



October 1, 2021

**VIA ELECTRONIC MAIL**

NYS Department of Taxation and Finance – ORPTS  
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Re: Appraisal Model #2 for solar and wind energy projects

Dear Mr. St. Germain:

On behalf of the Alliance for Clean Energy New York (ACE NY) and the New York Solar Energy Industries Association (NYSEIA), we are writing to submit additional comments on the Department of Taxation and Finance’s draft solar and wind appraisal models and preliminary discount rates, primarily focusing on Appraisal Model #2 posted on September 17, 2021. Thank you for considering these comments and please let us know if we can provide any supplementary information.

Respectfully,

Anne Reynolds  
Executive Director  
Alliance for Clean Energy New York

Daniel Hendrick  
East Region Head of External Affairs, Clearway Energy  
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Cc:  
Ms. Jessica Waldorf, Acting Assistant Secretary for Energy  
Ms. Jane Wiesenber, Assistant Secretary for Economic Development  
Mr. Sean Ewart, Senior Policy Advisor for Energy  
Mr. Rajiv Shah, Assistant Counsel, Executive Chamber  
Ms. Doreen M. Harris, President, NY State Energy Research and Development Authority  
Mr. Rory Christian, Chair, NY State Department of Public Service  
Mr. Basil Seggos, Commissioner, NY State Department of Environmental Conservation  
Mr. Houtan Moaveni, Deputy Executive Director, NY State Office of Renewable Energy Siting

**ADDITIONAL COMMENTS ON NYS DEPARTMENT OF TAXATION AND FINANCE  
PROPOSED APPRAISAL METHODOLOGY  
FOR SOLAR AND WIND ENERGY PROJECTS**

Submitted by  
**THE ALLIANCE FOR CLEAN ENERGY NEW YORK  
&  
THE NEW YORK SOLAR ENERGY INDUSTRIES ASSOCIATION**

October 1, 2021

The Alliance for Clean Energy New York (ACE NY) and the New York Solar Energy Industries Association (NYSEIA) appreciate the ongoing efforts of the Department of Taxation and Finance (DTF) to develop a model for valuing wind and solar projects. We also recognize the complexity of valuing these projects. The release of Appraisal Model #2 on September 17, 2021 and DTF's request for comments on this model is evidence of the agency's continuing efforts.

DTF's preparation of a discounted cash flow (DCF) model; the use of different discount rates for different technologies (*i.e.*, wind and solar); and the recognition of projects with different contract structures (e.g., grid-scale vs. local (VDER) solar) represents progress in the development of a tool for valuing renewable energy projects. In our view, the model still needs significant changes to the proposed discount rates and to how the model predicts expenses and revenue in order to accurately reflect the appropriate valuation for property tax appraisal purposes and to be consistent with the Uniform Standards of Professional Appraisal Practice (USPAP). Absent significant changes, the proposed tax assessment model will likely lead to projects not being built; the related economic development opportunities not being realized in New York communities; and progress in meeting the New York's renewable energy mandates not being made.

## **I. Summary**

On September 27<sup>th</sup>, ACE NY and NYSEIA submitted a letter to the DTF requesting an extension of the October 1 comment deadline to provide our member companies the time and opportunity to test and assess Model #2 more fully, to better inform these Comments. We reiterate that

request here, but given the deadline is still October 1 as of now, below, please find our initial comments on Model #2 and the methodology overall. We hope DTF will carefully review this feedback prior to publishing the final model.

On September 3<sup>rd</sup>, ACE NY and NYSEIA submitted initial comments on Model #1. At a high level, we reiterate here that the proposed Models #1 and #2 do not lead to a fair market valuation for wind and solar projects, and need to be modified to:

- (A) Use significantly higher discount rates in the model to better reflect risk and operating realities for clean energy projects in New York State, and that are consistent with those used by professional New York State assessors in clean energy project appraisals.**
- (B) Exclude intangible assets like environmental attributes from the model, as required by law.**
- (C) More accurately estimate revenue by adjusting to account for basis risk, curtailment, congestion, production profile, and capacity market revenue differences.**

Moreover, consistent with RPTL Section 581-a, the income approach should consider “actual net operating income” which does not include federal, state, or municipal income tax credits. As such, Production and Income Tax Credits should be considered a form of obsolescence and not included in the model.

## II. To Effectively Evaluate Model #2, Entities Need More Transparency into the Formula and Additional Time.

In comparison to the first model, Model #2, which DTF describes as “a potential alternative to the previously published preliminary model,” features different assumptions regarding revenue and expense factors that our members companies are in the process of examining and running simulations. Complicating the review of both models is DTF’s statement that “the final appraisal model may incorporate assumptions from both,” according to your website. It’s impracticable for project developers to comment on potential hybrid model scenarios in which various valuations could ultimately undercut one another. Much of the feedback that project developers provide on the individual models may not apply to a hybrid model.

We would like to reinforce that our respective member companies found it challenging to conduct their review and simulation of Model #2 (and Model #1) given that certain components were locked. Making the tabs, particularly those containing information directly related to the calculation of revenues, more accessible and unlocking components would have enabled our member companies to examine the valuations more effectively, as well as to accurately audit the proposed models. Locked and hidden components prevent the use of formula auditing tools and other techniques for checking the model. Being able to review the information and mechanics of the contents of the inaccessible portions of the model is essential for commenters proposing potential corrections.

### III. Initial Comments on Modifications in Model #2

One advantage of Model #2 over Model #1 is the opportunity for the additional project-specific user inputs to address some of the base assumptions for the project. Many of the default assumptions built into Model #1 and Model #2 may not be representative of the reality of the industry or the specific project, and so the opportunity to adjust those assumptions with the assessors on a per project basis is positive.

Another advantage of Model #2 over Model #1 is the addition of charts which demonstrate how many of the important valuation factors for a project change over time. Most importantly, Model #2 demonstrates how the appraisal for the project, based on the DCF method, would naturally decrease over time as the project approaches the end of its economic life. Having this represented visually in the model is an advantage.

One disadvantage of Model #2 with respect to Model #1 is the overall complexity. While having the opportunity to make project level adjustments is valuable, the number of tabs and the complicated inter-tab calculations will lead to inevitable confusion when dealing with any unique project situations.

The final calculations in the Project Report tab of Model #2 appear to be intended to demonstrate what the expected tax payments from the project may be, according to full project appraisal and the input tax rate, over either a 15-year PILOT term or the project's economic life. These calculations appear to be showing a far higher value than would be expected over those terms. As the project value decreases over time, the levelized tax payments over either term would be expected to be the average of the expected tax payments over the term, where Model #2 appears to be using the PMT formula to calculate an annual payment based on the Net Present Value of the tax payments and an interest rate of the loaded discount rate. This increased representation will lead to inaccurate expectations for long term revenues by the taxing jurisdictions.

We also note that VDER model is built around NYSEIDA's NY-Sun program, with assessment values based on the data submitted for a project's NY-Sun incentive application. As NYSEIDA NY-Sun incentives for projects over 1 MW have been exhausted for most regions of the state, and we are unaware of any intention by NYSEIDA to re-open NY-Sun funding, it is not clear that this model framework will be practical going forward. But most importantly for local/VDER solar projects, the resulting assessment values do not support feasible projects. Based on feedback from ACE members, when the NY-Sun application numbers for projects are used in the VDER model, the model results in payments that far exceed the guidance provided by NYSEIDA's Solar Guidebook for Local Governments, which has been a key tool for informing PILOT levels in New York. The results are also significantly higher than the PILOT payments agreed upon with the taxing jurisdictions, which allowed for projects to be successfully completed. The same was true for grid-scale Tier 1 projects.

Model #2 seems to not use the Annual Contract Maximum to drive revenue assumptions. ACE NY and NYSEIA agree with this approach.

Regarding operating expenses, our discussions with wind and solar developers indicated that the operating expenses assumed in the model are 20-30% lower than what is expected in New York. At the very least, the operating expenses that are directly related to rules and requirements in

New York should be included. For example, there are considerable fees at the NYISO for scheduling and dispatch of facilities, as well as operator's expenses for meeting scheduling and dispatch rules. There are costs associated with Office of Renewable Energy Siting permitting requirements and mitigation of species impacts (as well as curtailment to protect species). Model #2 should not use net decommissioning cost as that is inconsistent with state permitting requirements regarding decommissioning security. The costs should accurately reflect what the Office of Renewable Energy Siting is requiring for decommissioning and/or what the local municipality is requiring for decommissioning. Model #2 should include operational security to support gross decommissioning costs at the end of project life. Similarly, the costs of the newly enacted Host Community Benefit requirement should be considering in operating expenses. This is a requirement of the NYS Public Service Commission of \$500/MW/year for solar and \$1000/MW/year for wind. These all represent costs that are unique to operation in New York State.

Finally, it is not clearly stated how or if this model would be used each year during project life, or if it would be applied only in the first year of the project to determine the future tax liability. This lack of clarity in the procedure creates uncertainty.

#### **IV. The Discount Rates Proposed are Not Appropriate to Use for the Model that Was Proposed.**

In our September 3<sup>rd</sup> Comments, ACE NY and NYSEIA stated that the discount rates being proposed by DTF simply do not reflect the risks and operating realities for clean energy projects and are significantly lower than those used by professional New York State assessors in clean energy project appraisals. In these Comments, we are providing more explanation of the basis for the request for higher discount rates, in that the model proposed by DTF does not reflect the same approach to assessing risks and valuing clean energy projects used by market participants.

The discount rates proposed by DTF are at the low end of the range of discount rates used by the renewable energy industry for their *business valuations* of proposed facilities. But a business valuation (or, corporate valuations, fair market value calculations) are developed using a very different approach than the appraisal model that DTF has proposed. These business valuations are developed by always including several risk factors that are not considered in the DTF proposed models, and by discounting cash flows after income taxes, tax equity, and debt service costs. Because the proposed DTF model is such a different approach, it needs to utilize a substantially different discount rate.

The model proposed by DTF has missing risk factors as compared to a business valuation methodology that is typically used by market participants, such as:

- **Construction and supply chain risk.** The cost to build solar and wind facilities can fluctuate wildly due to the growing nature of the renewable energy industry. Supply chain constraints and a lack of available engineering, procurement, and construction (EPC) contractors are considerable risks that are taken into account when establishing the fair market value of projects.
- **Debt service and tax equity risk.** The COVID-19 pandemic and changing federal tax law has had dramatic effects on the availability and interest of tax equity providers and debt lenders. The costs and risks associated with financing and closing are considered when establishing the fair market value of projects.
- **Merchant revenue risk.** Contracted revenues (those realized via a long-term contract such as the NYSERDA Tier 1 contracts) and merchant revenues (those realized directly through the NYISO energy, capacity, and ancillary services markets) are handled very differently in renewable energy industry models for valuing a project. The level of risk associated with merchant revenues is much higher due to the higher level of uncertainty in what hourly energy prices and spot capacity prices will be day-to-day. Renewable energy companies typically use a blended discount rate that takes into account varying levels of contracted and merchant revenue assumptions. The source of the selected discount rate by DTF (i.e., NREL) does not take into account the unique structure of both the Value of Distributed Energy Resources (VDER) program and the NYSERDA Tier 1 Indexed Renewable Energy Credit (IREC) – structures that are both exposed to merchant revenue risk given the nature of the payment settlements. For example, currently the NYISO is proposing a complete reform to their capacity markets, which could dramatically decrease the expected compensation of renewable energy in the capacity markets. How this proposal will interact with the NYSERDA IREC and the VDER program is currently

unclear. Thus, the various risks associated with operating revenue – both contracted and merchant – are considered when establishing the fair market value of projects.

To state it another way, although it may be appropriate to use a weighted average cost of capital (WACC) published by NREL in a model that discounts cash flows after income taxes and tax equity and debt service costs are considered, and that includes the risks listed above (which is how a market participant would value a proposed wind or solar project to assess a sale price), it is not appropriate to use this discount rate in an income capitalization or discounted cash flow (DCF) model. The DCF model does not include the factors above; is not an after-tax model; and treats capital investments and debt service differently than a model traditionally used by the industry to value a project for purposes other than real estate appraisals.

The reason that market participants use the approach to project valuation outlined above is that most electric generation assets in deregulated markets, including renewable projects, are financed at the project level. Like all project finance structures, renewable project financing includes cash equity and debt financing. Solar and wind renewable assets are also highly likely to include tax equity financing. This is why the valuation of these assets most often includes an appropriate approximation of the widely understood features of project finance: a cash equity component; a debt component; and a tax equity component. However, DTF's proposed models use earnings before interest, taxes, depreciation, and amortization (EBITDA) as the basis for future cash flows. Since the DTF proposed model does not take this approach, the discount rate used needs to be higher.

To be clear, ACE, NYSEIA, and our member companies understand that the above risks – which are absolutely material to the industry's calculation of fair market value -- are currently not contemplated by the DTF model and are, in fact, extremely complicated to model for the purposes of real property tax appraisals. We are not herein advocating to change that. However, we remain adamant that the proposed discount rates are not appropriate for this type of model. The application of NREL's suggested discount rate, which is intended to represent the industry's WACC used in corporate valuations inclusive of the above risks, is inappropriate. There is no hard evidence to be found that suggests that this is the correct discount rate to use for the purposes



of real property tax appraisals, particularly since the model that DTF has proposed is missing several material risks inherent to the calculation of fair market value.

In our previous comments, we provide the example of the State of Vermont using a discount rate of 13% for this same purpose: real estate appraisal. It is difficult to find other examples in the U.S. because the DCF is not commonly used and because tax standardization for renewable energy has not been accomplished in most states. Similarly, we do not have examples of the WACC being used in a DCF in other states either. The lack of examples of a higher discount rate being used is *not* a justification for the use of lower discount rates if there are also no examples of the use of lower discount rates.

## V. The Proposed Model Is Inconsistent with New York Executive Law § 160-d

New York Executive Law § 160-d holds that appraisals be prepared in accordance with the standards adopted by the State, which “must, at a minimum, conform to the uniform standards of professional appraisal as promulgated by the Appraisal Standards Board of the Appraisal Foundation.” The adopted standards, the Uniform Standards of Professional Appraisal Practice (USPAP) is the generally recognized ethical and performance standards for the appraisal profession in the United States. USPAP contains standards for all types of appraisal services, including real estate, personal property, business and mass appraisal. The USPAP standards are not merely useful in analyzing and critiquing both DTF models, it is respectfully submitted that models must comport to USPAP standards for the assessed valuations derived by them to be upheld by New York courts.

For example, USPAP Standards Rule 2-1(b) and Standards Rule 3-4(b) require that each written or oral appraisal or appraisal review report must contain sufficient information to enable the intended users to understand the report properly. We argue that these rules support the disclosure of the hidden information that we discuss in these comments and in our letter dated September 27, 2021.

Also notable, USPAP is designed to set the rules that will produce a market value. Under USPAP Standards Rule 1-4 (describing approaches to value),

“In developing a real property appraisal, an appraiser must collect, verify, and analyze all information necessary for credible assignment results.

(c) When an income approach is necessary for credible assignment results, an appraiser must:

- (i) analyze such comparable rental data as are available and/or the potential earnings capacity of the property to estimate the gross income potential of the property;
- (ii) analyze such comparable operating expense data as are available to estimate the operating expenses of the property;
- (iii) **analyze such comparable data as are available to estimate rates of capitalization and/or rates of discount;**
- (iv) base projections of future rent and/or income potential and expenses on reasonably clear and appropriate evidence;
- (v) weigh historical information and trends, current supply and demand factors affecting such trends, and” anticipated events such as competition from developments under construction, when developing income and expense statements and cash flow projections.”

In our opinion, DTF did not do this.

Finally, Advisory Opinion 33, *Discounted Cash Flow Analysis*, while not part of USPAP, certainly provides advice expected to be followed by DTF. Applying the Competency Rule, it notes “Discounted cash flow analysis is complex and requires specialized education and experience to achieve competency in its application. In addition, due to the complexity and the potential for misuse of technology, it also requires a high degree of care and diligence.” This provides strong justification for DTF to take additional time before finalizing the model. It is important for fairness to New York municipalities and to renewable energy developers to get this right. The Advisory Opinion also says, “Market value DCF analyses should be supported by market derived data, and

the assumptions should be both market and property specific.” The proposed DTF models apply a single discount rate for projects of a given size and technology without consideration of the riskiness of different cash flows and without adjusting projected prices for uncontracted products consistent with how market participants assess and value risks. Without updating these items, project-specific assumptions (e.g., curtailment of energy sales and host community agreement payments), and other issues discussed herein, the proposed DTF model does not meet the criteria outlined in the Advisory Opinion.

## VII. Conclusion

In closing, we would like to reiterate that the DTF model, as currently structured, produces a valuation in excess of true fair market value and is thus not a legally defensible model for the State of New York to use. By materially underestimating the discount rate and overestimating revenues, the DTF model’s outcomes exceed fair market value, in violation of the State Constitution, N.Y. Constitution Article XVI, § 2 (“Assessments shall in no case exceed full value.”) The DTF model, as proposed, will also suppress the development of renewable energy projects required to support the state’s renewable electricity mandates as established in New York’s Climate Leadership and Community Protection Act of 2019<sup>1</sup> (CLCPA), while the intent of the legislation included in the 2021-2022 Enacted State Budget<sup>2</sup> that lead to this proposal was to support efforts to meet the State’s renewable energy goals. The Memo in Support for this legislative proposal stated that DTF should develop this appraisal model to “establish a process for creating a standard methodology for the assessment of wind and solar projects that facilitates meeting New York’s aggressive carbon reduction goals.”

A standardized methodology will bring certainty to taxing jurisdictions and project developers alike and will guide and assist in the negotiation of Payment In Lieu of Taxes (PILOT) agreements. But a model that results in excessive or un-financeable property taxation will simply kill wind and solar project development in New York, particularly projects that don’t have a PILOT in place at

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<sup>1</sup> <https://legislation.nysenate.gov/pdf/bills/2019/S6599>

<sup>2</sup> <https://www.budget.ny.gov/pubs/archive/fy22/ex/artvii/revenue-memo.pdf>

this time. With this in mind, we respectfully request that DTF seriously consider these recommendations.