



December 2, 2022

Dear members of the Executive Climate Change Coordinating Council (EC4):

The Commercial Fisheries Center of Rhode Island (CFCRI) submits these comments on the *Draft 2022 Update to the 2016 Greenhouse Gas Emissions Reduction Plan* on behalf of members of Rhode Island's commercial fishing industry. Rhode Island's commercial fishing sector represents 5,580 local jobs, including captains, crew, owners, owner-operators, netmakers, bait stringers, seafood dealers, seafood processing and delivery staff, engine mechanics, fuel and marine suppliers, trade associations, and more. The industry collectively yields \$377,124,000 in annual sales (not including sales of imported seafood) and forms the backbone of Rhode Island's coastal heritage. Our members share a deep pride in providing nutritious wild-caught seafood to our communities, our nation, and the globe, while working within the inherent natural limits of ocean and coastal ecosystems.

The decarbonization of Rhode Island's economy and the resilience of Rhode Island's fisheries should be complementary – not competing – objectives. The CFCRI supports robust action to address the root causes of climate change, but climate planners must recognize -- and do what they can to minimize -- the potential impacts that *some* climate solutions can have on fishery ecosystems and the food production activities that already occur in and depend on these places. Just as members of the conservation community are working to ensure that large-scale solar photovoltaic (PV) development does not diminish the capacity of the Rhode Island landscape to sequester carbon dioxide and provide food and conservation benefits to people and wildlife, it is vital to ensure that climate action in the Ocean State not only achieves net-zero GHG emissions by the year 2050, but does so in a way that supports and sustains fishery ecosystems, economies, and communities.

The CFCRI is a founding member of the Fishery Friendly Climate Action campaign,¹ a bicoastal initiative that provides commercial fishermen, fisheries associations, and seafood businesses with tools, networking, access, and knowledge to advocate for robust climate solutions that work *for* U.S. fisheries and not at their expense. The Fishery Friendly Climate Action campaign leverages the collective voices of fishing industry members to call on policy makers to preferentially support climate solutions that:

- Reduce, sequester, or avoid greenhouse gas (GHG) emissions;
- Avoid collateral impacts on the physical, chemical, and ecological properties and processes of ocean, coastal, estuarine, and watershed environments;
- Avoid interference with the harvest and provision of wild seafood;
- Wherever possible, contribute conservation co-benefits that enhance the resilience of ocean, coastal, estuarine, and watershed ecosystems;

¹ More information can be found at www.fisheryfriendlyclimateaction.org

- Help the fishing industry address its own carbon footprint by supporting transition to low-carbon fishing vessels; and
- Contribute to putting the U.S. on track to reduce its share of GHG emissions to a level that will hold warming well below 2°C while pursuing efforts to limit warming to 1.5°C.

Like many ecosystems and resource-dependent communities, fish and fishermen worldwide are significantly affected by the accelerating impacts of climate change. In Rhode Island, we are experiencing changes in catch composition, yields, timing of harvests, and additional uncertainty affecting the science and management system that governs and sustains fisheries. In keeping with a commitment to equity, it is imperative to ensure that ocean ecosystems and fishing communities do not also bear a disproportionate burden of the negative impacts resulting from climate solutions, particularly from the industrialization of nearshore waters for renewable energy production. By absorbing 30% of anthropogenic greenhouse gas (GHG) emissions, the ocean is already doing more than its share to combat climate change, in the process straining many of its fragile ecosystems to the breaking point. The work of addressing the climate crisis must enhance -- not further burden or jeopardize -- the absorptive capacity and resilience of ocean ecosystems and those who depend on them.

Therefore, in this letter, we call on the EC4 to prioritize fishery friendly climate actions (as defined above) that avoid zero-sum tradeoffs, promote win-win solutions, and mitigate the root causes of climate change *without* further taxing the resilience of ocean ecosystems and their dependent human communities.

The EC4's *Draft 2022 Update to the Rhode Island Greenhouse Gas Emissions Reduction Plan* states that it will identify priority short-term actions needed to put the state on track to reduce GHG emissions by 45% by 2030, while simultaneously laying the groundwork for development of the *2025 Climate Strategy*, which will incrementally reduce climate emissions to net-zero by 2050. The priorities we outline in this letter are pertinent to both plans, and we look forward to further developing these priorities through robust stakeholder participation in development of the *2025 Climate Strategy*.

Why an emphasis on fishery friendly climate action belongs in the *2022 Update*

Rhode Island's 2021 "Act on Climate" Act requires the EC4 to update the *Rhode Island Greenhouse Gas Emissions Reduction Plan* every five years. Each update, the Act states, "shall ... include a process where the interests of and people from populations most vulnerable to the effects of climate change and at risk of pollution, displacement, energy burden, and cost influence such plan." As a population that is highly vulnerable both to the effects of climate change *and* to displacement and loss of income from the impacts of some climate solutions, fishermen are a critical constituency that has much to offer to the update process.

A consideration of the impacts of climate action to fisheries fits with the EC4's *Draft 2022 Update*'s conceptualization of a "non-quantitative metric." The *Draft 2022 Update* states that "[W]e cannot lose sight of the importance of non-quantitative metrics and lived experience... [W]e should... lift up voices from communities across Rhode Island to share their experiences and trust their expertise on priority actions and success (or failure) of our climate strategies." The

notion of a non-quantitative metric offers a framework in which to consider the impacts of climate solutions on fishery resources, jobs, businesses, and communities, as well as their collective contribution to the economy, culture, and food security in the Ocean State.

Request for an analysis to illuminate opportunities for fishery friendly decarbonization pathways

Decarbonizing the Rhode Island economy will require major expansion of space-intensive renewable energies, and it is critical to balance these needs with maintaining the integrity of natural spaces and existing activities that occur there. The *Solar Siting Opportunities* (2020) analysis commissioned by the RI Office of Energy Resources and conducted by Synapse Energy Economics exemplifies an effective response to including non-quantitative considerations in climate action planning. By evaluating solar PV energy generation potential on rooftops, landfills, gravel pits, brownfields, parking lots, and commercial and industrial lots, it considers the potential for broad deployment of solar PV technologies when constrained by the simultaneous need to sustain other land uses such as conservation, agriculture, and recreation.

As a companion to the Synapse study, we recommend the development of a “fishery friendly” decarbonization pathway analysis as part of the EC4’s activities in preparation for developing the *2025 Climate Strategy*. This analysis would commence by recruiting a team of experts with expertise in fisheries habitat science, ocean and water resources, land use, climate, and energy, to assess and rank the applicable set of climate solutions that have significant deployment potential in Rhode Island, in terms of their potential impacts to fisheries (negative, positive, and neutral). Following this analysis, an exercise similar to the Synapse study would be undertaken to evaluate the GHG reduction potential that could be achieved by maximizing and front-loading the most fishery friendly combination of climate solutions possible.

Such an exercise would not obligate decision makers to adhere to such a roadmap, but rather would inform the development of the *2025 Climate Strategy* by clarifying trade-offs between fisheries resilience and the deployment at various scales of a range of decarbonization solutions, while illuminating strategies to avoid and resolve tradeoffs between these competing objectives wherever possible. The Rhode Island-based consulting firm Shining Sea Fisheries Consulting is prepared to help assemble and advise a team of experts conducting such an analysis, if funding is secured.

Applying a fishery friendly lens to electricity, heating, and transportation in Rhode Island

The *Draft 2022 Update* notes that electric sector emissions can be reduced via two mechanisms: reducing electricity consumption and producing electricity with renewable energy. It also notes that the anticipated electrification of major components of Rhode Island’s heat and transportation sectors will greatly increase the amount of electricity required within the state. Through its finalized power purchase agreements with the existing 30-MW Block Island Wind Farm and the planned 400-MW Revolution Wind offshore project,² and through the recent announcement of a

² The draft 2022 Update incorrectly states that Rhode Island has a total of 1,017 MW in clean generation capacity, including 400 MW represented by the Revolution Wind project. In actuality, the Revolution Wind project is not

new solicitation for up to 1,000 MW of offshore wind in accordance with the Affordable Clean Energy Security Act of 2022, Rhode Island has pursued offshore wind as a core part of its strategy for reducing the GHG emissions associated with electricity production.

Unfortunately, any large-scale energy production taking place in the ocean – whether renewable or fossil fuel-based -- is likely to have impacts on ocean ecosystems, and may negatively affect fishing through displacement of fishing activity, disruptions to scientific fish survey methodologies, and increases in safety risk, investment risk, and costs of doing business for fishing operations. In the case of offshore wind development, specific impacts of concern to fishery resources and ocean ecosystems include: noise, vibration, and turbidity during construction and cable laying; reduction in kinetic energy via wake effects of turbines (which can induce changes in stratification, temperature, cloudiness, and primary productivity); impacts of electromagnetic fields on migratory behavior; etc. While the precise nature and magnitude of impacts resulting from offshore renewable energy development cannot be known in advance and will depend on the siting and density of development, it goes without saying that the greater the scale of development, the greater the magnitude of cumulative impacts will be.

Given the potential for significant ocean ecological impacts to occur, expanded efforts are needed to understand the impacts of offshore renewable energy development at a variety of scales and to develop holistic and adaptive governance schemes capable of balancing competing objectives, addressing cumulative impacts, and setting upper bounds for the level of impacts that will be considered tolerable. For more information on the elements that an appropriate governance scheme for offshore renewable energy development should include, we refer you to the Responsible Offshore Development Alliance’s “Goals for Collaboration.”³

In the meantime, we encourage policy makers to dramatically accelerate the deployment of no-regrets emissions reductions strategies, by:

- a) Maximizing deployment of energy efficiency technologies and energy conservation practices;
- b) Preferentially encouraging energy development in the built environment (e.g., rooftops, buildings, industrial and commercial lands, parking lots, and highways), brownfields, landfills, and working lands; and
- c) Encouraging deployment of energy storage and time-variant pricing in order to smooth the electricity demand curve and avoid redundant generation.

Together, these actions can help alleviate pressure on ocean environments by reducing both the speed and scale of offshore energy development to levels that are more appropriate given current knowledge and governance gaps, and more in keeping with the precautionary principle of environmental governance. We will expand upon these points below.

The *Draft 2022 Update* celebrates the success that Rhode Island’s energy efficiency programs have achieved at transforming the lighting market, but observes that a sustainable funding and/or financing solution is needed for heating oil and propane customers to enjoy full and equal access to energy efficiency programs. The *Draft 2022 Update* also states that in 2021, the General

expected to come online until 2025. The only offshore wind generation currently supplying electricity to Rhode Island is the 30 MW Deepwater Wind project off Block Island.

³ More information can be found at <https://rodafisheries.org/offshore-wind/>

Assembly extended the statutory obligation to offer energy efficiency through 2029. Energy efficiency represents an immediate, no-regrets solution that not only reduces GHG emissions, but saves ratepayers money. With electricity and heating fuel prices at all time high levels, the benefits of investing in efficiency have never been clearer.

According to the *Draft 2022 Update* and the *Solar Siting Opportunities (2020)* analysis conducted by Synapse Energy Economics, solar energy on disturbed lands (e.g., rooftops, landfills, gravel pits, brownfields, parking lots, and commercial and industrial lots) has the potential to displace 70% of Rhode Island’s current greenhouse gas emissions. Because solar PV in these locations is friendly to fisheries and other wildlife and can achieve significant near-term greenhouse gas reductions while supporting local jobs and helping property owners save/make money, we encourage the EC4 to identify, and where possible implement, steps that would encourage full utilization of Rhode Island’s distributed solar energy potential on disturbed lands within the next decade.

With regard to heating, we urge the EC4 to refrain from prematurely “locking in” electrification as a sole decarbonization solution, and to continue to promote energy efficiency through building envelope upgrades and evaluate the potential for other zero-emissions and carbon-neutral heating fuels, such as biofuels and renewable natural gas. This recommendation is in keeping with The Brattle Group’s 2020 report, *Heating Sector Transformation in Rhode Island: Pathways to Decarbonization by 2050*, which notes, “[T]here is no winning approach... This implies that, for policy to support Rhode Island’s heating sector transformation, the next 10 years should not focus on advancing a single or limited set of solutions.”

Similar observations apply with regard to transportation. The increasing availability of electric vehicles (EVs) and EV charging infrastructure is a positive step, but this should not detract from investments in other forms of low- or zero-carbon transportation. Given not only the massive scale-up of space-intensive renewable energy that would be required to fully replace all private internal combustion with EVs, but also the high embedded carbon and critical mineral demand represented in EV batteries, it is vital to increase investment in and promotion of public transit, walking, and biking as methods of transportation.

Therefore, we highlight the importance of the *2016 Update*’s mention (repeated in the *Draft 2022 Update*) of undertaking practices to encourage the reduction of vehicle miles traveled, including increasing transit and mode share ridership targets, integrating transportation and land use planning, using price signals to discourage solo driving, and investing in alternative modes of mobility. As noted in the *Draft 2022 Update*, “there has been no concerted action to expressly reduce vehicle miles traveled.” This is a lamentable gap and one that we urge the EC4 to call out more forcefully in its *Draft 2022 Update* and the *2025 Climate Plan*.

Rhode Island’s small size makes the state an ideal place for interconnected networks of commuter rail, bus transit, ride sharing, and complete streets initiatives. Although these modes of transportation are not practical for everyone in the state all of the time, they represent for many others a more affordable, convenient, and enjoyable way to get around than solo driving. Moreover, they can help reduce the amount of additional electricity generation that will be needed to meet demands of widespread EV usage. Thus, as with heating, it is important not to

“lock in” electrification as a sole decarbonization strategy, but to recognize that all technologies have costs and impacts, and a diverse portfolio can often help balance the pros and cons associated with a suite of imperfect solutions.

With regard to energy storage, we concur with the Brattle Group’s recommendation in its report, *The Road to 100% Renewable Electricity by 2030 in Rhode Island*, which recommends building out a strategic role for energy storage in the regional electric grid. The *Draft 2022 Update* observes that this work has not yet begun. Having adequate storage capacity is not only key to addressing the challenge of wind and solar intermittency, but to avoiding redundancy in electricity generation infrastructure. Given the impacts of renewable energy sprawl on marine and forested ecosystems, it is vital to minimize the footprint of renewable energy generation by investing in greater storage capacity in the state.

Applying a fishery friendly lens to land use and carbon sequestration

The *Draft 2022 Update* notes that Land Use, Land Use Change, and Forestry (LULUCF) should be a key element of Rhode Island’s progress towards net-zero greenhouse gas emissions by 2050. In contrast to industrial renewable energy development, where there are often *trade-offs* between emissions reductions and natural resources such as forests and fisheries, climate solutions in the LULUCF category instead offer a plethora of potential *win-wins* for the climate and natural resources. This is because forest conservation, reforestation, and farmland soil conservation practices not only sequester and store carbon dioxide in lands and long-lived vegetation, but also protect wildlife habitat, reduce runoff of fertilizers, pesticides, and sediments, and improve stream habitat and water quality.

In a recent presentation to the EC4, Julianne Stelmaszyk, Director of Food Strategy for the Rhode Island Commerce Corporation, stated that Rhode Island could reduce 1,800 to 4,200 tonnes CO₂e per year by adopting conservation practices on existing croplands. By Stelmaszyk’s estimation, this would equate to planting 30,000 - 70,000 new trees for a decade. Her presentation further noted the multiple co-benefits that can occur as a result of soil conservation, including an improvement in long-term agricultural productivity and food security, mitigation of GHG emissions, and an improvement in water quality. We recommend ensuring that Rhode Island fully leverages existing state soil conservation programs and programs, including expanded funding made available under the federal Inflation Reduction Act of 2022 (e.g., Section 21001, “Additional Agricultural Conservation Investments,” and Section 21002, “Conservation Technical Assistance”).

As noted in the *Draft 2022 Update*, “[f]orests provide invaluable ecosystem services like carbon sequestration and storage that are essential to meeting the state's climate change goals.” Rhode Island’s 2021 Forest Conservation Act finds that “[f]orest land should be maintained to meet Rhode Island’s aggressive climate change goals through carbon sequestration and storage... Moreover, forest conservation is necessary to protect and maintain water quality and important wildlife habitat.” The Forest Conservation Act also recognizes that forest land is being converted to other uses in the state. We support the Forest Conservation Act’s steps to protect remaining forestland in Rhode Island, as well as the *2016 Update*’s recommendation of a ‘no net-loss of forests’ policy. In addition, we urge the members of the Forest Conservation Commission to

consider benefits to fisheries when developing the criteria necessary for defining the most important forest land under Section 2-27-5 of the Forest Conservation Act.

With regard to land use more broadly, the *Draft 2022 Update* notes that Rhode Island does not currently account for emissions from LULUCF. We support the draft Update's recommendation to develop a new method for estimating the impacts of LULUCF yearly to assess compliance with the 2021 Act on Climate act.

Lastly, we suggest that the EC4 recommend an inventory of opportunities to enhance coastal blue carbon sequestration in Rhode Island. Wherever possible, such an inventory should recognize the value of these habitats to fisheries and should proactively seek to provide co-benefits to fishery resources and ecosystems. Coastal and underwater vascular vegetation, such as salt marshes and sea grasses, is known to sequester a large amount of carbon. The habitats created by these plants also provide valuable ecosystem services to humans and fishery ecosystems, including water filtration, shoreline stabilization, storm protection, and refuge habitat for fish and invertebrates. Yet these vegetated coastal ecosystems have been lost at alarming rates due to residential and commercial development, energy development, aquaculture, and other stressors. Rhode Island has lost 53% of its salt marsh acreage since 1832.⁴ This loss has had profound impacts on fishery ecosystems and seafood yields. Tragically, the Coastal Resources Management Council (CRMC) estimates that Rhode Island is poised to lose 13% of its marshes with one foot of sea level rise; 52% of marshes with three feet of sea level rise; and a staggering 87% of its marshes with five feet of sea level rise.⁵

Protection and natural restoration of coastal blue carbon is a win-win for fisheries and the climate, and should be at the top of the list of carbon removal strategies in Rhode Island's *2025 Climate Plan*. Commercial fishermen and small-scale mariculture growers represent ideal partners in this work.

Addressing GHG emissions within the food and fishing industry

Food systems are responsible for about a third of global greenhouse gas emissions.⁶ We concur with Julianne Stelmaszyk's presentation to the EC4, which asked the EC4 to include a food systems perspective in the EC4's work and to include food systems in state climate plans.

Because wild seafood and farmed shellfish generally have a low carbon footprint relative to land-based protein and farmed finfish,⁷ sustaining the harvest of this seafood represents an important societal objective. Unfortunately, as outlined in several instances above, sustainable yields of low-carbon seafood may be threatened not only by climate change but by some of the solutions proposed to combat it (e.g., ocean-based renewable energy). It is important to acknowledge these

⁴ Bromberg, K.D. and M.D. Bertness. 2005. Reconstructing New England salt marsh losses using historical maps. *Estuaries* 28: 823–832.

⁵ RI Coastal Resources Management Council. "In focus: the future of RI's salt marshes." http://www.crmc.ri.gov/news/2018_0628_saltmarshes.html

⁶ Crippa, M., et al. 2021. Food systems are responsible for a third of global anthropogenic GHG emissions. *Nat Food* 2: 198–209. doi.org/10.1038/s43016-021-00225-9

⁷ Hilborn, R. et al. 2018. The environmental cost of animal source foods. *Front Ecol Environ* 16(6): 329–335. doi:[10.1002/fee.1822](https://doi.org/10.1002/fee.1822)

tradeoffs and consider approaches to boost the resilience of the fisheries system as it contends with both the impacts of climate change and ocean-based climate solutions.

Additionally, despite its low relative carbon footprint, the seafood sector should begin to design pathways for decarbonization within our own fleets of vessels, as well as in shoreside buildings and vehicle fleets. To support practical, cost-effective, and voluntary emissions reductions within the fishing industry itself, we recommend the establishment of new and diverse dedicated funding streams to support bottom-up planning and innovation. At present, availability of financing for capital upgrades in fisheries tends to be scarce. Funding streams for energy efficiency and alternative fuels can fill a niche gap and increase industry resilience through upgrades that not only reduce vessel emissions but also achieve cost savings, safety improvements, and fleet modernization.

Because of variations in fishing activity patterns, vessel size and configuration, and local cultural, economic and regulatory conditions, there is no “one size fits all” emissions reduction solution that will work for the entire fishing fleet. Some technologies may require infrastructure investments on the waterfront (e.g., electric charging stations) or development of new supply chains and distribution networks (e.g., inventory and delivery of biofuels, ammonia, or hydrogen) in order to be feasible. In some cases, energy efficiency may be more effective and affordable than upgrading engines or switching to alternative fuels. Solutions must be designed and led by those who best understand the unique needs of this sector: fishing vessel owners and operators themselves.

Rhode Island’s Agricultural Energy Grant Program, funded through the Regional Greenhouse Gas Initiative (RGGI) and administered through a partnership between the Rhode Island Department of Environmental Management and Office of Energy Resources, highlights the value of directly engaging food producers in deploying eligible energy efficiency and renewable energy projects. This funding helps local farmers “green” their operations and benefit from the related energy and cost savings through energy efficiency projects and by transitioning to renewable power. Programs like this should be established or extended to the fishing industry.

Finally, as members of Rhode Island’s food production system, we support the collection and diversion of food waste from the Central Landfill. As the *Draft 2022 Update* states, reducing organics in the Central Landfill not only extends the life of the landfill but can also contribute to reducing methane emissions. Entrepreneurial food scrap collection programs like Harvest Cycle, the Compost Plant, and Earth Care Farm, as well as DIY backyard composting, are a valuable step in the right direction, as is Rhode Island’s 2016 Food Waste Ban. However, given the obvious climate and co-benefits associated with diversion of organic waste from the landfill, it seems appropriate to identify additional policy measures and incentives that could be undertaken at the state and municipal levels to minimize the presence of food scraps in the landfill-bound waste stream.

Supporting the capacity of the commercial fishing community to engage climate planning

The *Draft 2022 Update* notes the importance of a robust stakeholder engagement process to inform climate planning in Rhode Island. Until now, the Rhode Island fishing community has not

been sufficiently engaged in climate and energy planning processes, such as those led by the EC4. Moving forward, we intend to seek funding to support knowledge transfer, communications tools, and capacity expansion so that the fishing industry can contribute more productively to state, local, regional, and federal climate and energy planning processes. We request the support of the EC4 in helping the fishing industry become an informed and constructive partner.

Sincerely,

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