates on term debt for revised 10- and 20-year Treasury yields for all resources (see next slide)**

Interest Rate on Term Debt (2)

Row	Solar Class	Notes	Medium Solar	Comm'l Solar/ Comm'l CRDG	Large Solar/ Large CRDG	Wind/Wind CRDG	Anaerobic Digestion	Small-Scale Hydroelectric
A	**Debt Term (Years)**	Med & Comm'l = average of 10 and 15 year values	13	13	15	15	15	20
B	**10-Year Treasury Yield**	Value on 10/10/2022	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%
C	**20-Year Treasury Yield**	Value on 10/10/2022	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%
D	**Effective 15-Year Treasury Value (for Swap)**	Avg of B & C	4.09%	4.09%	4.09%	4.09%	4.09%	4.09%
E	**Effective 13-Year Treasury Value (for Swap)**	Avg of B & D	4.04%	4.04%	4.04%	4.04%	4.04%	4.04%
F	**Applicable Treasury-Based Value**	Based on A	4.04%	4.04%	4.09%	4.09%	4.09%	4.09%
G	**Risk Premium**	Per stakeholder term sheet	3.25%	3.25%	3.25%	3.50%	3.25%	3.50%
H	**Estimate of Interest Rate on Term Debt**	**F + G**	**7.29%**	**7.29%**	**7.34%**	**7.59%**	**7.34%**	**7.59%**

Inflation Reduction Act (IRA) Financing Impact: Consideration of Allowing Hydro to Qualify for Successor Investment/Production Credits

- DPUC has argued that hydro projects are likely to be eligible for the successor Clean Energy Investment Credit (CEIC) or Clean Energy Production Credit (CEPC), despite risks associated with FERC licensing timelines, **given the CEIC/CEPC eligibility is based on a "placed in service" regime (rather than start construction-based regime)**
- **SEA has verified this understanding with hydro stakeholders**, who agree with this assessment (though this assessment remains subject to a degree of uncertainty related to the IRS' rulemakings over the next ~2 years)
- **M.I.s:**
  - **Small Scale Hydroelectric assumed to take 30% investment credit value, requiring the following changes:**
    - **Shifting sponsor/tax equity split from 80/20 to 25/75**
    - **Allowing the project to qualify for 5-year MACRS treatment (rather than 7-year, in the absence of the CEIC)**
    - **Including interconnection costs in the basis for calculating the value of the CEIC for the project**
    - **Lowering the debt share from 55% to 50% (to meet debt service coverage requirements)**

Inflation Reduction Act (IRA) Prevailing Wage Impact

- SEA was provided with estimates of the added cost of complying with the IRA's prevailing wage requirements from two solar market participants that averaged \$57.50/kW_{DC}
- In Draft 2, SEA applied this specific value to all eligible technologies
- Wind stakeholders provided highly detailed data supporting for IRA prevailing wage impacts on wind projects of the scale of those in the REG program, **which suggested cost increases would amount to \$130/kW_{DC}**
- **M.I.: Adopt \$130/kW_{DC} value for wind, given it was based on detailed and specific calculations**

Post-Tariff Project Revenue Assumptions (1)

- In comments, several stakeholders took positions on either side (either allowing post-tariff revenue to be assumed or not),
- Ecogy noted in its comments that neither option explicitly accounts for reconfiguration costs
- SEA disagrees that reconfiguration costs should be assumed in either scenario, because **we will recommend that the PUC adopt the "no post-tariff revenue" scenario for the prices if the agency believes that projects could reasonably expect to be required to reconfigure the project** to receive the net metering rate-based compensation
- Furthermore, and as before, **stakeholders remain uncertain about how to interpret Rhode Island law** about the treatment of post-tariff revenue
- **M.I.: No change in plans to propose two different options to PUC, except SEA restates the difference between Draft 2 and final recommended values for the "no post-tariff revenue" scenario to ensure that projects are not being unintentionally subsidized during the tariff period to compensate for uneconomical operation during the post-tariff period**
  - **In effect, the change makes the difference between the two options smaller than it would have been**

Post–Tariff Project Revenue Assumptions (2)

Ceiling Price Options	CP Option 1	CP Option 2
Include Post-Tariff Revenue?	No	Yes
Assume statute allows for NM compensation post-tariff irrespective of project configuration?	No	Yes
Therefore, include post-tariff re-configuration costs?	No	No
Limit term of analysis to tariff term?	**Yes - only model term of tariff, as wholesale post-tariff revenue is not able to cover operating expenses and thus results in higher CPs**	**No, model full useful life**

Depreciation Approach

- In its comments, DPUC reiterated its argument that bonus depreciation should be assumed given transferability rules created by IRA
- Based on feedback to SEA since the passage of the IRA, **industry participants do not expect the transferability rule to impact existing practices** with respect to monetizing depreciation (where tax equity avoids bonus depreciation in order to spread their equity across more projects). In fact, tax credit transferability is expected to be paired with *longer* depreciation schedules – allowing losses to be monetized by the project LLC.
- Furthermore, and even if it were available and an approach investors wanted to start using, bonus depreciation is a placed-in-service regime, meaning **projects relying on bonus depreciation will have to take the bonus value in place at the time of commercial operation**
  - Since many projects are facing uncertain interconnection timelines (but delays from certification to commercial operation of at least 2-3 years, and getting longer) **it is unclear to SEA that, without a further extension of bonus depreciation provisions, the remaining bonus depreciation value will be greater than the 5-year MACRS value**
- However, **SEA is open to reconsidering this assumption as the market gets more experience with the tax credit transferability provisions**, and would, if evidence justifies it, allow for some projects to be assumed to receive it in calculating ceiling prices
- **M.I.: No change for 2023 PY, but SEA open to revisiting in 2024 process to ensure ratepayers receive benefits if bonus depreciation emerges into more common use**

Other Changes to Financing Assumptions

- **Lender's Fee**
  - Ecogy argued that SEA's current assumption of 1% is too low and does not account for "legal costs…large commitment fees, audited financial statement fees, and associated required reporting and costs" – arguing that 2-3.5% is more reasonable
  - SEA's initial 1% estimate came from a mid-sized regional bank for projects <=1 MW
  - **M.I.: No change for 2023 PY, given late nature of suggestion in the process, but SEA will revisit for 2024 PY**
- **Small Solar I/II Financing Assumptions**
  - A stakeholder provided SEA with rate sheets that listed marginally higher interest rates and dealer fees as compared to SEA's current assumptions for Small Solar I/II
  - **M.I.: No change, price quotes are within range assumed in developing proposed financing inputs**

Land/Site Lease

- Ecogy commented that property owner requirements could as much as double lease payments after 20 years
- However, another stakeholder active in similar renewable energy classes indicated that in the case of their projects, **they assumed lease payments would remain the same value (or at the same escalation for the value in question)**
- Still another stakeholder indicated that they had not yet considered their approach to this issue
- **M.I.: No change, maintain current lease payment and escalation rate under scenario in which post-tariff revenue is assumed**
    - **This is because in the case in which it is not assumed, higher costs are not precluded, but are instead just not part of the analysis for making the initial investment decision**

Inverter Replacement

- A stakeholder indicated that their financier invested in projects assuming inverters need to be replaced after year 5, given that some manufacturer warranties expire at that time
  - The same stakeholder provided a copy of their warranty that indicated this was the approximate term of the warranty
- However, other stakeholders indicated **SEA's current assumption (of replacement following 10-13 years) remains broadly applicable**
  - It is unclear to SEA what brand of inverter the other market participants were using, or if it had a similar warranty period
- A separate stakeholder stated that **two inverter replacements over the project's useful life are typical, but that the first replacement is covered by warranty** (and thus not a cost that SEA would need to include in modeling)
- **M.I.: No change, but SEA will continue to monitor the market and determine whether the first replacement is more commonly not being covered under warranty**

Decommissioning Costs

- Stakeholders have provided SEA with a range of decommissioning cost estimates, both above and below SEA's current assumptions
- After engaging with a stakeholder who provided atypically high cost estimates, SEA determined that the high estimate was **driven partially by increased labor cost assumptions**, but was **unable to verify** these assumptions with publicly available third-party data
  - Even adopting labor rates at 50% of those quoted, the stakeholder's cost breakdown still yielded total costs greater than SEA's current input, suggesting that **there are other assumptions embedded in the estimate contributing to the high costs that SEA was unable to identify and validate**
- SEA also found a study conducted on behalf of Revity Energy regarding a solar facility in Hopkinton, RI that estimated decommissioning costs **lower than SEA's current inputs**
- **M.I.: No change for 2023 PY, given majority of data points support SEA's current assumptions, but SEA will continue to monitor labor costs and seek additional data on decommissioning expenses in next year's CP development process**

Insurance (% of Project Costs)

- One stakeholder provided SEA with insurance cost estimates that were lower than SEA's current inputs
- SEA has since learned that the estimates are a standard assumption agreed to with a financing partner, and **does not represent executed cost quotes with a defined scope of service**
- **M.I.: No change**

Sustainable Energy Advantage, LLC

Appendix

Summary: Solar <=25 kW Financing Assumptions

	Small I (1-15 kW)				Small II (15-25 kW)			
	2022 Final	***2023 1st Draft***	***2023 2nd Draft***	***2023 2nd Draft***	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 2nd Draft***
Federal Investment Tax Credit (%)	26%	30%	30%	**30%**	26%	30%	30%	**30%**
% Debt	60%	52.5%	52.5%	**52.5%**	50%	45%	45%	**45%**
Debt Term (years)	13	13	13	**13**	10	10	10	**10**
Interest Rate on Term Debt	6.3%	8.4%	6.3%	**6.3%**	7.0%	9.1%	7.0%	**7.0%**
Lender's Fee (% of total borrowing)	4.25%	4.25%	4.25%	**4.25%**	2.3%	2.3%	2.3%	**2.3%**
Target After-Tax Equity IRR	7%	7%	7%	**7%**	12.5%	12.5%	12.5%	**12.5%**

Summary: Solar Cost & Production Assumptions

	Small I	Small II	Medium	Comm'l I	Comm'l I (CRDG)	Comm'l II	Comm'l II (CRDG)	Large	Large CRDG
Nameplate Capacity (kW)	5.8	25	250	500	500	1,000	1,000	5,000	5,000
Capacity Factor	13.4%	13.4%	14.5%	14.6%	14.6%	14.6%	14.6%	15.10%	15.10%
Annual Degradation	1.0%	1.0%	0.8%	0.8%	0.8%	0.8%	0.8%	0.5%	0.5%
Useful Life (Years)	25	25	25	25	25	25	25	30	30
Total Capital Cost ^ ($/kW)	$3,566 [$3,355] [$3,377]	$3,058 [$2,878] [$3,103]	$2,485 [$2,085] [$2,408]	$2,352 [$1,953] [$2,108]	$2,452 [$2,053] [$2,208]	$2,218 [$1,821] [$1,938]	$2,318 [$1,921] [$2,038]	$1,964 [$1,677] [$1,444]	$2,064 [$1,777] [$1,544]
Fixed O&M ($/kW-yr)	$29	$24	$14.57	$12.03	$34.03	$12.03	$34.03	$11.00 [$8.00]	$33.00 [$30.00]
O&M Escalation Factor	2.0%	2.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Non-O&M Escalation %	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Insurance (% of Cost)	0.0%	0.0%	0.34%	0.57%	0.57%	0.57%	0.57%	0.57%	0.57%
Project Management ($/yr)	$0	$0	$3,000	$4,000	$4,000	$4,000	$4,000	$20,000	$20,000
Site Lease ($/yr)	$0	$0	$18,090 [$15,000]	$24,500 [$20,000]	$24,500 [$20,000]	$32,458 [$20,000]	$32,458 [$20,000]	$94,530 [$67,500]	$94,530 [$67,500]

Values in [Purple Brackets] represent 2022 ceiling price inputs, [Blue Bracketed] values are 1st Draft inputs that were changed for the 2nd Draft prices.

* Reflects installed cost of non-CRDG project from same category, plus estimated cost of customer acquisition ($100/kW)

^ Total cost includes interconnection cost

Summary: Non-Solar Cost & Production Assumptions

	Wind	Wind - CRDG	Hydroelectric	Anaerobic Digestion
Nameplate Capacity (kW)	3,000	3,000	500	725
Capacity Factor	21.00%	21.00%	55.00%	92%[1]
Annual Degradation	0.5%	0.5%	0.0%	0.0%
Total Cost ($/kW)	$3,288 [$3,158]	$3,388 [$3,258]	$11,918	$11,408
Fixed O&M ($/kW-yr)	$26.50	$48.50	$245 [$2.00]	$600
O&M Inflation	2.0%	2.0%	0% [2.0%]	2.0%
Insurance (% of Cost)	0.29%	0.29%	3.19% [4.0%]	1.5%
Project Management ($/yr)	$18,000	$18,000	$24,000 [$3,000]	$75,000
Property Tax ($/kW)	$5	$5	$5 [$0]	$5
Site Lease ($/yr)	$162,000	$162,000	$8,750	$35,000

2. Value in [Blue Brackets] are 1st Draft inputs that were changed for the 2nd Draft prices, values in [Green Brackets] represent 2nd Draft inputs that were changed for the 3rd Draft prices

Summary: Solar >25 kW Financing Assumptions

	Medium (>25-250 kW)				Comm'l & Comm'l CRDG (>250-1 MW)				Large & Large CRDG (>1 MW-5 MW)			
Assumption Set	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***	***2022 Final***	***2023 Proposed***	***2023 2nd Draft***	***2023 Final Recomm'd***	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***
Federal Investment Tax Credit (%)	26%	30%	30%	**30%**	26%	30%	30%	**30%**	26%	30%	30%	**30%**
% Debt	55%	47.5%	50%	**50%**	55%	47.5%	48%	**48%**	52.5%	42.5%	45%	**45%**
Debt Term (years)	15	15	13	**13**	15	15	15	**15**	15	15	15	**15**
Interest Rate on Term Debt	6.6%	8.7%	6.7%	**7.29%**	5.85%	7.95%	6.7%	**7.29%**	5.85%	7.95%	6.8%	**7.34%**
Lender's Fee (% of total borrowing)	1.0%	1.0%	1.0%	**1.0%**	1.0%	1.0%	1.0%	**1.0%**	2.0%	2.0%	2.0%	**2.0%**
% Equity Share of Sponsor Equity	25%	25%	30%	**32%**	25%	25%	33.3%	**33.3%**	25%	25%	35%	**35%**
Target After-Tax Equity IRR (Sponsor Equity, Levered Return)	13.0%	13.0%	12.5%	**12.5%**	12.0%	12.0%	12.0%	**12.0%**	11.0%	11.0%	11.0%	**11.0%**
% Equity Share of Tax Equity	75%	75%	70%	**68%**	75%	75%	66.7%	**66.7%**	75%	75%	65%	**65%**
Target After-Tax Equity IRR (Tax Equity, Levered Return)	9.5%	9.5%	9.5%	**9.5%**	9.5%	9.5%	9.5%	**9.5%**	9.5%	9.5%	9.5%	**9.5%**
Depreciation Approach	5-Year MACRS	5-Year MACRS	5-Year MACRS	**5-Year MACRS**	5-Year MACRS	5-Year MACRS	5-Year MACRS	**5-Year MACRS**	5-Year MACRS	5-Year MACRS	5-Year MACRS	**5-Year MACRS**

Summary: Non-Solar Financing Assumptions

	Wind & Wind CRDG				Hydroelectric				Anaerobic Digestion			
Assumption Set	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***
Federal Investment Tax Credit	0%	30%	30%	**30%**	0%	0%	0%	**30%**	0%	30%	30%	**30%**
% Debt	60%	42.5%	44%	**44%**	70%	66%	70%	**70%**	45%	45%	42%	**42%**
Debt Term (years)	15	15	15	**15**	20	20	20	**20**	15	15	15	**15**
Interest Rate on Term Debt	6.6%	8.7%	7.0%	**7.59%**	7.15%	9.15%	7.2%	**7.59%**	6.85%	8.95%	6.8%	**7.34%**
Lender's Fee (% of total borrowing)	1.0%	1.0%	1.0%	**1.0%**	1.88%	1.88%	1.88%	**1.88%**	1.5%	1.5%	1.5%	**1.5%**
% Equity Share of Sponsor Equity	60%	25%	25%	**25%**	80%	80%	80%	**25%**	60%	25%	25%	**25%**
Target After-Tax Equity IRR (Sponsor Equity, Levered Return)	12.0%	12.0%	12.0%	**12.0%**	12.0%	12.0%	12.0%	**12.0%**	12.0%	12.0%	12.0%	**12.0%**
% Equity Share of Tax Equity	40%	75%	75%	**75%**	20%	20%	20%	**75%**	40%	75%	75%	**75%**
Target After-Tax Equity IRR (Tax Equity, Levered Return)	9.5%	9.5%	9.5%	**9.5%**	9.5%	9.5%	9.5%	**9.5%**	9.5%	9.5%	9.5%	**9.5%**
Depreciation	Avg, of 100% bonus and 5-Year MACRS	5-Year MACRS	5-Year MACRS	**5-Year MACRS**	7-year MACRS	7-year MACRS	7-year MACRS	**5-year MACRS**	5-year MACRS	5-year MACRS	5-year MACRS	**5-year MACRS**

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Sustainable Energy Advantage, LLC

Rhode Island Renewable Energy Growth Program:

Request for Authorization for Further Changes to Reflect Federal Policy Outcomes and for Technical Corrections to Final 2023 Program Year Ceiling Prices

November 14, 2022

Sustainable Energy Advantage, LLC

Technical Corrections to 2023 PY Final Recommended Prices

- During preparation of testimony supporting 2023 PY final recommended ceiling prices, SEA discovered the following:
  - The CREST model did not include, as had been intended, a 13-year debt term (rather than 15-year) for Commercial I CRDG projects, Commercial II and Commercial II CRDG projects.
  - The Small-Scale Hydroelectric price was mis-transcribed as being between 0.2-0.3 ¢/kWh less than it had been modeled to be (though the modeled price did not require changes).
  - The Anaerobic Digestion price did not include, as had been intended, a 9.5% after-tax IRR for tax equity
- The revisions result in small upward adjustments to prices, which range from 0.2-0.45 ¢/kWh, depending on the resource in question
- **OER requests that the Board approve these technical corrections prior to filing the Report and Recommendations during the upcoming week.**

Summary Results, Solar Classes (¢/kWh)

Technology	Tariff Term (Yrs.)	Size Range kW (Modeled Size kW)	2023 Initial Recommended CP (Post-Tariff Revenue)	2023 Initial Recommended CP (No Post-Tariff Revenue)	2023 Revised Recommended CP (Post-Tariff Revenue)	2023 Revised Recommended CP (No Post-Tariff Revenue)
Small Solar I	15	0-15 (5.8)	27.75	31.25	**27.75**	**31.25**
Small Solar II	20	>15-25 (25)	26.15	26.65	**26.15**	**26.65**
Medium Solar	20	>25-250 (250)	25.65†	25.65†	**25.65†**	**25.65†**
Commercial I	20	>250-500 (500)	22.05	22.35	**22.05**	**22.35**
Commercial I CRDG	20	>250-500 (500)	24.75†	24.75†	**25.15†**	**25.15†**
Commercial II	20	>500-1,000 (1,000)	18.65	19.15	**19.05**	**19.55**
Commercial II CRDG	20	>500-1,000 (1,000)	21.45*	21.95	**21.91***	**22.35**
Large Solar	20	>1,000-5,000 (5,000)	14.35	15.45	**14.35**	**15.45**
Large Solar CRDG	20	>1,000-5,000 (5,000)	16.50*	17.77*	**16.50***	**17.77***

*This is the maximum CRDG Ceiling Price allowed by law. For the CPs excluding post-tariff revenue, the calculated 2023 values are 22.45 for Commercial CRDG >500-1,000 and 19.05 for Large CRDG. For the CPs including post-tariff revenue, the calculated 2023 values are 18.25 for Large CRDG. Note, however, that this CP would allow cost-competitive projects (bidding below the CP) access to > a 15% premium compared to actual project costs.

†The following values are identical because, on an after-tax basis, and under the assumptions for post-tariff revenue utilized, such revenue only provides slightly more compensation than is needed on an after-tax basis to cover the projects operating costs. Given that this value is incurred in years 21-25, the contribution to the project's margin is heavily discounted, and thus does not contribute materially to the project's IRR. As a result, assuming the project has no post-tariff revenue produces the exact same ceiling price.

The **green highlighted values** represent values that did not include the intended inputs in the CREST model, but now reflect the correct inputs (specifically, a 13-year debt term, rather than a 15-year debt term)

Summary Results, Non-Solar Classes (¢/kWh)

Technology	Tariff Term (Years)	Size Range kW (Modeled Size kW)	2023 Initial Recommended CP (Post-Tariff Revenue)	2023 Initial Recommended CP (No Post-Tariff Revenue)	2023 Revised Recommended CP (Post-Tariff Revenue)	2023 Revised Recommended CP (No Post-Tariff Revenue)
Wind	20	<=5,000 (3,000)	**19.15**	**19.95**	**19.15**	**19.95**
Wind - CRDG	20	<=5,000 (3,000)	**21.15**	**21.75**	**21.15**	**21.75**
Hydro	20	<=5,000 (500)	**31.75**	**32.15**	**31.95**	**32.45**
Anaerobic Digestion	20	<=5,000 (750)	**18.85†**	**18.85†**	**19.05†**	**19.05†**

†The following values are identical because anaerobic digestion projects have a useful life that is the same duration as their REG tariff term (20 years), and thus are not assumed to operate long enough to receive post-tariff revenue.

NOTE: **The yellow highlighted value** represents a value that was mis-transcribed from the value modeled in the CREST model, but was correctly modeled in the CREST model per the proposed inputs.

Summary: Solar >25 kW Financing Assumptions (As Revised)

	Medium (>25-250 kW)				Comm'l & Comm'l CRDG (>250-1 MW)				Large & Large CRDG (>1 MW-5 MW)			
Assumption Set	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***
Federal Investment Tax Credit (%)	26%	30%	30%	**30%**	26%	30%	30%	**30%**	26%	30%	30%	**30%**
% Debt	55%	47.5%	50%	**50%**	55%	47.5%	48%	**48%**	52.5%	42.5%	45%	**45%**
Debt Term (years)	15	15	13	**13**	15	15	13	**13**	15	15	15	**15**
Interest Rate on Term Debt	6.6%	8.7%	6.7%	**7.29%**	5.85%	7.95%	6.7%	**7.29%**	5.85%	7.95%	6.8%	**7.34%**
Lender's Fee (% of total borrowing)	1.0%	1.0%	1.0%	**1.0%**	1.0%	1.0%	1.0%	**1.0%**	2.0%	2.0%	2.0%	**2.0%**
% Equity Share of Sponsor Equity	25%	25%	30%	**30%**	25%	25%	33.3%	**33.3%**	25%	25%	35%	**35%**
Target After-Tax Equity IRR (Sponsor Equity, Levered Return)	13.0%	13.0%	12.5%	**12.5%**	12.0%	12.0%	12.0%	**12.0%**	11.0%	11.0%	11.0%	**11.0%**
% Equity Share of Tax Equity	75%	75%	70%	**70%**	75%	75%	66.7%	**66.7%**	75%	75%	65%	**65%**
Target After-Tax Equity IRR (Tax Equity, Levered Return)	9.5%	9.5%	9.5%	**9.5%**	9.5%	9.5%	9.5%	**9.5%**	9.5%	9.5%	9.5%	**9.5%**
Depreciation Approach	5-Year MACRS	5-Year MACRS	5-Year MACRS	**5-Year MACRS**	5-Year MACRS	5-Year MACRS	5-Year MACRS	**5-Year MACRS**	5-Year MACRS	5-Year MACRS	5-Year MACRS	**5-Year MACRS**

NOTE: The yellow highlighted value was both mis-transcribed in the initial PDF laying out the 2023 recommended prices and reflects a now-corrected value in the CREST model.

Summary: Non-Solar Financing Assumptions (As Revised)

	Wind & Wind CRDG				Hydroelectric				Anaerobic Digestion			
Assumption Set	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***	***2022 Final***	***2023 1st Draft***	***2023 2nd Draft***	***2023 Final Recomm'd***
Federal Investment Tax Credit	0%	30%	30%	**30%**	0%	0%	0%	**30%**	0%	30%	30%	**30%**
% Debt	60%	42.5%	44%	**44%**	70%	66%	70%	**48%**	45%	45%	42%	**42%**
Debt Term (years)	15	15	15	**15**	20	20	20	**20**	15	15	15	**15**
Interest Rate on Term Debt	6.6%	8.7%	7.0%	**7.59%**	7.15%	9.15%	7.2%	**7.59%**	6.85%	8.95%	6.8%	**7.34%**
Lender's Fee (% of total borrowing)	1.0%	1.0%	1.0%	**1.0%**	1.88%	1.88%	1.88%	**1.88%**	1.5%	1.5%	1.5%	**1.5%**
% Equity Share of Sponsor Equity	60%	25%	25%	**25%**	80%	80%	80%	**25%**	60%	25%	25%	**25%**
Target After-Tax Equity IRR (Sponsor Equity, Levered Return)	12.0%	12.0%	12.0%	**12.0%**	12.0%	12.0%	12.0%	**12.0%**	12.0%	12.0%	12.0%	**12.0%**
% Equity Share of Tax Equity	40%	75%	75%	**75%**	20%	20%	20%	**75%**	40%	75%	75%	**75%**
Target After-Tax Equity IRR (Tax Equity, Levered Return)	9.5%	9.5%	9.5%	**9.5%**	9.5%	9.5%	9.5%	**9.5%**	9.5%	9.5%	9.5%	**9.5%**
Depreciation	Avg, of bonus dep and 5-Year MACRS	5-Year MACRS	5-Year MACRS	**5-Year MACRS**	7-year MACRS	7-year MACRS	7-year MACRS	**5-year MACRS**	5-year MACRS	5-year MACRS	5-year MACRS	**5-year MACRS**

NOTE: The yellow highlighted value was mis-transcribed in the initial PDF laying out the 2023 recommended prices, but was correctly included in the modeled prices. The **green highlighted value** was included in the initial PDF, but is now corrected in the CREST model and subsequent price.

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