Joint Comments on Solar Transition Straw Proposal
Submitted by:
The Solar Energy Industries Association & the New Jersey Solar Energy Coalition
March 1, 2019

I. Introduction

Thank you for the opportunity to submit comments on the New Jersey Board of Public Utilities (BPU or Board) Straw Proposal on the future of the New Jersey solar market. The Solar Energy Industries Association (SEIA) and the New Jersey Solar Energy Coalition (NJSEC) submit these comments jointly. Collectively our associations represent more than 100 solar firms doing business in New Jersey.

As preamble, we urge the Board to the *accelerate its decisions* related to closing to the Legacy SREC program and deciding the value of Pipeline SRECs.

Right now, the BPU has included language in approved SRPs saying projects may not qualify for the Legacy SREC program and may be subject to a different regime than the current program. While it is important to notify the market of this possibility, without further clarifications from the Board about the value of future Pipeline SRECs, the uncertainty surrounding the transition will hold up solar investments, slow projects moving toward completion, and generally cast a shadow over the solar market in the Garden State.

To remedy this situation, as soon as possible and not later than April 30th, the Board should decide the value of the Pipeline SRECs and communicate that to the market. The solar industry, as reflected through its many industry associations, has recommended using a factoring approach to help control the cost of creating a Pipeline program. An August timeframe for an initial proposal on these issues is far too late because investment decisions are being made today that will affect future projects.

Furthermore, the Board must clarify whether projects receiving SRPs prior to the date when disclaimers were issued would be eligible for the Legacy SREC program. And lastly, the Board should be prepared to increase the RPS requirement by some amount to close the Legacy program in a smooth and orderly fashion.

Looking ahead to the SREC Successor Program, SEIA and NJSEC believe that a well-design successor program can deliver double the capacity for the installed solar to date and roughly half the cost of the current program.

SEIA and NJSEC recommend New Jersey should explicitly set solar goal of installing 10 gigawatts (GW) of solar by the year 2030. As an interim measure, SEIA and NJSEC recommends the Board set a goal of installing another 3 GW of new solar power by the year 2025 or reaching 6 GW of solar capacity by that year

Based on complexities of designing new approaches from scratch, SEIA and NJSEC further

recommend establishing a market-traded SREC mechanism, or as we call it SREC II, with a series of reforms to correct flaws the current Legacy SREC Program. Once this program is up and running, we encourage the BPU to continue investigating the fixed price approach.

We look forward to working with the Board as the design process continues. Our specific responses to the questions are designated with blue text. The solar industry stands ready to assist the Board with implementing its clean energy goals and we believe the next round of face-to-face discussions on program design details will be critical.

Respectfully submitted,

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II. Responses to BPU Questions

1) In your direct experience, how has the current SREC program functioned over the past 5 years?

The current SREC program has driven extraordinary growth of the solar market. Currently, the New Jersey Solar market is the 5th largest in the nation, with nearly three gigawatts of distributed solar operating in the state and nearly 100,000 solar installations.[1] These solar installations have helped avoid nearly 120,000 tons of carbon dioxide per year entering the atmosphere.[2] Furthermore, distributed solar installations have also helped avoid wholesale energy market purchases and have played a role in moderating wholesale energy market prices. Driven by strong customer demand, the solar industry has invested nearly $9 billion in New Jersey solar projects and employed approximately 6,500 workers in 2018.[3]

But the Legacy SREC market structure was plagued by uncertainty and went through several boom and bust cycles that required legislative intervention to prevent market crashes and keep solar firms from laying off workers. The design of an unmanaged commodity market without appropriate guardrails created significant swings in SREC prices. High SREC market prices drove investment and stimulated solar development, but also created a significantly oversupplied market that caused drops in SREC pricing. This significant market volatility created uncertainty, resulted in occasional layoffs, and hurt the solar industry. The program design also likely played a role in driving up the cost of the SREC program. Thankfully, the Legislature and successive Governors adjusted the Renewable Portfolio Standard (RPS) demand curve twice to ensure steady industry growth and prevent market crashes.

While the overall track record of the Legacy SREC program is strong and helped achieve the state's initial policy objectives, there are several lessons that can be learned from the initial program that should help inform program design and create a more stable and lower cost program in the future.

2) How should any proposed SREC Successor Program be organized in conformance with the Clean Energy Act and Staff's SREC Transition Principles? Please provide detailed quantitative and qualitative responses as to the perceived pros and cons of each of the following options:
   a. a fixed price SREC;
   b. a market-determined SREC;
   and
   c. any other option(s).

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[1] SEIA/GTM Research "U.S. Solar Market Insight," December 2018. Available at: https://www.seia.org/us-solar-market-insight. We note that many more solar projects have submitted applications to the SREC program and installation data excluded 4th Quarter 2018 results.

[2] United States Environmental Protection Agency, Avoided Emissions and Generation Tool (AVERT). Accessed March 2019. Available at: https://www.epa.gov/statelocalenergy/avert-web-edition

[3] The Solar Foundation "National Solar Jobs Census" February 2019. Available at: http://www.thesolarfoundation.org/wp-content/uploads/2019/02/Appendix-A.pdf

Given the Legacy SREC market's successes in driving solar development and creating a strong industry, SEIA and NJSEC recommends regulators adopt a modified market-determined SREC as the successor program.

SEIA and NJSEC recommend the market-determined construct in large part because given the Legacy SREC market is likely to reach the current 5.1 percent RPS target by spring of 2020. The Board has previously stated that it intends to "[s]upport the continued growth of the solar industry"[4] and this leaves very little time to debate, design and approve a significantly redesigned solar incentive program with different mechanics. The market-determined SREC has proven itself capable of driving solar development. Furthermore, its inherent flexibility allows a market-determined SREC to adjust with fast changing conditions. For example, the market-determined SREC allow pricing to move alongside the potential phase out of the federal investment tax credit, or fast rising utility interconnection costs.

Furthermore, SEIA and NJSEC believe that program reforms can be instituted that lower costs to ratepayers, eliminate the boom and bust cycles that have hurt solar industry, and better target incentives to projects that achieve certain public policy objectives. In brief, a revised SREC trading program builds off New Jersey's current successful framework and would be relatively simple to implement when compared to other options.

A revised SREC trading program would be familiar to regulators, market participants, and utilities and load serving entities. The Board's Clean Energy Program has years of experience running the current SREC program. The implementation mechanics, such as SREC certificate tracking, compliance and trading platforms are well established and understood by all.

Set Big Goals

This modified market should be constructed with the objective of achieving a new ambitious distributed solar goal. SEIA and NJSEC recommend New Jersey should explicitly set a solar goal of installing 10 gigawatts (GW) of solar by the year 2030. This 10 GW would include the SREC-I installations. As a "down payment" on this new and ambitious goal, SEIA and NJSEC recommend the Board set a goal of installing another 3 GW of new solar power by the year 2025 or reaching 6 GW of solar capacity by that year.

This goal would approximately double the size of the current New Jersey solar market and would outpace the current solar market growth projections.[5] These proposals would place the state on the path to reaching 50 percent of the state's electricity coming from Class I renewables by the year 2030. Furthermore, the goals are roughly equal to goals set by neighboring states, such as New York, and currently under consideration in Massachusetts.[6] The new solar goal should also explicitly support development across all distributed solar

[4] New Jersey Board of Public Utilities "New Jersey Solar Transition Staff Straw Proposal," December 26, 2018. Available at: https://www.state.nj.us/bpu/pdf/publicnotice/Solar%20Transition%20Straw%20Proposal%20-%202018-12-26%20clean%20(final).pdf

[5] SEIA/GTM Research "U.S. Solar Market Insight," December 2018. Available at: https://www.seia.org/us-solar-market-insight.

[6] New York Governor Andrew Cuomo "2019 Justice Agenda: The Time is Now," January 15, 2019. Available at: https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/2019StateoftheStateBook.pdf.

market sectors including residential, commercial & industrial, grid scale, and community solar.[7]

Alternatives

One alternative to the SREC market construct is using a fixed price SREC. Other states such as New York and Massachusetts have also adopted set, or non-floating, incentives.[8] There are advantages and disadvantages to this approach. The main advantage of a fixed price SREC is stability. Even under a scenario where the amount of a fixed price SREC declines over time -- policy designs that have worked in other states -- solar firms would have a clear understanding of the exact level of incentive and are therefore able to plan. This predictable, transparent incentive structure helps to lower costs.

However, the main disadvantage to establishing a fixed price SREC approach is complexity and the time it would take to implement such a fundamentally different design. The BPU would have needed to start the analysis months ago to inform the creation of fixed price incentives. As a point of comparison, Massachusetts spent more than three years designing and implementing the transition to its current Solar Massachusetts Renewable Target program, which provides a fixed incentive and is delivered through an approved utility tariff.

Fixed price SRECs set by regulators are less able to quickly adjust with changing costs over time. This model also ties the hands of program administrators in the face of immediate and unforeseen variables, such as the import tariffs imposed on PV cells and modules in 2018. Regulators in New York have made several adjustments to their program to help drive solar development, including increasing incentive levels in certain areas of the state. These adjustments have required regulatory procedure and public notice and comment, which while appropriate and necessary, takes considerable time to implement.

Among the challenges, setting the initial incentive rate itself is crucial. Setting incentives at the wrong level could create cascading problems through the program and require further design changes, that could halt progress toward the State's solar goals.

SEIA and NJSEC do not support the use of auctions to set incentive levels because auctioning tends to create a "race to the bottom" where firms compete individually at the expense of the market as a whole. Auctions may be a way to discover prices for a few, comparable firms, but in an industry as diverse as ours which serves all different classes of customers, in different locations using different business models, auctions are not likely produce representative results.[9] Furthermore, auction design is complicated and can result in perverse outcomes if not performed correctly.

That leaves regulators in the position of setting incentive levels themselves. This exercise would

[7] New Jersey should also revisit its prohibition on out-of-state solar projects being eligible for Class I RECs as this interpretation makes its clean energy objectives significantly harder to achieve and is inequitable with respect to other large-scale resources.

[8] "Declining block incentive" programs are increasing not an accurate description of these incentive designs given the NY has increased its incentive levels in certain areas and Massachusetts is currently considering similar revisions. Adjustable blocks incentive programs may be more appropriate name going forward.

[9] It is worth noting that Massachusetts used auctioning to help determine initial incentive levels in its SMART program but ended up administratively setting some incentive level because of concerns about the auction results and whether the bidding pool was insufficient to reflect actual market dynamics.

need to be informed by rigorous analysis, survey research of solar company costs, and would need to be completely transparent and open for solar stakeholders' comment.

Recommendation

Given the limited time available to construct a successor, SEIA and NJSEC believe maintaining the market construct with certain reforms is the most expeditious way forward and for the sake of simplicity we call this approach "SREC II." However, we would recommend the Board undertake a two-pronged approach. In the short-term, the BPU should establish the market-determined SREII program. But the Board should continue to investigate the potential of a fixed price model based on research and data provided by other jurisdictions, most notably Massachusetts.

3) Based on your response to question 2 above, provide precise quantitative and qualitative recommendations as to how your preferred SREC Successor Program model would be implemented, keeping in mind the necessity of satisfying the "SREC Transition Principles" set forth above.

The SREC Successor Program should be established mirroring many of the current features the Legacy SREC Program. For example, building off current program, the Board would set an overall additional compliance obligation for the load serving entities (LSEs) in terms of megawatts installed, establish and alternative compliance payment, and require the registration of SREC II certificates through PJM GATs.

However, a revised SREC II program would contain the following key reforms:

a. Using the BPU's existing administrative authority, the Board would set a lower solar alternate compliance payment (SACP) for projects participating in the *Successor Program*, so that new solar projects would have a new ceiling for incentives.[10] Based on our initial modeling included in Attachment 1, SEIA and NJSEC companies believe that a 30 percent initial reduction in SACP level from the current program with year-over-year declines per the current market design would allow the continued growth of the solar market. SEIA and NJSEC believe the EY 2020 SACP of $198/MWh with the assumption that SRECs trade at approximately 75 percent of the SACP.
b. Consistent with the Energy Act and recent decisions by the Board, the Board should set the eligibility for SREC II certificates at 10 years.
c. The Board must also establish mechanisms to appropriately balance the market and prevent over and undersupply. This critical feature must be carefully considered throughout the course of stakeholder discussions during the next few months. Once again the Massachusetts model may be instructive as regulators in the Bay State developed an automatic balancing mechanism.
d. Establish "factors" to support all market sectors and encourage the development of new sectors such as community solar similar to the Massachusetts SREC II design. For

[10] We reiterate that the adjusted SACP levels proposed here would only apply to projects in the Successor Program and would not apply to projects approved as part of the Legacy Program. Changing the current SREC program construct would jeopardize Changing that construct would jeopardize existing solar contracts.

example, solar projects serving low income residential customers directly or through community solar installations, would receive the full value of the SREC II incentive, whereas certain commercial projects and grid supply projects would receive discounted SRECs. This mechanism can be used not only to encourage certain projects that achieve public policy objectives and ensure a diversity of project types.

4) How should Legacy SRECs be valued? Should these Legacy SRECs be valued under the SREC Successor Program or valued separately?

Although the wording of this question is somewhat unclear, SEIA and NJSEC strongly urges the Board not to change the mechanics or administratively alter the values of the Legacy SREC program. Such an attempt would also violate the SREC Transition Principle to "ensure that prior investments retain their value."[11]

Attempts to cut Legacy SREC program values would adversely affect existing projects negatively impacting homeowners, schools, businesses, and municipalities that have invested nearly $9 billion in the state thereby undermining investor confidence needed to attract capital to support clean energy growth going forward. Many of the NJ solar consumers have entered into long-term contracts, whether they are leases or power purchase agreements, based on the SREC-I program construct. Changing that construct would jeopardize those billions of dollars worth of contracts.

As we have stated in many other documents to the BPU, the successor program is the place to drive cost control of the future solar incentive program – in other words, in SREC II.

5) How should Pipeline SRECs be valued? Should these Pipeline SRECs be valued under the SREC Successor Program or valued separately?

By definition, projects in the SREC pipeline have obtained SRP approvals for the Legacy SREC Program and have contracts signed based on the program rules, terms and conditions. Their project finance terms contract for SREC values based on the Legacy SREC Program. Therefore, the Pipeline SREC values should be roughly equivalent.

SEIA and NJSEC recommends the Board look to Massachusetts as a model for closing the SREC program. Massachusetts employed the concept of SREC discounting or as they called it "factoring" to help control costs of its transitional efforts while a permanent replacement was still in development.

This situation is very similar to the challenges faced by regulators in New Jersey. The Massachusetts model maintained the all the existing mechanics of their SREC market related to compliance obligations, the term for which projects were eligible to generate SRECs, and eligibility requirements. This approach required minimal additional administrative effort by

[11] New Jersey Board of Public Utilities "New Jersey Solar Transition Staff Straw Proposal," December 26, 2018. Available at: https://www.state.nj.us/bpu/pdf/publicnotice/Solar%20Transition%20Straw%20Proposal%20-%202018-12-26%20clean%20(final).pdf

regulators.

Applied in the New Jersey context, the Massachusetts model has the following features:

a. Projects in the pipeline with complete SRP applications[12] submitted on or before January 31, 2019 (or another appropriate date to be determined by the BPU) OR projects that reach completion before reaching the 5.1% milestone would all receive a Legacy SRE Factor of 1.0.
b. Projects with a complete SRP application on or before June 1, 2019 but that have not reached completion upon reaching the 5.1% milestone, would be eligible for a discounted SREC, for instance a factor of 0.9.
b. Projects with a complete SRP application after June 1, 2019 but not yet complete upon reaching the 5.1% milestone, would be eligible for a discounted SREC, for instance a factor of 0.8.

In general, this approach ensures continuity for the solar market and also provides for cost control which is consistent with the objectives of the Clean Energy Act[13]. Under this plan, the final size obligation of "Pipeline SREC" program would then be added to the current RPS solar carve-out obligation. The final RPS obligation would then need to be adjusted to account for the additional projects.

a. Should the Board continue the current SREC program as a separate program? If so, how?

Similar to the way Massachusetts structured its SREC obligations, SEIA and NJSEC recommend the Board look at the SREC program(s) cumulatively. The current SREC program would remain in effect per the current schedule without changes. The Successor Program, or SREC II, would then build on SREC I. Together, we would recommend the programs count toward SEIA and NJSEC's recommended long-term goal.

b. Should the Board include the current SREC program within the SREC Successor Program? If so, how?

SEIA and NJSEC recommends the Successor Program would build off the Legacy SREC program and would be considered two programs in pursuit of an overall solar target.

6) For any solar transition, should the Board set a megawatt ("MW") target for annual new solar construction? If so, should those targets be defined as percentage of retail sales or a set MW cap? Under what circumstances and/or assumptions is this target achievable?

Given the great strides in reducing energy consumption through efficiency and conservation, for SREC II, SEIA and NJSEC recommend the Board establishes an increased RPS target for the solar program that is not defined as percentage of retail sales for the successor program.

[12] For subsection t projects, milestone is "Date Application (t) Submitted to DEP".
[13] Chap 17 of the Laws of 2018.

Instead, simply setting a MW target takes complexity and uncertainty out of the process because regulators and solar firms will know what target they are trying to hit. With load forecasts continuing to fall, setting a straight MW target is also a more stable mechanism and eliminates calculations where one of the values is unknown.

Based on our initial modeling (See Attachment 1), SEIA and NJSEC recommend the SREC II target for EY 2025 target should be 3 gigawatts (which translates to approximately an additional 4.8% of retail sales given the current calculation method). Combined with the SREC I requirements, these targets would therefore have a goal of obtaining nearly 10% percent of the state's retail sales supplied by solar electricity.

We assume the static New Jersey load forecast for 2017, which has been widely used in such modeling. Furthermore, to main industry stability the solar market would continue to install 450 – 500 megawatts of solar per year. This estimate assumes current build rates for the existing market segments, the addition of the community solar pilot program, the approval of grid supply projects and factors in room for industry growth.

7) In any SREC Successor Program, should the Board seek to set annual MW capacity caps for new solar construction or percentages of retail sales? Why or why not? If yes, what should be the value through 2030 and why? If yes, should the Board seek to set differentiated capacity caps under the solar RPS based on project type?

SEIA and NJSEC recommend the board set an update RPS target as a straight MW target. We recommend New Jersey should explicitly set solar goal of installing 10 gigawatts (GW) of solar by the year 2030. As an interim measure, SEIA and NJSEC recommends the Board set a goal of installing another 3 GW of new solar power by the year 2025 or reaching 6 GW of solar capacity by that year.

8) In the SREC Successor Program, should the Board provide differentiated SREC or solar value incentives to different types of projects? Should such differentiated SREC compensation be created through SREC multipliers, through an add-on valuation, or through some other method? Based on what factor(s) should any SREC compensation be differentiated?

SEIA and NJSEC strongly support the use of differentiated SREC II values for different types of programs. As stated earlier, Massachusetts effectively used SREC factoring to encourage solar projects that served different constituencies or otherwise achieved a public policy objective. We recommend the Board sets higher factors for projects serving low income customers, or community solar projects serving low income customers and for residential customers. We further recommend that the Board establish high factors for solar carports and canopy projects.

9) How should the cost cap be measured? Should any "head space" under the cost cap in the first years be "banked"? Why or why not?

The Clean Energy Act sets cost caps on meeting the 50 percent renewable goals "so that the cost to customers of satisfying the requirement shall not exceed nine percent of the total paid for

electricity consumption by all customers in the State for energy year 2019, energy year 2020, and energy year 2021, respectively, and shall not exceed seven percent of the total paid for electricity consumption by all customers in the State in any energy year thereafter."[14]

The Board must use some discretion in interpreting this language. The Board BPU does not yet know what the "total paid for electricity consumption by all customers for EY 2019" is. Therefore, the BPU has to set these caps by either using a forecast, or by using historical data and establishing an average. Using a forecast would require constant adjustments and true-ups and would be difficult to administer.

Therefore, SEIA and NJSEC recommend instead using a three-year historical rolling average to establish the total paid by electricity consumption by all customers. These are known numbers and using a three-year average helps moderate the influence of one significantly up or down year based on swings in energy market pricing. Using these averages would ensure cost caps are known in advance and help regulators manage programs accordingly.

Furthermore, based on SEIA and NJSEC's limited preliminary calculations, there will likely be room under the caps on a yearly basis through EY 2023. SEIA and NJSEC strongly recommend that any headroom under the caps be "banked" or held in "reserve" to give the Board more flexibility in meeting its overall clean energy goals. We recommend the "reserve" be calculated by the Board in percentage terms at the end of each energy year and carried over and added to cost cap calculations in later years. These carry overs can be added on a one-time basis or split between years as the Board deems advisable.

10) Can and should the cost cap be determined based on net costs that include some type of valuation of associated benefits? If so, what should those qualitative and quantitative benefits be and how should they be assigned a value? If the Board can and should consider a net benefits test, should other cost impacts be included, and which ones? Why? If other cost impacts should not be included, why not?

In addition to the calculation recommendations advanced above, SEIA and NJSEC encourage the Board to consider net costs when managing the caps. As stated previously, solar incentive programs have largely been developed to compensate solar projects owners for the previously unquantified benefits these projects bring to the grid and to society.

The benefits solar projects provide are legion.[15] On the bulk power system, DER helps avoid capacity, energy, transmission infrastructure and operations and maintenance costs, as well as transmission line losses. At the distribution system level, all DER helps avoid operations and maintenance costs, distribution capacity infrastructure costs and line losses. With respect to environmental benefits, solar projects avoid carbon emissions, other the damages created by other criteria air pollutants and provide certain non-energy benefits.

These benefits to the society have been routinely found to outweigh the cost of solar incentive

[14] Ibid.

[15] New York State Public Service Commission, "Benefit Cost Analysis Framework," January 21, 2016. Available at: file://p-rofiles/userprofiles$/DGahl/Downloads/%7BF8C835E1-EDB5-47FF-BD78-73EB5B3B177A%7D%20(1).pdf

support.[16] Therefore we recommend the BPU take all these benefits into consideration when making its calculations and developing an approach to a calculating the caps that provides flexibility.

[16] See SEIA Solar Cost Benefit Studies: https://www.seia.org/initiatives/solar-cost-benefit-studies

11) What steps should the Board take to implement the cost cap? In particular, please discuss the pros and cons of decreasing the Class I REC Renewable Portfolio Standards. Should any measures implemented differentiate among the different type of Class I renewable energy technologies? Should these measures differentiate among the different market sectors (e.g. utility-scale grid supply versus small residential systems)? Should these measures be technology neutral? Why or why not?

SEIA and NJSEC believe that the adjustments to calculations above will obviate the Board from needing to adjust the Class I REC obligations.

12) Should the solar industry transition into a true, incentive-free market as the costs of solar begin to approach "grid parity be a goal, or even a consideration, of the SREC Successor Program? If so, how can a SREC Successor Program assist that transition? Should a transition also encompass changes to the net metering program (cf. ongoing FERC/PJM review of DER aggregation)?

The solar industry seeks to transition into a truly, incentive free market. However, to date, incentives have been used by many states as a proxy for estimating the avoided environmental costs associated with fossil fuels, avoided grid investments and transmission infrastructure improvements needed to operate the systems, and host of other avoided costs that distributed energy resources such as solar provide.

If the compensation for the energy solar projects produce fully accounted for these benefits, there would be little need for additional incentives. But do date, most states have just begun to scratch the surface on identifying fair and accurate values. Identifying these values requires a rigorous, step-wise, analysis that takes a deep dive into utility distribution planning and is informed by utility operational data.

SEIA and NJSEC believe that once a long-term Successor SREC program is put into place, regulators should turn attention to value-based analysis. But these discussions are years off. Based on our experience in other jurisdictions such as New York, we caution regulators that determining these values are time intensive discussions that must be informed by data. Without establishing the appropriate foundation to do a value-based analysis, regulators in other jurisdictions have relied on inappropriate proxy values that have been the source of criticism and have worked at cross purposes to achieving policy-makers goals.

13) Please provide comments on any significant issues not specifically addressed in the questions above, making specific reference to their applicability in the New Jersey context. Please do not reiterate previously made comments.

Not at this time.

ATTACHMENT 1

SREC II Proposal

Updated ###### 75,031,955.00

Percent SACP 0.75

2017

SREC II PROPOSAL

	NJ load forecast	Total SREC % Requirement	SREC I Requirement	SREC II Requirement	SREC I	SREC II	MW req'd SREC I	MW req'd SREC II	Total MW req'd	SREC I SACP	SREC II SACP
EY18	75,031,955	3.20%	3.20%	0.00%	2,401,023	-	2,000.85	-	2,000.85	$308	$0
EY19	75,031,955	4.30%	4.30%	0.00%	3,226,374	-	2,688.65	-	2,688.65	$268	$0
EY20	75,031,955	5.00%	4.90%	0.10%	3,676,566	75,032	3,063.80	62.53	3,126.33	$258	$198
EY21	75,031,955	5.70%	5.10%	0.60%	3,826,630	450,192	3,188.86	375.16	3,564.02	$248	$191
EY22	75,031,955	6.60%	5.10%	1.50%	3,826,630	1,125,479	3,188.86	937.90	4,126.76	$238	$183
EY23	75,031,955	7.70%	5.10%	2.60%	3,826,630	1,950,831	3,188.86	1,625.69	4,814.55	$228	$175
EY24	75,031,955	8.60%	4.90%	3.70%	3,676,566	2,776,182	3,063.80	2,313.49	5,377.29	$218	$167
EY25	75,031,955	9.60%	4.80%	4.80%	3,601,534	3,601,534	3,001.28	3,001.28	6,002.56	$208	$160
EY26	75,031,955	9.75%	4.50%	5.25%	3,376,438	3,939,178	2,813.70	3,282.65	6,096.35	$198	$152
EY27	75,031,955	9.60%	4.35%	5.25%	3,263,890	3,939,178	2,719.91	3,282.65	6,002.56	$188	$144
EY28	75,031,955	8.99%	3.74%	5.25%	2,806,195	3,939,178	2,338.50	3,282.65	5,621.14	$178	$136
EY29	75,031,955	8.32%	3.07%	5.25%	2,303,481	3,939,178	1,919.57	3,282.65	5,202.22	$168	$129
EY30	75,031,955	7.46%	2.21%	5.25%	1,658,206	3,939,178	1,381.84	3,282.65	4,664.49	$158	$121
EY31	75,031,955	6.83%	1.58%	5.25%	1,185,505	3,939,178	987.92	3,282.65	4,270.57	$148	$113
EY32	75,031,955	6.65%	1.40%	5.25%	1,050,447	3,939,178	875.37	3,282.65	4,158.02	$138	$106
EY33	75,031,955	6.35%	1.1%	5.25%	825,352	3,939,178	687.79	3,282.65	3,970.44	$128	$98