SOUTHCOAST WIND

September 5, 2023

Submitted via email to (to austin.dawson@mass.gov)
Massachusetts Department of Energy Resources

RE: 83C Round 4 Indexation Adjustment Comments

SouthCoast Wind Energy LLC (SouthCoast) appreciates the opportunity to comment on the 83C Round 4 Indexation Adjustment.

SouthCoast, a 50/50 joint venture between Shell New Energies US LLC and OW North America, is developing an offshore wind lease area with the potential to supply 2,400 MW of low-cost clean energy to electricity customers in New England on an accelerated schedule to meet State and Federal GHG targets. SouthCoast is committed to zero harm, innovation, industry development, and investing in our local communities.

SouthCoast strongly supports Massachusetts' commitment to maintaining an open forum for public comments from industry and community stakeholders to respectfully highlight their support and concerns with the proposed RFP.

In response to the Request for Information, SouthCoast provides the enclosed letter with the following structure:

- An executive summary with key priorities for consideration, followed by
- Support for the key priorities suggested by Southcoast, followed by
- A detailed response to each question asked in the RFI

We appreciate once again the opportunity to engage on these important topics.

Sincerely,

DocuSigned by:
Francis Slingsby
4758423DE94E469...

Francis Slingsby
CEO, SouthCoast Wind

Executive Summary

SouthCoast submits the following top priorities for consideration by DOER, with more detailed recommendations, including DOER's requested feedback, in the sections which follow

Critical Elements for Consideration:

1. **Timing is the most essential element of an indexation mechanism and deserves a re-visit:** The proposed mechanism aligns with the Regulatory Approval of the Contracts, which does not have any direct link with when the project exposure to commodity risk closes. This misalignment fundamentally undermines the effectiveness of an indexation mechanism, and could eliminate the overall value of the indexation adjustment as a tool to lower cost and risk.

2. **Interest rates and EUR/USD foreign exchange are as powerful as commodities and should be included in the indexation adjustment:** Commodities are only one of the three major buckets of external macroeconomic cost drivers. The other two cost drivers are (a) interest rates, and (b) the strength of the Dollar relative to the Euro. For early projects, developers must utilize foreign suppliers, mainly Europe-based, to deliver before the required COD date of Jan 1, 2032. These collective three global factors – commodities, interest rates, and EUR/USD foreign exchange – should all be part of the indexation adjustment. Not only would this help remove priced risk, it also positions the Commonwealth to benefit from lower realized prices if macroeconomic conditions improve (e.g. if interest rates decline, if the dollar becomes stronger, etc.) As further discussed in this letter, hedging is unfortunately not an effective solution as securing hedges early in the project's development will drive bid prices higher.

3. **The best chance to improve the imbalanced US supply chain is for states to demonstrate US market conviction with meaningful award volumes in 2023 and 2024:** Affordable clean energy requires a healthy, growing supply chain. Unfortunately, the US offshore wind industry has suffered a fits-and-starts beginning owing to permitting delays, COVID-19, the Russia/Ukraine war, and other factors which have collectively led to many cancelled, delayed, or otherwise at-risk projects. This has created a lack of confidence within the supply chain about US clean energy market durability and political conviction to procure even when it is difficult to do so.

   The solution – which is not easy, but is needed – is to provide the supply chain confidence through large award volumes, sending a clear signal and unlocking supplier investment decisions to expand capacity and provide deflationary relief.

   NYSERDA recently discussed their view that near-term and mid-term fundamentals may continue to be challenged by inflation; if the upcoming solicitations result in timid award volumes which continue to inject conviction uncertainty in US clean energy, the supply chain expansion needed to return to a balanced market for the next 10's of GW needed by the region may not ever materialize.

Collectively, these three priority items reflect what SouthCoast considers to be critical as it relates to the indexation mechanism and the questions from DOER regarding expectations for macroeconomic conditions.

1: SouthCoast Wind Recommendations for RFP

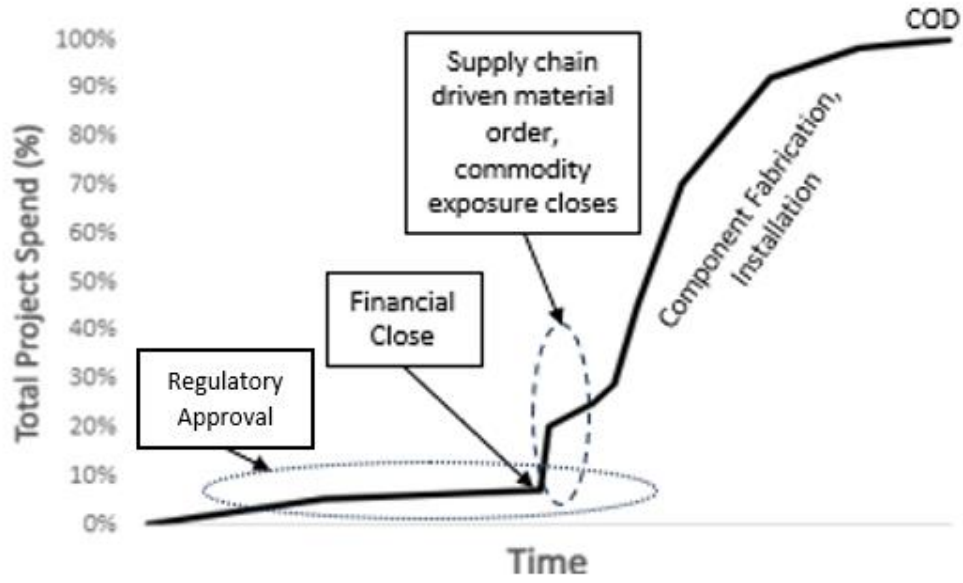
SouthCoast respectfully offers the following recommendations:

- *Move the Indexing Adjustment date to Financial Close, not one year following DPU approval*

  This is fundamental and critical to the performance of the indexation formula: in order for the formula to reduce risk, the Indexing Adjustment must take place at the same time that developer commodity exposure is fixed with their supply chain.
  SouthCoast appreciates the importance of protecting ratepayers and not creating any structure that would be "gamed", but in fact developers have very little control over when their exposure to the macro-economic environment closes and commodity-driven costs become fully locked.

  Instead, it is the supply chain that drives the timing of fixing commodities, and this is directly a function of the project COD. Suppliers lock commodity prices as they start to order materials – steel plates for monopiles, for example – and the timing of material order is driven by the time it would then take to transform these materials into offshore wind components and have them ready for installation by the project COD. Offshore Wind projects convert hundreds of thousands of tons of raw material into project components through industrial fabrication, and it would simply be impractical to begin to attempt to "time the market" by placing material orders before they are actually needed. There would not be a place to put all these plates and other materials awaiting transformation into components, and in any case, developers aim to build projects, not speculate in commodity markets.
  The below diagram is an indicative payment profile showing the build of project spend from 0% (no spend yet) to 100% (all project Capex spent) on the path to COD. The very large jump in the middle coincides with the timing of supplier material order, where many of these index-exposed costs become locked. Because of the magnitude of expense incurred at this time – hundreds of millions or billions of dollars – developers would always want to put financial close just before this time period so that bank financing can support payment.

  This is why Financial Close is the appropriate timing for Indexing Adjustment. The timing of the DPU approval is important for many reasons, but it has no direct relevance for when commodity exposure closes; DPU approval could be before, during, or after the indexation risk closes with suppliers, which is not helpful to lower risk to developers.



If the Indexation Adjustment takes place *before* developer exposure to these indices closes with their supply chain, no risk is being removed. If it closes *after*, the project may not even be financeable. It would only be luck for it to occur at the correct time when these projects costs lock.

Financial close is the right time for the Indexing Adjustment and SouthCoast would suggest making this change in the final RFP.

- *Remove the ±15% cap to allow the indexation formula to perform as intended*

  The purpose of an indexation formula is to ensure that developers can take an agnostic view of macro-economic conditions outside of their control, and instead focus on delivering a project that is technically and commercially optimized to deliver the best economic value to ratepayers.

  Putting a cap on the indexation formula works directly against this intended purpose. Developers would now need to consider their macroeconomic risk in the event of another major and unprecedented global event and price this risk into the PPA. Likewise, ratepayers would also not be able to receive the full benefit of significant improvements to the macroeconomic environment due to this cap.
  The ±15% cap has an eroding effect on the value of the indexation formula and SouthCoast would suggest that DOER consider removing it in the final RFP.

- *Bring developers into the discussion on the creation and structure of the formula*

  Developers are not currently included as a stakeholder in creating the indexation formula beyond this RFI. Developers are fully aligned with the Commonwealth in wanting a

straightforward, fair indexation formula that adds value to ratepayers and cannot be gamed. Creating a venue for developers to be at the table for discussion does not in any way undermine the independence of the DOER in achieving that outcome. Instead, it ensures that a fulsome discussion can be had and creates a space for experience to be lent, clarifications to be offered, etc. Developers should have a seat at the table to share their experiences to ensure that the goal of lowering prices for ratepayers is achieved.

2: Responses to DOER RFI Questions

1. Price Indexation
    a. *Please provide any suggestions for the Composite Set of Indices represented by the Index terms in the above equation.*
    b. *For each suggested Index, please provide a transparent, publicly available source for the Index. Please define the Index as specifically as possible. For example, if a U.S. Bureau of Labor Statistics index is suggested, provide the specific data set identifier. Provide a link to a website where the data are published, if applicable.*
    c. *For each suggested Index, please provide a value for Fi. Please also provide a suggested value for* F_o

SouthCoast suggests a formula of the following basic structure to cover (i) commodities, (ii), currency, and (iii) interest rates/cost of financing:

$$PPA_{adj} = PPA_{bid} \times (F_{Commodity}) \times F_{Currency} + F_{Interest\ Rates}$$

SouthCoast would specifically suggest the following formula and weighting, with the "TBD" component associated with interest rates to be provided confidentially by developers in their proposal given the commercially sensitive nature of project finance:

$$PPA_{adj} = PPA_{bid} \times \left[0.70 \times \frac{Index_{M,CPI}}{Index_{I,CPI}} + 0.10 \times \frac{Index_{M,Steel}}{Index_{I,Steel}} + 0.08 \times \frac{Index_{M,Fuel}}{Index_{I,Fuel}} + 0.05 \times \frac{Index_{M,Labor}}{Index_{I,Labor}} + 0.05 \times \frac{Index_{M,PPI}}{Index_{I,PPI}} + 0.02 \times \frac{Index_{M,Cu}}{Index_{I,Cu}}\right] \times \left[0.6 + 0.4 \times \frac{Index_{M,EUR/USD}}{Index_{I,EUR/USD}}\right] + TBD \times \left(SOFR_f - SOFR_o\right)$$

Commodity		Proposed F_i	Proposed Index
	CPI	70%	Consumer Price Index for All Urban Consumers: All Items in U.S. City Average (CPIAUCSL)Consumer Price Index for All Urban Consumers: All Items in U.S. City Average (CPIAUCSL) | FRED | St. Louis Fed (stlouisfed.org)
	Steel	10%	BLS PPI Data Series PCU331110331110 PPI industry data for Iron and steel mills and ferroalloy manufacturing, not seasonally adjusted

	Fuel	8%	U.S. Energy Information Administration, Petroleum & Other Liquids Data https://www.eia.gov/dnav/pet/PET_PRI_SPT_S1_D.htm
	Labor	5%	BLS Employment Cost Trends Data Series CES2000000003 Average hourly earnings of all employees, construction, seasonally adjusted
	PPI Machinery	5%	BLS PPI Data Series PCU811310811310 PPI industry data for Commercial machinery repair and maintenance, not seasonally adjusted
	Copper	2%	COMEX, spot price on last trading day of month for prompt month https://comexlive.org/copper/
Currency			
	Fixed USD	60%	N/A
	EUR	40%	
Interest Rates			
	Interest Rates	TBD – Developer Specific, submitted confidentially in developer proposals.	

2. Index setting
    a. *What is an appropriate way to set $Index_I$ and $Index_M$, the values of the Indices at the time of bid and at the milestone date, respectively? For example, should the values be a single value or calculated as an average over several months? Please explain the reason for your suggestion.*

The initial value should be calculated based on a two-month index average from Sep – Oct 2023, coincident with release of the RFP. This will prevent temporary market disruptions from artificially affecting the PPA price. The final price should be calculated using the index values from the month preceding the adjustment date. For example, assuming the indexation adjustment date occurs on Jan 1, 2026, the index values used in the adjustment should be the average for Dec 2025.

Further consideration or flexibility should be provided to account for market disruptions. As an example of such an event, refer to the London Metals Exchange Nickel trading in March 2022. A market disruption caused a temporary price spike resolved through retroactive price adjustments. See the notice below for more information:

https://www.lme.com/api/sitecore/MemberNoticesSearchApi/Download?id=7f00b96e-136a-4896-9a43-f57e671dffea

An effective indexation mechanism will be designed to use an average price and provide flexibility to account for similar market disruptions in the future.

3. Hedging
    a. *Are there any components of the project cost that can reasonably be hedged through instruments such as options or futures contracts and do not need to be included in an Indexing Adjustment?*

The fundamental issue with hedging costs is Value and Timing. The longer term and the greater the value a hedge protects, the more expensive it will be. Hedges are secured through fees paid when the price is

locked in. Hedging before Financial Close will inherently add hundreds of millions of dollars of costs to be priced into developers' bids.

A hedge is like any other insurance product; the longer the period one secures coverage, the higher the cost. To secure a hedge, a developer must define three elements: the length of time for which the developer wishes to secure the value/when to receive the hedged funds, the overall value of the commodity being hedged, and the specific currency or commodity.

Value and Timing Problem: To secure a hedge for a commodity, the developer pays a fee based on a percent of the initial value. For example, securing a fixed exchange rate for EUR/USD for 12 months on $100 of value may have a 3% fee when the hedge is secured. This rate will quickly rise for longer-term contracts; for example, a 24-month hedge may have a rate of 3.5% or 4% vs. the 3% required for the shorter term.

This may not seem material, but if 60% of the project value is in a foreign currency needing hedging, then this can lead to meaningful cost increases. From bid submission until Financial Close, most of the project's costs are still floating and subject to indexation. Therefore, a project would likely have to secure hedges for billions of dollars of value with fees in the hundreds of millions of dollars. Once a project achieves Financial Close, many of the indexation mechanisms in supplier contracts are closed as suppliers now have the certainty to proceed with ordering materials and Tier 2 supplies.

Securing hedges at bid submission or award would be speculative and significantly more expensive than indexation, recalling again that hedges are an insurance product against an uncertain future. An indexation formula has a similar effect, but is bi-directional, has no direct costs to the project, and is overall neutral to either party if well designed.

A developer could secure hedges at Regulatory Approval of the PPAs, Federal Approval of Permits, or some other time before Financial Close if awarded a PPA. Unfortunately, this strategy is undermined by the value and timing problem. For example, if a developer won a PPA and saw in mid-2024 that EUR/USD exchange as being 1.14 in spot and wanted to take a hedge, they should expect to pay multiple hundreds of millions of dollars and achieve an all-in realized exchange rate which is much less favorable, perhaps closer to 1.21. Net-net, these actions would have increased project costs 5% or more, and still they have not fully closed risk because the other side of taking out the hedge is taking receipt of the hedged currency on the specific future date agreed in the hedging contract (12 months out, 24 months out, *etc.*). Importantly, that negotiated date of need may change if, for example, financial close is delayed for any reason (regulatory delay, *etc.*). Now developers would have taken a hedge for the wrong date, and again have more risk.

For all of these reasons, the very best time for the indexation formula to adjust the PPA price is financial close. At financial close, developers can close contracts with their suppliers, hedge currencies as needed, *etc.* without the timing risk.

4. *Will a PPA with an Indexing Adjustment be sufficient to support executing binding agreements with primary OEMs, and ultimately project financing? Are there similar indexing adjustments in contracts with suppliers, and if so what are the primary components or commodities?*

The indexes and weights in response to Question 1 reflect an internal analysis of supplier offers and cost risk exposure, including through the operational period which is often not discussed but is very important for multi-decade projects.

For some binding offers and contracts, in particular ones where the commodity cost dominates, the only fixed portion of the cost is the "conversion cost," which is the fabrication cost for the manufacturer to convert the raw products into the finished good. The more significant commodity cost will fluctuate until the developer achieves Financial Close and provides the supplier Notice to Proceed when the supplier can order the raw materials. This is particularly important for components such as Foundations, Wind Turbine Towers and Cables, where the commodity cost is most of the final product cost. Suppliers could not provide offers without these indexation mechanisms because a small fluctuation in the commodity cost can significantly change the final product price. If a cable manufacturer did not provide offers in this format, their business would be more akin to copper price speculation than manufacturing. This is not the business they want to be in, just as commodity speculation is also not the business developers want to be in.

A PPA Indexing Adjustment mechanism is not required to execute binding agreements with suppliers and project financing. Early projects like Vineyard Wind I have proceeded through financing and to construction without PPA adjustments, as financing was complete prior to the recent spike in inflation. Later projects could not achieve Financial Close before the pandemic and war in Ukraine and were exposed to global inflation and reduced supplier capacity.

Under the 83C4 rules, developers must submit fixed-price bids, and the Indexed Alternative Price is only offered as an optional price. In preparing proposals for the 83C4 Solicitations, developers will evaluate the final Indexation Mechanism. If the Indexation Mechanism allows developers to submit a more competitive offer by effectively mitigating risk, developers will submit offers leveraging this mechanism. Unfortunately, if the mechanism is narrowly designed to accommodate only commodities, not currency and interest rate risk, it may not result in lower prices.

5. *Please comment on your expectations for near-term and long-term costs for primary offshore wind components and supplies, for general inflation, and for interest rates. Describe the impact on your proposal pricing.*

Offshore wind in the US is at a very critical moment.

On the one hand, the supply chain is very strained and costs across the board are significantly higher than in previous years. It is very reasonable to consider if perhaps these effects may dampen in the near-term, encouraging a more modest 'wait-and-see' award today.

However, on the other hand, the supply chain has seen a US market suffering through permitting delays, cancelled projects, and a general note of uncertainty. This has created significant angst in the supply chain, who are questioning if the US market will materialize to its potential and support a thriving industry.

If the US continues to show uncertainty, the supply chain will not come to provide deflationary relief. Therefore, while difficult, the only solution that will actually bring stability and a more balanced supply/demand dynamic is a meaningful award in the upcoming solicitations. Southcoast is providing this comment as a reflection of the direct discussions held with top management and nearly every global supply chain partner serving the industry.

While it is a difficult position, NYSERDA shared their perspective in a recently published letter to the New York Public Service Commission with the following statement:

> "While it is impossible to predict future bid prices accurately, NYSERDA can confirm that median bid prices from proposals received in 22T1 and NY3 are significantly higher than in prior solicitations. And given the analysis that predicts higher bid prices being maintained in the near and medium term, and the low likelihood for deflationary market dynamics to lead to cheaper bid prices in that timeframe, it is reasonable to assume that the higher pricing levels observed in the latest solicitations represent the best available estimate of general pricing trends in future bids."[1]

Many factors, including global geopolitical events, drive costs specific to offshore wind. In particular, the war in Ukraine has caused many countries to seek energy security and independence by expediting renewable energy projects, including offshore wind. TenneT, a European grid operator, is seeking at least ten high-capacity transmission systems for renewable energy. In TenneT's press release, they specifically cited the War in Ukraine as the motivation for the speed and scale of this procurement. These global forces further drive demand for input goods and services and quickly consume the limited manufacturing capacity that can supply the offshore wind and electrical transmission industries.

While the past year has seen the moderation of some indices like the Consumer Price Index, these indices are made of a basket of goods designed to reflect consumers' broad purchases. Price spikes have continued for some individual goods while overall prices have moderated. Offshore wind is uniquely exposed to a few specific goods and services with long lead times for procurement and limited existing capacity. Challenges include the availability of vessels and fabrication facilities with expertise in building large-capacity offshore transmission stations. Bringing further capacity online for these specialized supply chains requires enormous investment and time for permitting, construction, and workforce training. Capacity still exists within supply chains to bring new projects online, but only if the US market provides unequivocal confirmation that there is conviction here to buy clean energy.

6. *Please comment on whether the Indexing Adjustment should include interest rates or other indicators of changes in the cost of capital and if so, what are appropriate interest rate or cost of borrowing indices (e.g., Secured Overnight Financing Rate or 10 or 20-year Treasury Bills). For any potential interest index, please specify what are appropriate spreads to reflect financing costs for offshore wind projects. To the extent the Indexing Adjustment should include interest rates, please describe what type of mechanism (e.g. formula, adder, multiplier, etc.) you would recommend for incorporating a change in interest rates into the Indexing Adjustment. Please be as specific as possible.*

The inclusion of interest rates is essential to creating an effective formula. Regardless of how developers finance offshore wind projects, all developers will be exposed to movements in interest rates. Therefore, an effective adjustment mechanism must include interest rates.

Offshore wind projects are capital intensive, and developers may use various tools, including non-recourse project finance or leveraging their parent company's balance sheet. Each structure is still exposed to interest rates but with different levels of sensitivity. Therefore, the mechanism to adjust interest rates

[1] NYSERDA Comments filed 8/28/2023, NY PSC Case 18-E-0071 https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=18-E-0071&CaseSearch=Search

should allow for a confidentially provided developer-specific factor determined by their financing which would allow the project economics to be neutral to changes in rates. The existing bid document requires a detailed description of the financing plan, which allows the Evaluation Committee to verify the validity of the developer's proposed weighting.

The adjustment mechanism should use the 10 year Secured Overnight Financing Rate (SOFR) and take the form of an adder, as seen below.

$$PPA_{adder} = W_{dev}(SOFR_f - SOFR_o)$$

Term	Description
$\boldsymbol{PPA_{adder}}$	Change in PPA Price
$\boldsymbol{W_{dev}}$	Developer specific weighting
$\boldsymbol{SOFR_f}$	SOFR rate at adjustment date
$\boldsymbol{SOFR_o}$	SOFR rate at original date

7. *Please comment on any recommendations for additional features or alternatives to the Indexing Adjustment Mechanism. If you recommend a formula that is different from Question 1, please explain in detail the reason for a different formula.*

The structure of the formula provided in response to Question 1 is shown below:

$$PPA_{adj} = PPA_{bid} \times (F_{Commodity}) \times F_{Currency} + F_{Interest\ Rates}$$

This format is consistent with the proposed DOER structure but recognizes that the commodity and currency adjustments should be independent factors. Additionally, the PPA adjustment for interest rates is structured as an adder instead of a multiplier, as described in response to question 6.