



Docket No. Q020020184 ADI Refresh

New Jersey Solar Energy Coalition Comments

December 9, 2022

The New Jersey Solar Energy Coalition (NJSEC) is pleased to submit the following comments on the Administratively Determined Incentive “refresh.” We appreciate the hard work and leadership from the BPU Staff in developing this Cadmus review and we look forward to continuing an open dialogue with Board staff in the creation of an incentive structure that will keep our State on a path toward achieving its goal of 100% clean energy by 2050, balancing ratepayer impacts, and supporting a thriving and stable solar industry in New Jersey.

It is abundantly clear that the current anemic “Non-Residential” commercial ADI incentive levels need to be significantly raised if we are to achieve the desired build rate of 150 MWs in each energy year and we are confident that staff is armed with enough data to hopefully reflect the Cadmus results into the new “refreshed” incentive. We are, however, very concerned with several statements made during the webinar on December 2, 2022, that lead us to believe that the residential block will be the subject to a new administratively set “market throttling” factor that will be applied to reduce the current residential incentive.

Back in 2020 the industry worked very hard to model each market segment and at the end of the day believed that the Cadmus modeling output was a fair representation of the cost data and incentive levels needed. However, when the Board order was finally published it was evident that very significant downward modifications had been made to the final incentive levels. At that time there was no transparency, we received no information as to why the incentive levels had been so substantially altered. Clearly, after working for so many hours refining the Cadmus modeling it was very disconcerting that those efforts were largely ignored. Of particular note: the solar carport market, which up to that point had been a “preferred market,” was economically completely swept away, without explanation.

Comments across the board submitted by the industry at the time on the SuSi Board order all reflected the concern that the commercial or “Non-Residential” sector incentive was set too low to support commercial projects.

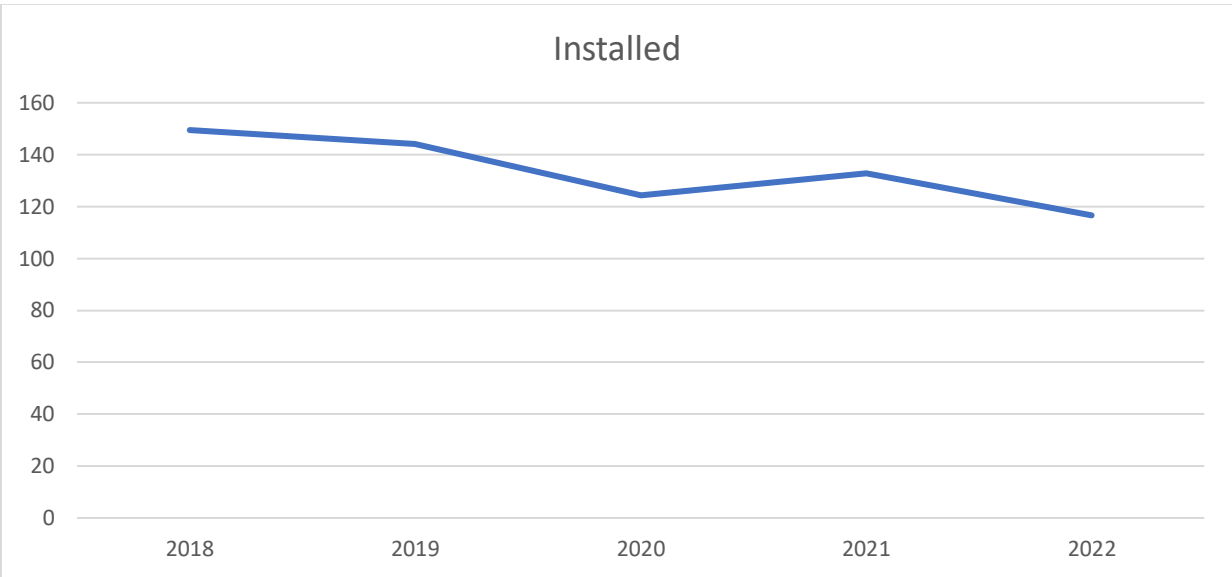
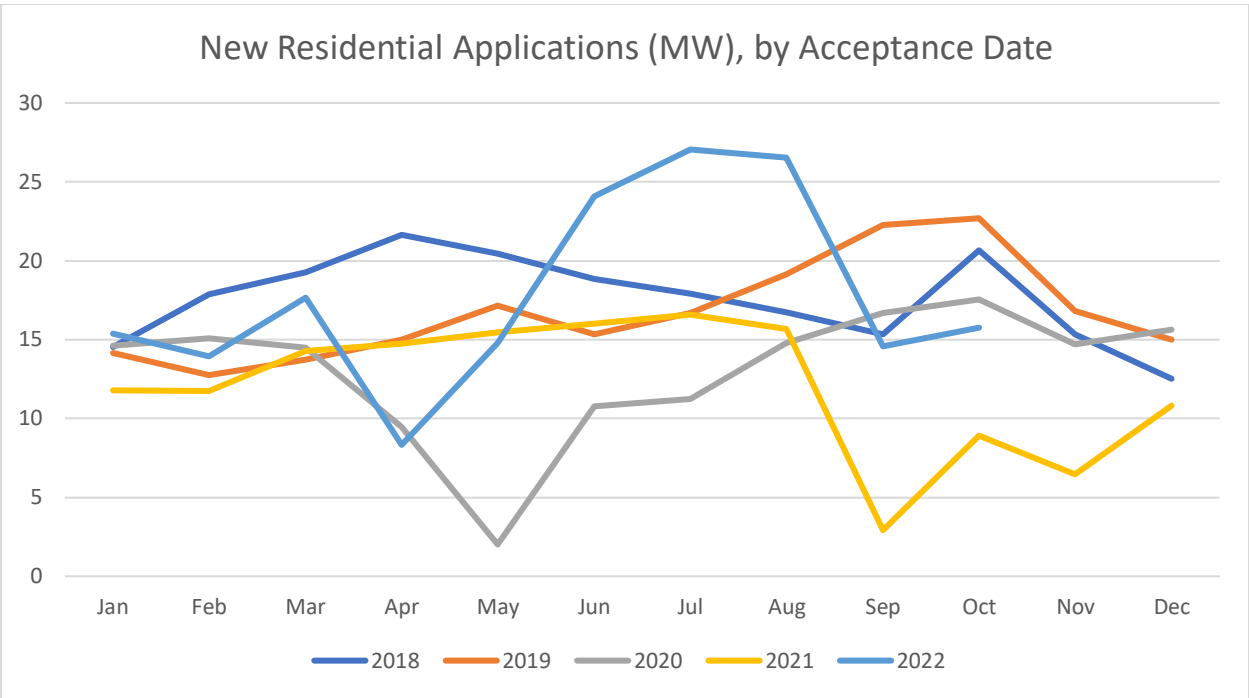
Staff Market Segment	Cadmus Market Segment	Staff Straw	TREC Program	Cadmus Sensitivity	Straw Variance		Cadmus vs. TREC
					TREC	Cadmus	
Administratively Set							
Net Metered <1MW							
Roof	C&I Roof Med.	\$85	\$152	\$130 [a]	-44%	-35%	-14%
Carport	Carport	\$85	\$152	\$170 [a]	-44%	-50%	12%
Ground	C&I Ground Med.	\$85	\$91	\$135 [a]	-7%	-37%	48%
Net Metered >1MW							
Roof	C&I Roof Lrg.	\$70 [b]	\$152	\$100 [c]	-54%	-30%	-34%
Carport	Carport	\$85	\$152	\$170 [a]	-44%	-50%	12%
Net Metered Ground (1-5MW)	C&I Ground Lrg. [b]	\$75 [b]	\$91	\$95 [c]	-18%	-21%	4%

Staff Market Segment	Cadmus Market Segment	Staff Straw	TREC Program	Cadmus Sensitivity	Straw Variance		Cadmus vs. TREC
					TREC	Cadmus	
Competitive Solicitation							
Grid							
Roof	Grid Roof	\$80	\$152	\$135 [a]	-47%	-41%	-11%
Ground	Grid Ground	\$40	\$91	\$120 [a]	-56%	-67%	32%
Landfill	Landfill/Brownfield	\$80	\$152	\$135 [a]	-47%	-41%	-11%
Net Metered >5MW							
Roof	C&I Roof Lrg. [b]	\$70 [b]	\$152	\$100 [c]	-54%	-30%	-34%
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Naturally, it is impossible to separate the results of “market throttling” from the loss of clean energy jobs. If the Board staff believes, as stated during the webinar, that the residential sector is running at 250 MWS (5 MWs per week as stated), we would be looking at a market throttling factor that could significantly impact the current residential workforce. This could translate into many hundreds, if not a thousand, current New Jersey clean energy jobs.

Of course, using the data associated with “Approved Application (MWs) monthly rather than using the Board’s own installation report, is like a restaurant that uses reservations data to predict income when actual meals served data is available.

Let’s consider the three months of data associated with the number of approved applications for the months of June (24.07 MWs), July (27.05 MWs), and August (26.55 MWs). Clearly, this data in and of itself would support Mr. Hunters statement during the webinar that the residential market would be running in the area of 250 MWs annually fully 40% above the desired build rate. However, let’s look at the actual build out that occurred as a result of those applications. Consider that the residential business cycle is generally 60 days from application approval to commercialization, so if we want to determine the “scrub” rate or difference between approved applications and actual build for any month, we would want to compare June 2022 applications with the August 2022 installation report. In June as noted above 24.07 MWs of new applications were approved, however, in August only 15.07 MWs were installed. In July 27.05 MWs of applications resulted in a September installation of only 10.66 MWs, and finally in August with 26.55 MWs of applications approved the October installation report recorded only 5.74 MWs of installation.



Clearly, these are stark differences, however, when you consider that the surge of application approvals last summer was largely the result of TRC’s hiring additional staff to clear up the enormous backlog of applications that were dropped as the TREC program was closing. It becomes clear, therefore, that the significant delay in obtaining application approvals and other TREC market closure issues has resulted in a huge number of project abandonments. There is just

no reason to believe that with only 31.46 MWs installed of the 77.67 MWs approved in the summer that we are headed anywhere near the projected build out of 250 MWs.

Therefore, we take serious issue with the projection that the residential market will be end up anywhere near the 250 MWs projected by Board Staff. In fact, we see nothing that would suggest that the final installation report for EY23 will look very much different previous years, all averaging at or below 150 MWs. There is no data justification whatsoever to overlay a “market throttling” factor to drive the existing incentive levels lower. While we would be happy, if provided the opportunity, to review this data with Board staff in greater detail to achieve some reasonable consensus on the actual data, we are concerned that there will be no opportunity based upon history.

While the more recent impacts of inflation, cost of capital and other factors have weighed heavily on residential project economics, the residential market segment, although now closer to their economic edge, continues to support the market activity aligned with the sought result. We would recommend, therefore, that the existing ***incentive levels be maintained*** in the ADI refresh. The Cadmus data shows that residential TPO has gone up 10% while the residential DO has increased 38%. Forgoing an upward adjustment of this magnitude is ample to reflect a continued “right sized” residential market. Any intervention to lower the current incentive level could have significant impacts particularly since installation costs are fully 10% higher.

The New Jersey Solar program’s residential market segment has created, by far, the greatest number of clean energy jobs, it continues to provide the grid benefits of distributed generation and has been embraced by about 157,000 households throughout the state. This success should not be taken for granted; we are now 10% closer to the economic edge than we were last year at this time. It is also important to recognize that the residential business cycle is 60 days, so job impacts will be almost immediate, leaving everyone in this market segment searching for the data and calculations that Board staff used to support their “market throttling” conclusions. After all, we believe that if jobs will be lost there should be some reasonable substantiation available to prove with actual build data the necessity of that Board action.

New Jersey’s residential market segment has for the past 6 years never exceeded the targeted build out of 150 MWs. The market segment is mature, stable, and successful.

We would again observe that these incentive factors, if they are to create the desired result, need to be reviewed frequently to reflect national economic circumstances. Finally, we recommend that any contemplated incentive reductions, when warranted by actual build result data, be phased in under a “ratchet” or other creative mechanism to mitigate the job impacts by allowing the market to try to absorb these changes incrementally and avoid the shock of finding the “bottom” potentially shutting down the entire market as we have already witnessed in the non-residential commercial sector.

We appreciate the opportunity to provide comments and thank the Board staff for their hard work in moving the ADI refresh process forward.

A handwritten signature in black ink that reads "Fred DeSanti". The letters are cursive and connected, with a prominent loop at the end of the word "Santi".

Fred DeSanti
Executive Director
New Jersey Solar Energy Coalition (NJSEC)
fred.desanti@mc2publicaffairs.com



Docket No. QO20020184, IN THE MATTER OF THE ONE YEAR REVIEW OF THE ADMINISTRATIVELY DETERMINED INCENTIVE PROGRAM

Solar Energy Industries Association Comments

December 9, 2022

I. Executive Summary

The Solar Energy Industries Association (SEIA) appreciates the opportunity to offer input to the New Jersey Board of Public Utilities (BPU or Board) regarding whether to adjust the incentive levels or capacity blocks in the Administratively Determined Incentive (ADI) Program.

The Solar Energy Industries Association (SEIA) is the national trade association for the United States solar and energy storage industries. With more than 1,000 member companies nationwide, SEIA is leading the transformation to a clean energy economy, creating the framework for solar to achieve 30% of U.S. electricity generation by 2030. SEIA works with its 1,000 member companies and other strategic partners to fight for policies that create jobs in every community and shape fair market rules that promote competition and the growth of reliable, low-cost solar power that is increasingly paired with energy storage. SEIA has more than 45 member companies located in New Jersey with many more national firms that are either already conducting business in the state or considering investing in New Jersey.

Our comments reflect the on-the-ground experience our members have developing and deploying solar projects both in New Jersey and across the United States, with particular insights into the market's adjustment to the ADI Program from the Transition Incentive Program. Our comments are organized with an opening narrative section explaining our positions followed by specific answers to the questions posed by the BPU. These answers are designated using blue text.

This year New Jersey eclipsed 4 GWs of solar installations, which is an outstanding achievement and a testament to the early investment New Jersey made in the solar industry. However, most, if not all, of the installations coming online this year are still from the Transition Incentive program, not the ADI program, and the transition to the ADI program is occurring during a period of unprecedented change in the United States. New Jersey's solar industry was not immune to global economic trends and our members continue to navigate a supply chain riddled with bottlenecks and delays. Given the magnitude of these ongoing challenges, SEIA would like to offer our assistance in thinking about how to adjust the ADI program in a way that truly provides assurances of continued strong development over the coming year without risking New Jersey jobs, investments, and consumers.

II. Historic Price Increases and Supply Chain Constraints Justify Increased ADI Incentive Levels

The long-term health of the NJ solar industry, and our ability to meet NJ's ambitious solar goals, is contingent on the health of the ADI program pipeline and decisions the BPU makes about the ADI program, a program where incentive levels were set without an expectation of record inflation or record price increases in solar modules and equipment.

After a decade of cost declines, 2021 was the first year that solar system prices increased consistently year-over-year and quarter-over-quarter.¹ Over the last 18 months, shipping constraints and other supply chain challenges stemming from the global pandemic and trade instability have led to price increases across the U.S. solar industry. For the fifth consecutive quarter, year over year prices have increased across all market segments leaving commercial solar prices 15% higher and residential prices 12% higher than at the start of 2021. Our forthcoming WoodMac/SEIA Solar Market Insights report coming out on December 13 will unfortunately indicate that this trend of price increases across all market segments is continuing.

System pricing remains elevated, mainly due to rising module prices. Module pricing is at its highest level since 2016 because of supply chain challenges, trade policies, and high polysilicon prices. While the Covid pandemic led to supply chain challenges throughout the industry, the spring 2022 Anti-Dumping/Countervailing Duties (ADCVD) petition brought by Auxin Solar led to sharp reductions in module imports, raising module prices dramatically overnight. While President Biden issued an Executive Order offering short-term relief from tariffs, on December 2, 2022 the Commerce department issued a preliminary determination affirming that certain companies in Southeast Asia are circumventing duties imposed on Chinese solar products. Even with tariffs suspended until June 2024, the decision will constrain module supply and put upward pressure on module prices.

In addition, module importers are currently working with Customs and Border Protection to provide appropriate documentation to satisfy the requirements of the Uyghur Forced Labor Prevention Act (UFLPA). The process has been slow-moving, restricting module imports and leading to extensive project delays, especially for large commercial and community solar systems. While some importers are beginning to see shipments released from detention, module imports are not expected to flow normally until at least the second half of 2023.

This combination of factors has led to an expectation that 2022 module imports will be 65% of the amount seen in 2021, as shown in the graphic below.² The reduction in imports has served to decrease module supply and raise module prices across all segments.

¹ SEIA/Wood Mackenzie *U.S. Solar Market Insight Q3 2022*

² Ibid

Estimated impact of trade policies on module imports (relative to 2021)



Source: Wood Mackenzie

It is also worth pointing out that the residential and commercial segments – which typically have shorter procurement cycles – saw an immediate spike in module prices because of the anticircumvention investigation, and with ongoing module import uncertainty, we have not seen prices fall back to where they were prior to the launch of New Jersey’s solar transition

Raw material prices including polysilicon, copper, steel, and aluminum remain at historic levels, further leading to rising equipment prices for all segments. Inverter prices have been steadily increasing as manufacturers raise prices due to inflation.

The totality of these circumstances, especially when paired with market underperformance in the first year of the ADI Program, justify increasing ADI incentive levels, especially in the non-residential market segment.

III. The Residential Market Incentive Should Not Be Arbitrarily Reduced

Net metered residential market segment registrations are on a pace that will commit the full 150 MW of allocated capacity well before the conclusion of EY 2023. However, this trend doesn’t consider attrition for these projects, which will result in less than 150 MW of installations, or the fact that labor rates for the residential segment are also increasing due to skilled labor shortages. It is critical that the BPU recognize that the spike in applications during this past summer is largely due to the fact that registrations during the first 6+ months of the ADI were roughly half the number of registrations under the TREC program due to learning pains with the new program and the long processing times. This inevitably led to a backlog of projects that then were applied for in the summer. The data available does not suggest that this is a long-term or sizable increase in the actual installations occurring in the residential segment. Registrations in September and October have regressed back to approximately 15 MW per month, which is a more normal pace, and when applying a 20% attrition rate suggests a rate of 140-150 MW installations in a year. If the BPU’s objective is to ensure a healthy solar industry, it would be a mistake to reduce the

residential solar incentive to moderate market activity and throttle development to avoid reaching an arbitrary market segment allocation.

Just like the commercial segment, the residential market segment saw an immediate spike in module prices as a result of the anticircumvention investigation, and prices have not fallen back to where they were prior to the launch of New Jersey's solar transition. Rising interest rates have also increased the cost of capital for businesses, with a year-over-year increase in the mid-single digits. These facts alone justify maintaining the current ADI incentive level even after accounting for the higher ITC value from the IRA.

Furthermore, as we have stated previously, the residential sector has a sales pipeline that can be severely harmed by arbitrary gaps in capacity availability, which justifies an always on incentive program. Thus, the likelihood of early subscription of the full 150 MW market segment allocation justifies improvements to the ADI program design: a larger capacity allocation or exempting the residential sector from the annual capacity allocation. A larger capacity allocation would have to account for an expected attrition rate and provide enough buffer to prevent the market segment from facing a potential availability cliff every single energy year. Given that necessity of maintaining continuous access to the program (and because projects must receive approval before moving forward with installation), it would be logical to not have a hard cap on program participation in the residential segment at all. An arbitrary cap that everyone knows cannot actually be hit without significant harm for the industry or is large enough that there is no risk it will be fully subscribed serves no real purpose except to create uncertainty for the market.

Should the BPU ignore Cadmus modeling that justifies maintaining or increasing residential incentives, an arbitrarily decision to lower the incentive risks creating market underperformance and the loss of jobs.

IV. Recommended Improvements to Modeling Assumptions

SEIA agrees with Cadmus's assumption that wage and apprenticeship standards will be met for the full 30% ITC, and generally supports the Cadmus approach to assessing whether inflationary pressures warrant revisiting ADI Program incentive levels. However, we provide the following improvements to Cadmus modeling.

It is reasonable to assume an increased cost of project debt by 3% but rising interest rates affect all parts of capital structure, including the cost of project equity. Thus, a 3% increase in debt should result in at least a corresponding 3% increase in IRR. However, it is worth noting that these debt assumptions imply good investment grade credit. For the non-residential segment, customer credit has a direct impact on project debt and equity requirements, as these projects are not easily securitized in a portfolio and often transacted individually. Currently and for the foreseeable future, the general US commercial credit outlook is negative, and thus the true cost of financing will be much higher for most of the non-residential segment.

As we stated in our comments on the Capstone report, using a 15% discount estimate for customers to derive the PPA rate is not in line with the current market. Residential discounts should be modeled

between 20% to 25% and commercial and industrial, or non-residential, discounts should be modeled at 25%.

Additionally, while it is reasonable that modeling results suggest an increased incentive level for all market segments, it is not clear what Cadmus is assuming with respect to hardware or soft costs. The quarterly *Wood Mackenzie/SEIA Solar Market Insights* reports have made clear that capex across all segments remains high as inflation continues to rise, trade disruptions reduce equipment supply and labor prices climb. The combined effect of these factors has led to year over year price increases ranging from 8- 13% depending on the segment. For example, Cadmus does not appear to be modeling the additional costs for carports and ground mounted solar due to steel price increases. Doing so would likely justify an increased incentive or location-based adder for canopies and carports, similar to the \$20/MWh adder for public entities.

Furthermore, the most recent U.S. Solar Market Insight report, published jointly by SEIA and Wood Mackenzie, suggested that prices for microinverter and single-phase inverters had increased by 4-5% compared to Q2 2021. Our forthcoming WoodMac/SEIA Solar Market Insights report will confirm that manufacturers continue to raise prices almost every quarter due to inflationary pressures, and that central inverters that may include low and medium-voltage switchgear solutions have also increased in price as manufacturers face shortages of transformers.

Additionally, while differences in racking materials and design have implications for labor costs, grounding requirements, and the need for additional structural support, it is worth noting that as the aluminum index continues to rise in 2022, residential and commercial rooftop racking costs have increased by 14% and 12% year-over-year, respectively.

Finally, members report that interconnection costs will be increasing over time, and SEIA recommends Cadmus Modeling should be prospective and in line with the interconnection cost increases.

Part II- Answers to Specific BPU Questions.

1. Cadmus proposes to adjust Operational Expenses by annual inflation rates, and to adjust current Capital Expenses by inflation rates and other cost escalators researched from industry data.
 - a. Please comment on the proposal to use Bureau of Labor Standards CPI-U data to escalate operational and capital expenses. [This is an appropriate metric.](#)
 - b. Please comment on the proposal to utilize industry data to apply a separate supply chain adjustment, and if so, what data range should be used? [It is appropriate to apply a cost increase as a result of supply chain complications for capex between 7-14% as referenced by industry reports, such as Wood Mackenzie and Bloomberg New Energy Finance.](#)

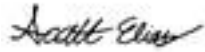
- c. Are there market segment-specific considerations when making cost adjustments? Cadmus' price adjustments for all large-scale ground mounted segments are smaller than those for other segments. In estimating system pricing for the utility-scale segment, the SEIA/Wood Mackenzie *U.S. Solar Market Insight* (SMI) report series assumes all utility-scale modules are procured one year prior to commercial operation. However, module prices have increased dramatically over the last year, indicating that module pricing for 2023 systems will be considerably higher than is currently presented in the latest SMI report. If Cadmus is using this resource to inform large-scale ground mount system pricing, they should assume module pricing increases similar to those in the other non-residential segments.
 - d. Are there additional or alternative data sources that should inform cost adjustments? SEIA has no additional comment at this time.
 2. Interest rates have increased in 2022. In addition to cost and tax credit assumptions, Cadmus can adjust the cost of financing from the previous model runs. The cost of financing had been set at between 5.5% and 6.5%, depending on the project type, in the previous Cadmus Capstone report. Should increased interest rates be accounted for in modeling incentive requirements using the NREL's System Advisor Model? If so, are there suggested data sources for this adjustment? Yes, SEIA generally supports the updated annual interest rate of 8.5-9.5% adjustment as demonstrated at the BPU stakeholder meeting on December 2nd.
 3. Cadmus proposes to adjust investment tax credits for all market segments according to the Inflation Reduction Act, increasing tax credits to 30%. How should the changes in federal tax incentives from the Inflation Reduction Act be accounted for in modeling incentive requirements using the NREL's System Advisor Model?
 - a. When adjusting tax credits, are there any considerations for specific market segments? SEIA agrees with the Cadmus assumption that all market segments will seek a 30% ITC.
 - b. How should the wage and apprenticeship requirements be considered for tax credit adjustments? SEIA agrees with the Cadmus assumption that the wage and apprenticeship standards will be met for the full 30% ITC.
 4. Does potential funding from the Infrastructure Investment Act require adjustment to any inputs in modeling incentive requirements using the NREL's System Advisor Model? NREL released a System Advisor Model update on November 21, 2022. Since this update did not incorporate potential funding from the Infrastructure Investment Act, we do not recommend further adjustments to account for that uncertain possibility.
 5. Does the pace of registration submission into the residential market segment since inception and the likelihood of early subscription of the full 150 MW market segment allocation before the close of Energy Year 2022 support a change in incentive level from the initial value of \$90 per MWh?

Should the change in incentive level occur regardless of the modeling results? No, the pace of registration submission into the residential market segment should not be used as an excuse to reduce the incentive level from the initial value of \$90 per MWh. The Cadmus preliminary modeling results indicate that incentive levels should be moderately increased or remain constant, which SEIA recommends. SEIA opposes reducing the residential solar incentive arbitrarily to moderate market activity and throttle development to avoid reaching an arbitrary market segment allocation. The activity in the market can only be interpreted to mean that the ADI incentive is financially viable for residential customers, which is further supported by the Cadmus modeling. It is not clear how one could differentiate between the incentive being financially viable or too lucrative purely based on the rate of registrations - which is why the Cadmus modeling is so important. If the ADI incentive is financially viable and New Jersey companies are investing resources, you would expect to see a strong customer response. Throttling the incentive level significantly below Cadmus' modeling results risks crossing the "financially viable" tipping point, which won't be apparent until it is too late to fix. The non-residential market segment's experience in the ADI shows that this risk is very real. We further note that the pace of registration submissions is different than installations and that the BPU does not account for project attrition.

6. Does the relatively slow uptake in registration submission in the non-residential market segments and the existence of excess capacity in this allocation for Energy Year 2022 support a change in incentive levels from the initial values? Yes, we do not believe that the relatively slow uptake in registration submission in the non-residential market segment and the existence of excess capacity is in large part due to "demand pull" resulting from the closure of the TI program offering a higher incentive. Rather, we believe the primary reason for market underperformance is that the non-residential incentive was set lower than recommended by initial Cadmus modeling, coupled with historic price increases in the non-residential solar market segment. We agree with the Cadmus preliminary modeling results shared at the December 2nd stakeholder meeting that the non-residential incentives should be increased and reiterate our previous request for a location-based adder for canopies and carports, a market that has effectively been closed by the current incentive level set by the BPU.
7. Assuming the answer to question 5 is yes and the modeling supports a change in the residential market segment incentive value, how and when should modified incentive values in the residential market segment be implemented? SEIA recommends that any change in the residential market segment incentive value be implemented on a forward-going basis after the BPU decides to make a change.
8. Assuming the answer to question 6 is yes and the modeling supports an increase in the non-residential market segment incentive values, how and when should the altered incentive values be implemented? SEIA recommends that any change in the non-residential market segment incentive value be implemented on a forward-going basis after the BPU decides to make a change.

9. What other issues should be considered in the One-Year Program Review? [SEIA has no additional comment at this time.](#)

Sincerely,

A handwritten signature in black ink that reads "Scott Elias". The signature is written in a cursive style.

Scott Elias
Director of State Affairs, Mid-Atlantic
Solar Energy Industries Association



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Net metered residential market segment registrations are on a pace that will commit the full 150 MW of allocated capacity well before the conclusion of EY 2023. However, this trend doesn’t consider attrition for these projects, which will result in less than 150 MW of installations, or the fact that labor rates for the residential segment are also increasing due to skilled labor shortages. It is critical that the BPU recognize that the spike in applications during this past summer is largely due to the fact that registrations during the first 6+ months of the ADI were roughly half the number of registrations under the TREC program due to learning pains with the new program and the long processing times. This inevitably led to a backlog of projects that then were applied for in the summer. The data available does not suggest that this is a long-term or sizable increase in the actual installations occurring in the residential segment. Registrations in September and October have regressed back to approximately 15 MW per month, which is a more normal pace, and when applying a 20% attrition rate suggests a rate of 140-150 MW installations in a year. If the BPU’s objective is to ensure a healthy solar industry, it would be a mistake to reduce the

residential solar incentive to moderate market activity and throttle development to avoid reaching an arbitrary market segment allocation.

Just like the commercial segment, the residential market segment saw an immediate spike in module prices as a result of the anticircumvention investigation, and prices have not fallen back to where they were prior to the launch of New Jersey's solar transition. Rising interest rates have also increased the cost of capital for businesses, with a year-over-year increase in the mid-single digits. These facts alone justify maintaining the current ADI incentive level even after accounting for the higher ITC value from the IRA.

Furthermore, as we have stated previously, the residential sector has a sales pipeline that can be severely harmed by arbitrary gaps in capacity availability, which justifies an always on incentive program. Thus, the likelihood of early subscription of the full 150 MW market segment allocation justifies improvements to the ADI program design: a larger capacity allocation or exempting the residential sector from the annual capacity allocation. A larger capacity allocation would have to account for an expected attrition rate and provide enough buffer to prevent the market segment from facing a potential availability cliff every single energy year. Given that necessity of maintaining continuous access to the program (and because projects must receive approval before moving forward with installation), it would be logical to not have a hard cap on program participation in the residential segment at all. An arbitrary cap that everyone knows cannot actually be hit without significant harm for the industry or is large enough that there is no risk it will be fully subscribed serves no real purpose except to create uncertainty for the market.

Should the BPU ignore Cadmus modeling that justifies maintaining or increasing residential incentives, an arbitrarily decision to lower the incentive risks creating market underperformance and the loss of jobs.

IV. Recommended Improvements to Modeling Assumptions

SEIA agrees with Cadmus's assumption that wage and apprenticeship standards will be met for the full 30% ITC, and generally supports the Cadmus approach to assessing whether inflationary pressures warrant revisiting ADI Program incentive levels. However, we provide the following improvements to Cadmus modeling.

It is reasonable to assume an increased cost of project debt by 3% but rising interest rates affect all parts of capital structure, including the cost of project equity. Thus, a 3% increase in debt should result in at least a corresponding 3% increase in IRR. However, it is worth noting that these debt assumptions imply good investment grade credit. For the non-residential segment, customer credit has a direct impact on project debt and equity requirements, as these projects are not easily securitized in a portfolio and often transacted individually. Currently and for the foreseeable future, the general US commercial credit outlook is negative, and thus the true cost of financing will be much higher for most of the non-residential segment.

As we stated in our comments on the Capstone report, using a 15% discount estimate for customers to derive the PPA rate is not in line with the current market. Residential discounts should be modeled

between 20% to 25% and commercial and industrial, or non-residential, discounts should be modeled at 25%.

Additionally, while it is reasonable that modeling results suggest an increased incentive level for all market segments, it is not clear what Cadmus is assuming with respect to hardware or soft costs. The quarterly *Wood Mackenzie/SEIA Solar Market Insights* reports have made clear that capex across all segments remains high as inflation continues to rise, trade disruptions reduce equipment supply and labor prices climb. The combined effect of these factors has led to year over year price increases ranging from 8- 13% depending on the segment. For example, Cadmus does not appear to be modeling the additional costs for carports and ground mounted solar due to steel price increases. Doing so would likely justify an increased incentive or location-based adder for canopies and carports, similar to the \$20/MWh adder for public entities.

Furthermore, the most recent U.S. Solar Market Insight report, published jointly by SEIA and Wood Mackenzie, suggested that prices for microinverter and single-phase inverters had increased by 4-5% compared to Q2 2021. Our forthcoming WoodMac/SEIA Solar Market Insights report will confirm that manufacturers continue to raise prices almost every quarter due to inflationary pressures, and that central inverters that may include low and medium-voltage switchgear solutions have also increased in price as manufacturers face shortages of transformers.

Additionally, while differences in racking materials and design have implications for labor costs, grounding requirements, and the need for additional structural support, it is worth noting that as the aluminum index continues to rise in 2022, residential and commercial rooftop racking costs have increased by 14% and 12% year-over-year, respectively.

Finally, members report that interconnection costs will be increasing over time, and SEIA recommends Cadmus Modeling should be prospective and in line with the interconnection cost increases.

Part II- Answers to Specific BPU Questions.

1. Cadmus proposes to adjust Operational Expenses by annual inflation rates, and to adjust current Capital Expenses by inflation rates and other cost escalators researched from industry data.
 - a. Please comment on the proposal to use Bureau of Labor Standards CPI-U data to escalate operational and capital expenses. [This is an appropriate metric.](#)
 - b. Please comment on the proposal to utilize industry data to apply a separate supply chain adjustment, and if so, what data range should be used? [It is appropriate to apply a cost increase as a result of supply chain complications for capex between 7-14% as referenced by industry reports, such as Wood Mackenzie and Bloomberg New Energy Finance.](#)

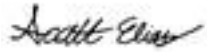
- c. Are there market segment-specific considerations when making cost adjustments? Cadmus' price adjustments for all large-scale ground mounted segments are smaller than those for other segments. In estimating system pricing for the utility-scale segment, the SEIA/Wood Mackenzie *U.S. Solar Market Insight* (SMI) report series assumes all utility-scale modules are procured one year prior to commercial operation. However, module prices have increased dramatically over the last year, indicating that module pricing for 2023 systems will be considerably higher than is currently presented in the latest SMI report. If Cadmus is using this resource to inform large-scale ground mount system pricing, they should assume module pricing increases similar to those in the other non-residential segments.
 - d. Are there additional or alternative data sources that should inform cost adjustments? SEIA has no additional comment at this time.
 2. Interest rates have increased in 2022. In addition to cost and tax credit assumptions, Cadmus can adjust the cost of financing from the previous model runs. The cost of financing had been set at between 5.5% and 6.5%, depending on the project type, in the previous Cadmus Capstone report. Should increased interest rates be accounted for in modeling incentive requirements using the NREL's System Advisor Model? If so, are there suggested data sources for this adjustment? Yes, SEIA generally supports the updated annual interest rate of 8.5-9.5% adjustment as demonstrated at the BPU stakeholder meeting on December 2nd.
 3. Cadmus proposes to adjust investment tax credits for all market segments according to the Inflation Reduction Act, increasing tax credits to 30%. How should the changes in federal tax incentives from the Inflation Reduction Act be accounted for in modeling incentive requirements using the NREL's System Advisor Model?
 - a. When adjusting tax credits, are there any considerations for specific market segments? SEIA agrees with the Cadmus assumption that all market segments will seek a 30% ITC.
 - b. How should the wage and apprenticeship requirements be considered for tax credit adjustments? SEIA agrees with the Cadmus assumption that the wage and apprenticeship standards will be met for the full 30% ITC.
 4. Does potential funding from the Infrastructure Investment Act require adjustment to any inputs in modeling incentive requirements using the NREL's System Advisor Model? NREL released a System Advisor Model update on November 21, 2022. Since this update did not incorporate potential funding from the Infrastructure Investment Act, we do not recommend further adjustments to account for that uncertain possibility.
 5. Does the pace of registration submission into the residential market segment since inception and the likelihood of early subscription of the full 150 MW market segment allocation before the close of Energy Year 2022 support a change in incentive level from the initial value of \$90 per MWh?

Should the change in incentive level occur regardless of the modeling results? No, the pace of registration submission into the residential market segment should not be used as an excuse to reduce the incentive level from the initial value of \$90 per MWh. The Cadmus preliminary modeling results indicate that incentive levels should be moderately increased or remain constant, which SEIA recommends. SEIA opposes reducing the residential solar incentive arbitrarily to moderate market activity and throttle development to avoid reaching an arbitrary market segment allocation. The activity in the market can only be interpreted to mean that the ADI incentive is financially viable for residential customers, which is further supported by the Cadmus modeling. It is not clear how one could differentiate between the incentive being financially viable or too lucrative purely based on the rate of registrations - which is why the Cadmus modeling is so important. If the ADI incentive is financially viable and New Jersey companies are investing resources, you would expect to see a strong customer response. Throttling the incentive level significantly below Cadmus' modeling results risks crossing the "financially viable" tipping point, which won't be apparent until it is too late to fix. The non-residential market segment's experience in the ADI shows that this risk is very real. We further note that the pace of registration submissions is different than installations and that the BPU does not account for project attrition.

6. Does the relatively slow uptake in registration submission in the non-residential market segments and the existence of excess capacity in this allocation for Energy Year 2022 support a change in incentive levels from the initial values? Yes, we do not believe that the relatively slow uptake in registration submission in the non-residential market segment and the existence of excess capacity is in large part due to "demand pull" resulting from the closure of the TI program offering a higher incentive. Rather, we believe the primary reason for market underperformance is that the non-residential incentive was set lower than recommended by initial Cadmus modeling, coupled with historic price increases in the non-residential solar market segment. We agree with the Cadmus preliminary modeling results shared at the December 2nd stakeholder meeting that the non-residential incentives should be increased and reiterate our previous request for a location-based adder for canopies and carports, a market that has effectively been closed by the current incentive level set by the BPU.
7. Assuming the answer to question 5 is yes and the modeling supports a change in the residential market segment incentive value, how and when should modified incentive values in the residential market segment be implemented? SEIA recommends that any change in the residential market segment incentive value be implemented on a forward-going basis after the BPU decides to make a change.
8. Assuming the answer to question 6 is yes and the modeling supports an increase in the non-residential market segment incentive values, how and when should the altered incentive values be implemented? SEIA recommends that any change in the non-residential market segment incentive value be implemented on a forward-going basis after the BPU decides to make a change.

9. What other issues should be considered in the One-Year Program Review? [SEIA has no additional comment at this time.](#)

Sincerely,

A handwritten signature in black ink that reads "Scott Elias". The signature is written in a cursive style with a clear, legible font.

Scott Elias
Director of State Affairs, Mid-Atlantic
Solar Energy Industries Association



State of New Jersey
DIVISION OF RATE COUNSEL
140 EAST FRONT STREET, 4TH FL.
P.O. Box 003
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PHIL MURPHY
Governor

SHEILA OLIVER
Lt. Governor

BRIAN O. LIPMAN
Director

December 9, 2022

Via Electronic Mail board.secretary@bpu.nj.gov

Carmen D. Diaz
Acting Secretary of the Board
44 South Clinton Avenue, 1ST Floor
P.O. Box 350
Trenton, NJ 08625-0350

**Re: In the Matter of the One Year Review of the Administratively
Determined Incentive Program
BPU Docket No. QO20020184**

Dear Acting Board Secretary Diaz:

Please accept for filing these comments being submitted on behalf of the New Jersey Division of Rate Counsel ("Rate Counsel") in accordance with the Notice issued by the Board of Public Utilities ("Board") in this matter on November 17, 2022. In accordance with the Notice, these comments are being filed electronically with the Board's Secretary at board.secretary@bpu.nj.gov.

Carmen D. Diaz, Acting Secretary of the Board

December 9, 2022

Page 2

Please acknowledge receipt of these comments.

Thank you for your consideration and attention to this matter.

Respectfully submitted,

Brian O. Lipman, Esq.
Director, Division of Rate Counsel

By: */s/ Maura Caroselli*
Maura Caroselli, Esq.
Deputy Rate Counsel

MC

Enclosure

cc: Kelly Mooij, BPU
Stacy Peterson, BPU
Abe Silverman, BPU
Robert Brabston, BPU
Jim Ferris, BPU
Scott Hunter, BPU
Veronique Oomen, BPU
Paul Heitmann, BPU
Pamela Owen, DAG, ASC

STATE OF NEW JERSEY

BEFORE THE BOARD OF PUBLIC UTILITIES

In the Matter of the One Year Review of) Docket No. QO20020184
the Administratively Determined)
Incentive Program)

**COMMENTS OF THE NEW JERSEY DIVISION OF RATE COUNSEL
IN RESPONSE TO REQUEST FOR STAKEHOLDER INPUT ON THE ONE-YEAR
REVIEW PROCESS AND POTENTIAL CHANGES IN THE NEW JERSEY SOLAR
ADMINISTRATIVELY DETERMINED INCENTIVE PROGRAM**

DECEMBER 9, 2022

INTRODUCTION

On July 28, 2021 the New Jersey Board of Public Utilities (“Board”) issued an Order in this docket (the “SuSI Order”) establishing New Jersey’s Successor Solar Incentive (“SuSI”) Program. As part of that Order, the Board established the framework for the Administratively Determined Incentive (“ADI”) Program within the SuSI Program, including initial incentive levels and other parameters. In that Order, the Board’s Staff (“Staff”) was directed to:

undertake a review of the ADI Program implementation and the overall health of the relevant portions of the solar market 12 months after the opening of the ADI Program, which shall include a review of the market segments and incentive levels.

SuSI Order at 49.

The purpose of this One Year Review, referred by Staff as the “One-Year Checkup,” is to:

provide an opportunity to examine whether the ADI Program is reasonably on track to meet the targets established by the Board or whether incentives should be adjusted based on the first year of operational experience.

SuSI Order at 22.

On November 17, 2022, Board Staff issued a Notice seeking comments on the procedure for conducting the One-Year Review, and input on a variety of input assumptions and modeling issues and potential changes in the ADI Program. In the comments below, the New Jersey Division of Rate Counsel (“Rate Counsel”) will address serious concerns about the process that is currently envisioned for the One-Year Review, and will then provide response to the specific questions contained in the Notice.

RATE COUNSEL COMMENTS

I. PROCECURAL ISSUES

Rate Counsel has serious concerns about the process that is apparently envisioned for the One-Year Review. It appears that Staff will be considering the oral input provided at the December 2, 2022 stakeholder meeting and written input provided in accordance with the Notice in developing several potential modeling and input changes that will impact the ADI incentive levels, and potentially the respective capacity blocks for each of the market segments. Rate Counsel understands that these changes will be made by Staff's consultants, Cadmus, who will use the collective stakeholder input to make revised modeling runs, which Staff will use to make recommendations on ADI program changes that are to be approved by the Board. Based on the discussion at the December 2, 2022 stakeholder meeting, it appears that Staff does not contemplate any opportunity for further stakeholder comment before the Staff recommendations are submitted to the Board.

This procedure does not comport with the requirements of due process. The New Jersey Supreme Court held in In re Provision of Basic Generation Service for the Period Beginning June 1, 2008, 205 N.J. 339, 344 (2011) ("Basic Generation Service"), the Board has a "basic administrative law obligation to act with transparency through the provision of prior notice and opportunity to comment." Thus, when the Board wishes to consider a change that will affect the rates paid by the State's ratepayers, it has a "duty to provide clear notice that would enable a meaningful opportunity for comment" 205 N.J. at 344.

The procedure envisioned by Staff does not meet the Board's obligation to provide due process because it forces stakeholders to effectively comment on potential ADI program changes without knowing or being allowed to opine on how input changes, changes in assumptions and

other data will impact ADI incentive levels and capacity blocks. While Board Staff and Cadmus have identified several potential modeling changes, such as making adjustments for inflation or supply chain constraints, Staff has not specified what modeling adjustments may be made nor has it proposed any specific changes in ADI incentive levels or capacity blocks. This is simply unfair because it does not afford stakeholders “clear notice that would enable a meaningful opportunity for comment” on proposed changes that will directly affect the amounts of the subsidies that must be paid for by New Jersey ratepayers. Basic Generation Service, 205 N.J. at 344. Indeed, the scope of any one change or the cumulative impact of all the changes may influence a party’s decision to oppose or support the changes, or to comment at all.

As the Board is aware, the initial incentive levels for the ADI Program were established following a lengthy stakeholder process that included multiple opportunities for comments. It would be unfair and prejudicial to effectively undo the entire previously-conducted ADI process and re-set incentives without a more robust process for public comment on specific ADI Program changes. Rate Counsel has previously expressed concerns in this and other proceedings about the flaws inherent in administratively determined incentives. Even if incentives are set following proper procedure, they place the burden of regulatory error on ratepayers. The “expedited” process apparently contemplated by the Board would only magnify the burden on the State’s utility ratepayers.

In order to provide due process, Staff should do the following before offering recommendations to the Board on any ADI Program changes:

- Identify modeling changes offered by stakeholders and accepted by Staff to make ADI Program revisions. Provide a justification and rationale for these changes, and clearly identify the underlying data sources from which these changes are based.

- Conduct sensitivity analyses and provide stakeholders with an understanding of the relative impact that the changes identified above have on the final incentives or capacity blocks for each of the ADI market segments.
- Allow stakeholders to comment on the Board Staff/Cadmus analysis and any proposed changes in the ADI Program.
- Prepare a final One-Year Review recommendation to the Board, to be included in any Board Order, including detailed explanations of the reasons for Staff's adoption or rejection of stakeholder proposals and comments, and supporting analysis for the recommended ADI incentives and capacity blocks.

If a procedure that comports with due process is not feasible within the available time constraints, then either no changes should be made to existing ADI Program incentive levels and market segment capacity blocks or, alternatively, Rate Counsel recommends adjusting the deadlines in the SuSI Order.

II. RESPONSES TO STAFF QUESTIONS

- 1. Cadmus proposes to adjust Operational Expenses by annual inflation rates, and to adjust current Capital Expenses by inflation rates and other cost escalators researched from industry data.**
 - a. Please comment on the proposal to use Bureau of Labor Standards CPI-U data to escalate operational and capital expenses.**

Rate Counsel Response:

Rate Counsel does not support making any inflation adjustment at the current time.

While the U.S. economy has reflected a significant degree of inflation over the past year or more, price levels are starting to moderate, and are expected to continue to moderate as the year progresses. In fact, there is a very strong chance that the U.S. economy could slip into a recession as a result of recent Federal Reserve Bank interest rate hikes designed to temper the

kind of price inflation Board Staff proposes to build into the ADI Program incentive levels. Rate Counsel is concerned that inflating these ADI incentive values now will result in over-incentivizing solar projects as inflation starts to wane due to a slow-down in economic activity.

To the extent Board Staff and Cadmus move forward with making an inflation adjustment, Rate Counsel recommends that the Board utilize the Gross Domestic Product Price Index (“GDP-PI”) as a more appropriate measure of inflation rather than the Consumer Price Index for All Urban Consumers (“CPI-U”). The CPI-U is a survey-based instrument and data series designed to measure changes in household consumer-oriented expenditures that can include such items as toothpaste, cosmetics, medicines, food, and other items that have little to nothing to do with the installation and operation of a solar energy project. If the goal is to develop an economy-wide measure of price inflation, across all goods and services, the GDP-PI is more appropriate measure than the CPI-U. While these values are often similar in magnitude, there are some instances in which they can and do diverge.

b. Please comment on the proposal to utilize industry data to apply a separate supply chain adjustment, and if so, what data range should be used?

Rate Counsel Response:

Rate Counsel does not support the use of private or commercial information to support adjustments to ADI incentive levels that will be funded by retail ratepayers. There is no way this information, as proposed, can be reasonably and independently audited or verified by any stakeholder in this process, particularly given the time allotted for this review. The very nature of this review will leave stakeholders guessing about the specifics of how any outside data is used to adjust ADI incentive levels. Private or commercial information differs from government data coming from such entities as the Bureau of Economic Analysis (“BEA”), the Bureau of

Labor Statistics (“BLS”), or the Energy Information Administration (“EIA”) which are readily available and verifiable by all stakeholders.

It is Rate Counsel’s understanding from the November 17, 2022 Notice that Staff/Cadmus are considering adjustments to ADI incentive levels for supply chain constraints that were developed from third party sources of information including Wood Mackenzie and/or Bloomberg New Energy Finance in the 7 to 14 percent range. No information has been provided to stakeholders on where or how this range was developed, the specific source(s) from which these ranges originate, or the relative weighting of information between sources in developing this range. Staff simply offers no supporting analysis for these potential ADI modeling adjustments and stakeholders are simply left to speculate whether the contemplated adjustment is reasonable.

Second, no context has been provided for this wide range of seven to 14 percent that is being considered for the proposed supply chain adjustment range. It is unclear whether Staff is basing this range of possible adjustments on an historic range or projected range. It is also unclear whether the sources relied upon by Staff considered the inherently transitory nature of supply chain constraints, or whether those sources provided any cautions or sensitivities.

It would be improper to base an adjustment to ADI incentive levels that will be paid for by New Jersey’s ratepayers on such scant information and documentation. The use of privately sourced industry data could very likely result in rates that are not fair, just, and reasonable. Further, the timing of Staff’s proposal to implement an adjustment based on supply chain issues is unreasonable. Supply chain issues and adjustments should have been proffered and examined during the initial ADI stakeholder process at some point during the past year, not at this late juncture. Inflation and supply chain concerns have been in existence since most economies

started recovering from the COVID-19 the pandemic. Addressing these issues now, in a rushed “expedited” review, is simply unreasonable and unfair to New Jersey’s retail ratepayers.

c. Are there market segment-specific considerations when making cost adjustments?

Rate Counsel Response:

The Board should not consider making any market segment-specific adjustments without clearly identifying these adjustments, providing all support and documentation for such adjustments, and giving parties an opportunity to review and comment on such adjustments.

d. Are there additional or alternative data sources that should inform cost adjustments?

Rate Counsel Response:

Rate Counsel does not have any specific recommendations at this time but suggests that any alternative data that may be used be from credible, publicly-available sources. To the extent additional information is used in making any recommendations to adjust any aspect of the ADI Program, stakeholders should have access to that information and should have an opportunity to opine on the data and how incentives or capacity levels are changed given this information.

2. Interest rates have increased in 2022. In addition to cost and tax credit assumptions, Cadmus can adjust the cost of financing from the previous model runs. The cost of financing had been set at between 5.5% and 6.5%, depending on the project type, in the previous Cadmus Capstone report. Should increased interest rates be accounted for in modeling incentive requirements using the NREL’s System Advisor Model? If so, are there suggested data sources for this adjustment?

Rate Counsel Response:

Rate Counsel does not support an interest rate adjustment since current economic data suggest that high relative interest rates are a current period phenomenon that are likely to dissipate quickly over the next 12 months. The business press reports daily on the presence of substantially inverted yield curves, when interest rates on short-term government securities rise

above long-term rates, indicating that markets expect rates to fall over time, and that a recession, or significant economic slowdown may be forthcoming.¹ Thus, there is no need to speculate on this issue at the current time. Rate Counsel suggests Staff continue to monitor this situation in future ADI evaluation periods to see if current interest rate expectations change.

3. Cadmus proposes to adjust investment tax credits for all market segments according to the Inflation Reduction Act, increasing tax credits to 30%. How should the changes in federal tax incentives from the Inflation Reduction Act be accounted for in modeling incentive requirements using the NREL’s System Advisor Model?

a. When adjusting tax credits, are there any considerations for specific market segments?

Rate Counsel Response:

Rate Counsel is not aware of any specific adjustments that may be needed other than potential differences in depreciation allowances for commercial installations relative to residential installations that do not receive these benefits.

b. How should the wage and apprenticeship requirements be considered for tax credit adjustments?

Rate Counsel Response:

The SuSI program includes a “prevailing wage” requirement for all projects one megawatt or larger in size. SuSI Order at 33-34. Thus, the federal wage and apprenticeship requirements should not substantially impact or create doubt as to whether New Jersey solar projects one megawatt or larger will have the ability to receive the full amount of any federal tax incentives tied to such requirements.

¹ See, e.g., Goldfarb, S., “Yield Curve Inversion Reaches New Extremes,” The Wall Street Journal (Nov 29, 2022) (<https://www.wsj.com/articles/yield-curve-inversion-reaches-new-extremes-11669687278>); Brown, A., “What the Inverted Yield Curve Says About the Next Recession,” The Washington Post (Dec. 6, 2022) (https://www.washingtonpost.com/business/what-the-inverted-yield-curve-says-about-the-next-recession/2022/12/06/5367ddb8-755e-11ed-a199-927b334b939f_story.html); Moore, S., “Yield Curve Inversion Deepens, Increasing Likelihood Of 2023 Recession,” Forbes (Nov. 18, 2022). (<https://www.forbes.com/sites/simonmoore/2022/11/18/yield-curve-inversion-deepens-increasing-likelihood-of-2023-recession/?sh=6287c86734eb>).

4. Does potential funding from the Infrastructure Investment Act require adjustment to any inputs in modeling incentive requirements using the NREL’s System Advisor Model?

Rate Counsel Response:

Rate Counsel is not aware of any provisions that allow for a “stacking” of new tax incentives on clean hydrogen and other similar projects with other renewable energy credits like an investment tax credit. Rate Counsel discourages the Board from speculating on how many of these kinds of unique projects would apply for ADI based incentives at the current time. Board Staff should continue to monitor and review projects in case future adjustments are necessary.

5. Does the pace of registration submission into the residential market segment since inception and the likelihood of early subscription of the full 150 MW market segment allocation before the close of Energy Year 2022 support a change in incentive level from the initial value of \$90 per MWh? Should the change in incentive level occur regardless of the modeling results?

Rate Counsel Response:

For the reasons stated above, incentive levels should not be changed in the absence of a procedure that comports with due process. If Staff is considering a change, the likelihood of early subscription suggests that the incentive level is higher than necessary. Rate Counsel notes that the actual interest in the residential program may be even greater than indicated in the Straw Proposal. On November 9, 2022 the Board issued an Order denying numerous requests for extensions of the deadline to achieve commercial operation under the Transition Incentive (“TI”) program, including one blanket request for an extension of the deadline for 149 residential projects. I/M/O a New Jersey Solar Transition Pursuant to P.L. 2018, c. 17, BPU Dkt. Nos. QO19010068 et al., Order at 17 (Nov. 9, 2022). Under the Board Order, all of these projects may choose to participate in the ADI program, thus further increasing participation in the residential segment. Id. at 17, 45. If any change is being considered for the residential market segment, it should be a decrease.

- 6. Does the relatively slow uptake in registration submission in the non-residential market segments and the existence of excess capacity in this allocation for Energy Year 2022 support a change in incentive levels from the initial values?**

Rate Counsel Response:

For the reasons stated above, incentive levels should not be changed in the absence of a procedure that comports with due process. Further, while the relatively slow pace of non-residential project seeking incentives under the ADI Program might appear to suggest that incentives are too low, this is not the only relevant factor. As was recognized in the Notice, the relatively slow pace of the non-residential participation could be, at least in part, the result of “demand pull” resulting from the significantly higher incentives offered in the Board’s TI Program. As noted in the response to Question 5 above, the Board has recently denied requests for extensions of the deadline to achieve commercial operation under the TI Program, and many of these projects may choose to participate in the ADI Program. It would be premature to conclude that the ADI incentives for commercial projects are inadequate until sufficient time has passed to determine the adequacy of the current incentive levels when a program offering higher incentives is no longer an alternative.

- 7. Assuming the answer to question 5 is yes and the modeling supports a change in the residential market segment incentive value, how and when should modified incentive values in the residential market segment be implemented?**

Rate Counsel Response:

See the responses to Question 5 above.

- 8. Assuming the answer to question 6 is yes and the modeling supports an increase in the non-residential market segment incentive values, how and when should the altered incentive values be implemented?**

Rate Counsel Response:

See the response to Question 6 above. In addition, any proposed change in the non-residential incentive levels should consider the apparent bias in the Cadmus model or inputs noted in the response to Question 7 above.

- 9. What other issues should be considered in the One-Year Program Review?**

Rate Counsel Response:

Rate Counsel has no comment at this time.



Friday, December 9, 2022

via email: board.secretary@bpu.nj.gov

Carmen D. Diaz

Acting Secretary of the Board
44 South Clinton Ave., 1st Floor
PO Box 350
Trenton, NJ 08625-0350

Re: BPU Docket Number QO20020184

Dear Acting Secretary of the Board –

NJR Clean Energy Ventures Corporation (“NJRCEV”) appreciates the opportunity to submit the following comments on BPU Docket Number QO20020184, pertaining to the ADI Program Year 1 Incentive Review.

NJRCEV is among the leaders in the New Jersey solar market. Since 2010, we have invested more than \$1 billion in over 400 MW of solar projects across all market segments and counties in New Jersey, comprising about 10 percent of solar installed in the State. This investment has supported more than 1,000 local jobs constructed with union labor, helped our customers save on energy costs, and reduced 330,000 tons of greenhouse gas emissions.

As is pertains to this matter, the State needs a successful ADI program to reach its solar goals, which is responsible for incentivizing 450MW per year of net metered projects – the same projects that help support New Jersey’s 6,000+ solar jobs. This ADI Incentive review will be key in maintaining the success of the residential solar program, while correcting the incentive for commercial net metered projects, in order to revitalize that market.

Residential Solar

- Residential solar has been performing well, so well in fact, that on December 7, 2022 – the BPU Commissioners voted to expand their 2023 capacity allocation by 100MW, to ensure that this market did not have to shutdown until June 1, 2022. NJRCEV applauds the BPU for that decision.
- We agree with Cadmus modeling assumptions and the resulting \$95/MWH residential incentive need. To ensure continued success in this market segment, NJRCEV urges the Board to maintain the Year 1 incentive level.
- We are concerned over Staff statements made at the December 2, 2022, stakeholder meeting that the residential incentive will be reduced in an attempt to artificially throttle the development of this market to comply exactly with the 150MW annual target.
- The three, six, and twelve-month run rates on installations is stable at ~13MW per month. The run rate on new pipeline additions is running at a slightly higher level of 16-19MW per month; we

believe the lower end of the range is a better planning assumption given the temporary effect of the accelerated pace of approvals this past summer initiated to catch up with approval backlog. With normal scrub rates of 15-25%, the installation pace should remain on the 150MW pace.

Residential	Oct-22	Moving Averages		
		3-Month	6-Month	12-Month
Installs	13.3	14.1	14.3	12.6
New Approvals	15.8	18.9	21.1	16.7

- To further reduce the incentive beyond current levels would have a detrimental impact to the only market which has been able to succeed thus far under ADI.

Commercial Net Metered Solar

- As acknowledged by Staff, commercial net metered solar has been the largest market segment negatively impacted by the SREC-II incentives set in Year 1 of the ADI program. Landfill project incentives of \$100/MWh were also well below the levels needed to encourage project development.
- According to the stakeholder meeting held on Friday, December 2 – Cadmus acknowledges their initial recommendation for third-party owned commercial projects was \$140/MWh. When Staff set the incentive; however, they went against that recommendation and set incentives in the \$90-100/MWh, 30-35% lower than Cadmus recommended.
- The result of this action was a market that for the last 12-18 months has only installed 1MW of commercial net metered projects and with a pipeline of only ~100 projects totaling 46MW.
- In the December 2 meeting, Cadmus announced that their recommendation increased from \$140/MWh to \$165/MWh for third-party owned commercial projects. NJRCEV recommends that Staff follow the Cadmus analysis and set ADI for commercial net metered, and the other market segments, to match the incentives to the Cadmus outputs for third-party owned projects.

We appreciate the opportunity to comment on this proceeding. We look forward to working with Staff and stakeholders to ensure a successful program that will facilitate critical energy solar goals in the State’s Energy Master Plan.

Sincerely,

Steve Osborne Jr.
Sr. Corporate Strategy Analyst

Cc: Larry Barth, Managing Director Corporate Strategy
Robert Pohlman, Vice President – Clean Energy Ventures and Corporate Strategy
Garrett Lerner, Director Development and Finance
Henry Labalme, Manager Development Emerging Technologies
Jordan Kaputkin, Manager Marketing and Business Development
Kelsey Pistilli, Manager Sunlight Advantage
Valerie Marotta, Assistant Manager Sunlight Advantage



Docket No. Q020020184 ADI Refresh

New Jersey Solar Energy Coalition Comments

December 9, 2022

The New Jersey Solar Energy Coalition (NJSEC) is pleased to submit the following comments on the Administratively Determined Incentive “refresh.” We appreciate the hard work and leadership from the BPU Staff in developing this Cadmus review and we look forward to continuing an open dialogue with Board staff in the creation of an incentive structure that will keep our State on a path toward achieving its goal of 100% clean energy by 2050, balancing ratepayer impacts, and supporting a thriving and stable solar industry in New Jersey.

It is abundantly clear that the current anemic “Non-Residential” commercial ADI incentive levels need to be significantly raised if we are to achieve the desired build rate of 150 MWs in each energy year and we are confident that staff is armed with enough data to hopefully reflect the Cadmus results into the new “refreshed” incentive. We are, however, very concerned with several statements made during the webinar on December 2, 2022, that lead us to believe that the residential block will be the subject to a new administratively set “market throttling” factor that will be applied to reduce the current residential incentive.

Back in 2020 the industry worked very hard to model each market segment and at the end of the day believed that the Cadmus modeling output was a fair representation of the cost data and incentive levels needed. However, when the Board order was finally published it was evident that very significant downward modifications had been made to the final incentive levels. At that time there was no transparency, we received no information as to why the incentive levels had been so substantially altered. Clearly, after working for so many hours refining the Cadmus modeling it was very disconcerting that those efforts were largely ignored. Of particular note: the solar carport market, which up to that point had been a “preferred market,” was economically completely swept away, without explanation.

Comments across the board submitted by the industry at the time on the SuSi Board order all reflected the concern that the commercial or “Non-Residential” sector incentive was set too low to support commercial projects.

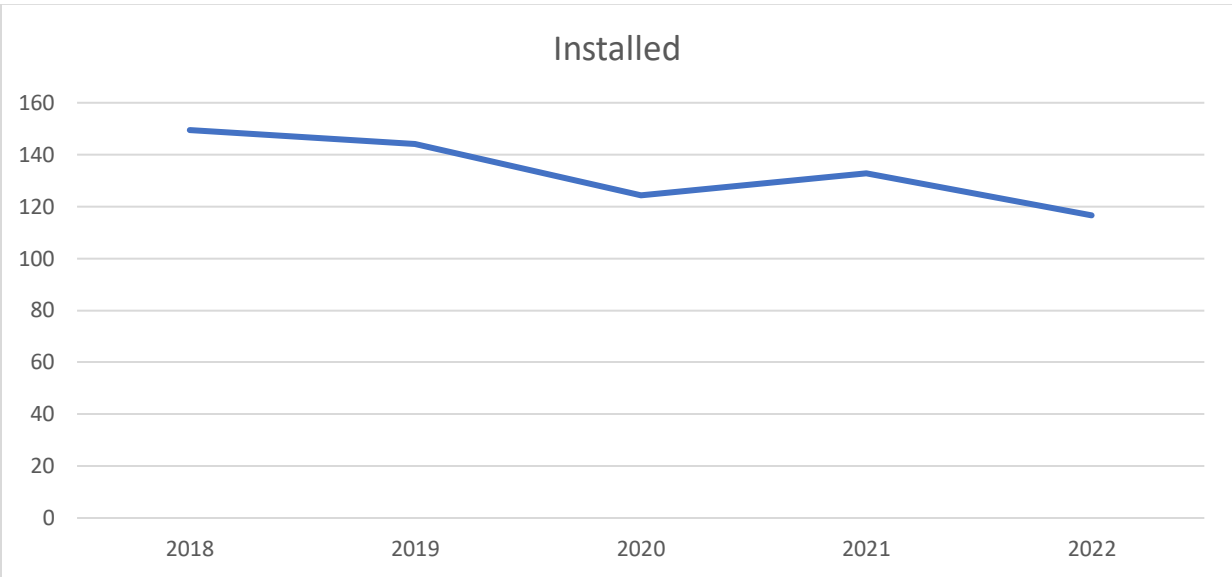
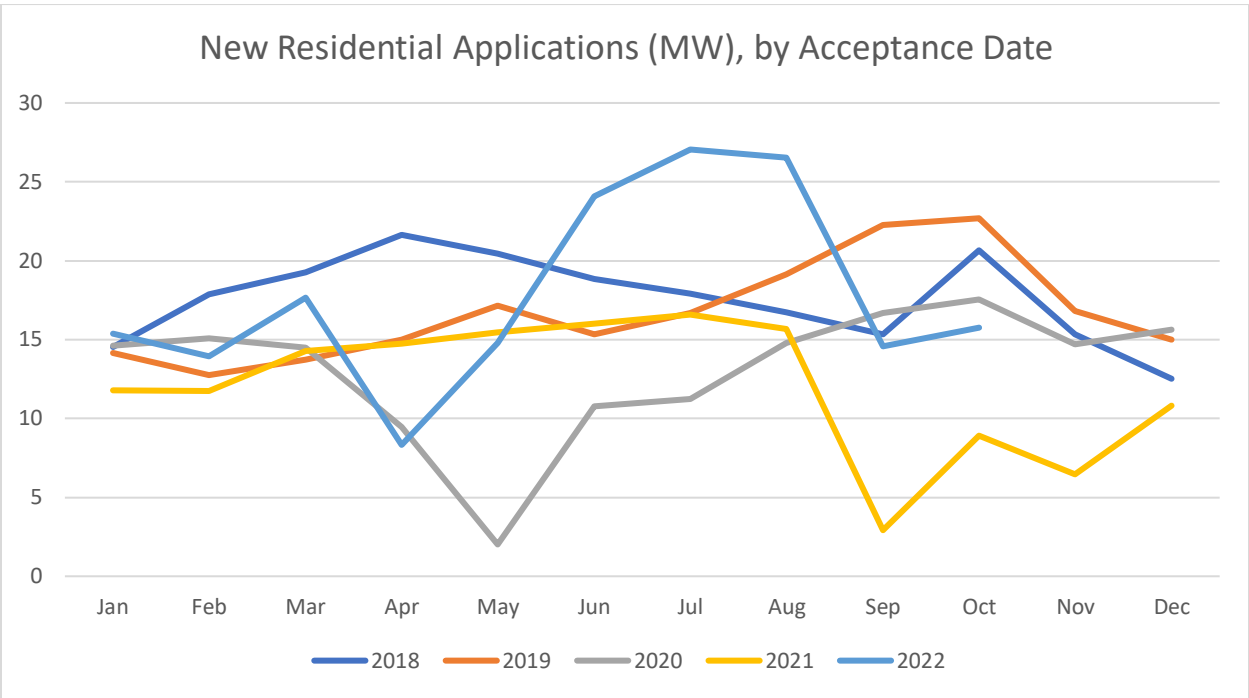
Staff Market Segment	Cadmus Market Segment	Staff Straw	TREC Program	Cadmus Sensitivity	Straw Variance		Cadmus vs. TREC
					TREC	Cadmus	
Administratively Set							
Net Metered <1MW							
Roof	C&I Roof Med.	\$85	\$152	\$130 [a]	-44%	-35%	-14%
Carport	Carport	\$85	\$152	\$170 [a]	-44%	-50%	12%
Ground	C&I Ground Med.	\$85	\$91	\$135 [a]	-7%	-37%	48%
Net Metered >1MW							
Roof	C&I Roof Lrg.	\$70 [b]	\$152	\$100 [c]	-54%	-30%	-34%
Carport	Carport	\$85	\$152	\$170 [a]	-44%	-50%	12%
Net Metered Ground (1-5MW)	C&I Ground Lrg. [b]	\$75 [b]	\$91	\$95 [c]	-18%	-21%	4%

Staff Market Segment	Cadmus Market Segment	Staff Straw	TREC Program	Cadmus Sensitivity	Straw Variance		Cadmus vs. TREC
					TREC	Cadmus	
Competitive Solicitation							
Grid							
Roof	Grid Roof	\$80	\$152	\$135 [a]	-47%	-41%	-11%
Ground	Grid Ground	\$40	\$91	\$120 [a]	-56%	-67%	32%
Landfill	Landfill/Brownfield	\$80	\$152	\$135 [a]	-47%	-41%	-11%
Net Metered >5MW							
Roof	C&I Roof Lrg. [b]	\$70 [b]	\$152	\$100 [c]	-54%	-30%	-34%
Ground	C&I Ground Lrg. [b]	\$75 [b]	\$91	\$95 [c]	-18%	-21%	4%

Naturally, it is impossible to separate the results of “market throttling” from the loss of clean energy jobs. If the Board staff believes, as stated during the webinar, that the residential sector is running at 250 MWS (5 MWs per week as stated), we would be looking at a market throttling factor that could significantly impact the current residential workforce. This could translate into many hundreds, if not a thousand, current New Jersey clean energy jobs.

Of course, using the data associated with “Approved Application (MWs) monthly rather than using the Board’s own installation report, is like a restaurant that uses reservations data to predict income when actual meals served data is available.

Let’s consider the three months of data associated with the number of approved applications for the months of June (24.07 MWs), July (27.05 MWs), and August (26.55 MWs). Clearly, this data in and of itself would support Mr. Hunters statement during the webinar that the residential market would be running in the area of 250 MWs annually fully 40% above the desired build rate. However, let’s look at the actual build out that occurred as a result of those applications. Consider that the residential business cycle is generally 60 days from application approval to commercialization, so if we want to determine the “scrub” rate or difference between approved applications and actual build for any month, we would want to compare June 2022 applications with the August 2022 installation report. In June as noted above 24.07 MWs of new applications were approved, however, in August only 15.07 MWs were installed. In July 27.05 MWs of applications resulted in a September installation of only 10.66 MWs, and finally in August with 26.55 MWs of applications approved the October installation report recorded only 5.74 MWs of installation.



Clearly, these are stark differences, however, when you consider that the surge of application approvals last summer was largely the result of TRC’s hiring additional staff to clear up the enormous backlog of applications that were dropped as the TREC program was closing. It becomes clear, therefore, that the significant delay in obtaining application approvals and other TREC market closure issues has resulted in a huge number of project abandonments. There is just

no reason to believe that with only 31.46 MWs installed of the 77.67 MWs approved in the summer that we are headed anywhere near the projected build out of 250 MWs.

Therefore, we take serious issue with the projection that the residential market will be end up anywhere near the 250 MWs projected by Board Staff. In fact, we see nothing that would suggest that the final installation report for EY23 will look very much different previous years, all averaging at or below 150 MWs. There is no data justification whatsoever to overlay a “market throttling” factor to drive the existing incentive levels lower. While we would be happy, if provided the opportunity, to review this data with Board staff in greater detail to achieve some reasonable consensus on the actual data, we are concerned that there will be no opportunity based upon history.

While the more recent impacts of inflation, cost of capital and other factors have weighed heavily on residential project economics, the residential market segment, although now closer to their economic edge, continues to support the market activity aligned with the sought result. We would recommend, therefore, that the existing ***incentive levels be maintained*** in the ADI refresh. The Cadmus data shows that residential TPO has gone up 10% while the residential DO has increased 38%. Forgoing an upward adjustment of this magnitude is ample to reflect a continued “right sized” residential market. Any intervention to lower the current incentive level could have significant impacts particularly since installation costs are fully 10% higher.

The New Jersey Solar program’s residential market segment has created, by far, the greatest number of clean energy jobs, it continues to provide the grid benefits of distributed generation and has been embraced by about 157,000 households throughout the state. This success should not be taken for granted; we are now 10% closer to the economic edge than we were last year at this time. It is also important to recognize that the residential business cycle is 60 days, so job impacts will be almost immediate, leaving everyone in this market segment searching for the data and calculations that Board staff used to support their “market throttling” conclusions. After all, we believe that if jobs will be lost there should be some reasonable substantiation available to prove with actual build data the necessity of that Board action.

New Jersey’s residential market segment has for the past 6 years never exceeded the targeted build out of 150 MWs. The market segment is mature, stable, and successful.

We would again observe that these incentive factors, if they are to create the desired result, need to be reviewed frequently to reflect national economic circumstances. Finally, we recommend that any contemplated incentive reductions, when warranted by actual build result data, be phased in under a “ratchet” or other creative mechanism to mitigate the job impacts by allowing the market to try to absorb these changes incrementally and avoid the shock of finding the “bottom” potentially shutting down the entire market as we have already witnessed in the non-residential commercial sector.

We appreciate the opportunity to provide comments and thank the Board staff for their hard work in moving the ADI refresh process forward.

A handwritten signature in black ink that reads "Fred DeSanti". The letters are cursive and connected, with a prominent loop at the end of the word "Santi".

Fred DeSanti
Executive Director
New Jersey Solar Energy Coalition (NJSEC)
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