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Commonwealth of Massachusetts

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## **Introduction**

Good morning, Mr. Chairman, Madam Chairwoman and Members of the Subcommittees. My name is Ian Bowles and I am Secretary of the Executive Office of Energy and Environmental Affairs for the Commonwealth of Massachusetts. In creating the first state cabinet-level office in the nation that oversees both energy and environmental agencies, Governor Patrick recognized, as you have, that these areas of responsibility present challenges and opportunities that are inseparable and must be addressed together. Thank you for holding this important hearing and for inviting me to testify on energy development in the Outer Continental Shelf.

Coastal and ocean areas represent an important source of energy for the U.S., ranging from oil and gas to renewable energy from tide, wave and wind. However, energy is but one product of the ocean's bounty, and its use as a resource must be balanced by a commitment to protection of living marine resources, seafloor habitats, traditional uses such as fishing and navigation, and coastal communities. Our oceans are held in public trust for all citizens, and must be managed in a way that is consistent with the long-term preservation of these resources.

In Massachusetts, the Oceans Act passed by the state Legislature and signed by Governor Patrick last year directed my office to develop a comprehensive management plan for our state waters that will be the first such plan in the nation. We are now creating an ocean management framework that will allow us to responsibly develop our marine renewable resources, and wind in particular, in the context of strong environmental protection and respect for the many interests that share our coastal waters. Based on the work we've done thus far, I believe the following elements are critical to an effective, progressive national energy policy: 1) elevate the energy policy priority of offshore wind as a component of a diverse national energy portfolio; 2) coordinate and focus federal agency support for ocean management based on effective partnerships between state and federal agencies; 3) ensure a strong supportive role for the National Oceanic and Atmospheric Administration and enhance the existing federal-state partnership in a reauthorized Coastal Zone Management Act; and 4) establish an Ocean and Coastal Trust Fund to support coastal states' efforts to address the critical ocean and coastal management needs of our nation. **Offshore energy, old and new**

Traditionally, discussion of offshore energy development has centered on oil and natural gas exploration and extraction. In that context Massachusetts has always sounded a note of caution, for we have much at

stake. The waters of the Outer Continental Shelf off Massachusetts are dominated by Georges Bank, a uniquely productive fishery. Georges Bank is a rich natural resource and a vital part of the Massachusetts and New England economy that warrants strong protections.

The groundfish fishery of Georges Bank is regarded as one of the most commercially important fisheries on the Atlantic coast and the lifeblood of many coastal communities. The history of fishing on the Bank extends over 400 years.

The value of Georges Bank groundfish today exceeds \$140 million annually, and with careful stewardship could grow to \$300 million by 2026. About \$70 million is attributable to the Massachusetts economy, with the remaining \$70 million supporting other coastal New England States and Canadian Provinces. The scallop fishery generates another \$225 million in economic activity annually, nearly all of which benefits Massachusetts. Thanks to Georges Bank scallop revenues, New Bedford has been the nation's most highly valued fishing port for the past six years. Gloucester continues to rank among the top ten.

Still, this significant and productive fishery is under great stress, experiencing a general decline in landings and biomass of Atlantic cod, haddock and yellowtail flounder over the past 20 years. Any further damage to the fishery would be devastating to the fishing industry in Massachusetts and New England, which has already seen enormous cutbacks resulting from federal catch limitations intended to rebuild the fishery. With effective fisheries management and environmental stewardship, we are optimistic about the recovery of the Georges Bank fishery. Haddock populations are already recovering, and the scallop fishery remains a thriving and highly valuable fishery.

The fragility of this irreplaceable natural resource would make us in Massachusetts leery of calls to reopen these waters to oil and gas exploration even if the prospects seemed more promising. But initial exploration of Georges Bank in the 1980s found no oil and no commercially exploitable natural gas. Even if the technology and/or economics have changed since, the great value of Georges Bank as a fishery would set an extremely high bar for a competing use like oil or gas drilling that could put it at risk. Drilling in Georges Bank proved to be a bad idea 30 years ago, and we have no reason to think it would be a good idea today.

But oil and gas are no longer the only energy resources to be found on the Outer Continental Shelf, and worthy of our attention. Today in New England, offshore wind energy offers the prospect of utility-scale electricity that is renewable, free of harmful emissions, and if developed with care and forethought, compatible with other ocean uses and resources. The United States Department of Energy estimates that 900,000 megawatts (MW) of offshore wind energy potential is available off the coasts of the United States, including those of the Great Lakes. It is a potentially inexhaustible resource that in many cases is available in close proximity to regions with the highest electricity demand, minimizing the need for costly new transmission lines. According to the National Renewable Energy Laboratory (NREL), households and businesses in the 28 coastal states use 78% of the electricity generated in the United States.

The vast resource of offshore wind remains untapped in the United States, but capturing it is no longer a fanciful notion. We have come a long way since 2001, when Cape Wind Associates proposed to construct this nation's first offshore wind farm off the coast of Cape Cod. Offshore wind energy was untested in the U.S. at that time, even though the first offshore wind project was installed almost 20 years

ago in Denmark. Today twelve countries have a combined total of more than 500 turbines (1,480 MW) in the water. The United States is still awaiting its first operational offshore wind farm, but Cape Wind is no longer the only project in the queue. In fact, the wind energy potential of every coastal region of the United States (including the Great Lakes) has been or is in the process of being assessed. Projects have been proposed in every region save the west coast, where conditions offer no opportunities for shallow water development.

In addition, preliminary estimates by the U.S. Department of Energy indicate that ocean wind resources just beyond the reach of current technology offer even bigger bang for the buck. University researchers and private developers are already working on overcoming the engineering barriers presented by deep-water environments over the horizon. Their success could help propel the U.S. to the forefront of the emerging global offshore wind energy industry.

With interest growing steadily, there is a pressing need for clear and consistent rules from the Department of Interior's Minerals Management Service governing the siting and leasing of offshore wind facilities. Governor Patrick and I applaud the Obama Administration and Interior Secretary Salazar for their clear expressions of support for strong and effective ocean and energy policy. The administration could immediately and significantly demonstrate its support for renewable energy development by releasing the final rule for alternative energy development on the Outer Continental Shelf. The lack of formal guidance is restricting the research and development, planning, and market creation that will draw capital into this promising new industry. The draft rule pending before Secretary Salazar is far from perfect, and comments filed by Massachusetts identified a variety of shortcomings, but this is a case where the perfect should not stand in the way of the good. Offshore wind is a tremendous resource of renewable, emissions-free energy, and the time has come for us to put it to work creating a clean energy future for the nation.

As we move forward to address the significant opportunity of offshore wind and the siting and leasing framework for it, we should also consider questions of a specific approach to transmission infrastructure. There is currently a significant push for over-land transmission to support the development of wind power in remote regions. This effort would rely on current, fully commercialized and competitive wind and transmission infrastructure, and some of this transmission may be appropriate to move this wind power to load centers in the West and Midwest. The East Coast is a different matter. Here, offshore wind is superior to remote onshore wind in terms of resource size, distribution, capacity factor, reliability, minimization of environmental impact, and – this is the key – proximity to population centers. This enormous energy resource is located just a short distance from the major load centers of the East Coast, but unlike on-land wind, tapping it will require development and policy assistance to get it over the commercialization hurdle. We will fail as a nation if we do not take this moment in our history – a time of aggressive federal funding and policymaking for sustainable energy development – to capture this resource once and for all for the benefit of current and future generations.

What is required to make this happen? Conceptually, the answer is fairly simple. We need a comprehensive plan to develop an offshore transmission backbone along the East Coast to facilitate the interconnection of any and all wind and tidal energy resources. Such a system would enable interconnection of offshore generating capacity at multiple points, and would deliver power into the major load centers along the coast, from Portland, Maine, to Virginia Beach. This would combine renewable resource development with energy, capacity, and transmission congestion relief for the major load centers

of the most populous region of our country. Development of such an offshore transmission network will require intense focus from MMS and FERC, and needs to be aggressively pursued as part of any OCS energy resource development plan.

### **Massachusetts Ocean Management Plan**

Our ocean and coastal areas are being called upon to support a tremendous and often conflicting array of critically important activities, including fisheries and aquaculture development and enhancement; commerce and industrial port development; energy and minerals exploration and production; waterfront commerce and residences, public access, recreation and tourism; and habitat preservation and restoration.

Historically, Massachusetts waters have supported traditional uses, and more recently we have permitted such activities as offshore liquefied natural gas facilities, fiber optic and electrical cables, and aquaculture. With wind, wave, and tidal energy emerging as vital resources for meeting energy and environmental challenges, the need to balance and accommodate a growing range of uses while protecting precious natural assets has become more pressing than ever.

Given that the ocean is a resource held in public trust, how should the Commonwealth effectively manage the “assets of the trust” to best protect and use them for the benefit of citizens today and in the future? Which uses should be allowed in which areas? Who should decide? How do we ensure that individual and collective uses do not harm the environment? Do we have the right information to make those decisions? Do public agencies that are authorized to make these decisions have the right tools? How can we work collaboratively with our federal partners to address transboundary resources, uses and impacts?

Massachusetts is striving to answer these questions by establishing a new model of stewardship for the marine ecosystem – a model that recognizes the importance of both protecting and making wise use of the marine environment for the benefit of society now and in the future. I would like to use some of my time this morning to highlight key features of the ocean management plan we are now in the process of developing.

In recognition of our need to better understand, protect and manage the use of our ocean resources, Governor Patrick signed the Massachusetts Oceans Act of 2008 into law last May. The Oceans Act directs my office to develop a draft integrated ocean management plan by June 30, 2009, and promulgate a final plan by December 31, 2009. The Act is comprehensive, and requires, in summary, that the ocean plan:

- (1) set forth the Commonwealth's goals, siting priorities and standards for ensuring effective stewardship of its ocean waters held in trust for the benefit of the public;
- (2) adhere to sound management practices, taking into account the existing natural, social, cultural, historic and economic characteristics of the planning areas;
- (3) preserve and protect the public trust;
- (4) reflect the importance of the waters of the Commonwealth to its citizens who derive livelihoods and recreational benefits from fishing;

- (5) value biodiversity and ecosystem health;
- (6) identify and protect special, sensitive or unique estuarine and marine life and habitats;
- (7) address climate change and sea-level rise;
- (8) respect the interdependence of ecosystems;
- (9) coordinate uses that include international, federal, state and local jurisdictions;
- (10) foster sustainable uses that capitalize on economic opportunity without significant detriment to the ecology or natural beauty of the ocean;
- (11) preserve and enhance public access;
- (12) support the infrastructure necessary to sustain the economy and quality of life for the citizens of the commonwealth;
- (13) encourage public participation in decision-making;
- (14) adapt to evolving knowledge and understanding of the ocean environment; and
- (15) identify appropriate locations and performance standards for activities, uses and facilities allowed under the Ocean Sanctuaries Act, including but not limited to renewable energy facilities, aquaculture, sand mining for beach nourishment, cables, and pipelines.

To do this, my Office of Coastal Zone Management is developing the ocean plan based on the following principles:

**The ocean plan will be science based.** We have convened workgroups of state and federal agency staff and outside experts to compile and analyze existing data relating to fisheries, habitat, sediment, cultural/recreational/historic resources, renewable energy, and marine infrastructure, and we have convened a science advisory council of credentialed scientists to assist in the development and review of these materials.

**The planning process will be transparent and participatory.** Since September, we have held 18 public hearings and five public workshops to get input from and share information with the constituencies who will be affected by the ocean plan. We have met with over 80 stakeholder groups representing all sectors of marine interest to gather information and learn the issues important to each group. And we have convened an ocean advisory commission, representing legislators, coastal regional planning agencies, fishing, and environmental and renewable energy interests to provide policy guidance and review planning materials.

**The ocean plan will integrate spatial and regulatory management measures.** We are employing marine spatial planning and ecosystem-based management techniques to overlay and analyze data from the workgroups to identify special, sensitive and unique marine life and habitat, and to identify appropriate locations for renewable energy facilities and other uses. We are concurrently developing performance standards to define the terms for the respective protection and use of these areas.

**The ocean plan will coordinate state and federal regulation of activities in state waters and with current and future uses of federal waters.** We are working with our federal partners to identify management areas in state waters that are consistent with federal management interests, to ensure regulatory efficiency. And we will be working with the Minerals Management Service, and others, building on our state planning materials, to identify appropriate locations for the development of renewable energy facilities on the Outer Continental Shelf.

**The ocean plan will be revised at least every five years.** We recognize that much more data and information are needed to address all of the issues identified through the planning process. An important element of the first plan is the outline for ongoing work and the identification of priority management objectives and associated data needs to ensure ongoing, dynamic evolution of the ocean plan.

**The ocean plan will make choices and give clarity to users and development interests.** While we build a durable framework for long term, science-based, oceans management, we recognize the need for clarity for the range of interests that seek the opportunity to, for example, site energy infrastructure in our state waters.

Overall, the ocean plan will provide a robust template to protect our vital natural resources and balance traditional uses with new ones, such as renewable energy, that are important to our future.

### **Federal leadership on ocean policy**

More than five years ago, the US Commission on Ocean Policy and the Pew Ocean Commission declared that, while coastal and ocean issues have significant and far-reaching environmental, economic and social ramifications for the nation, federal policy-makers have been slow and short-sighted in their response. More recently, the Joint Ocean Commission Initiative's Ocean Policy Report Card gave state-level planning and management efforts an "A-"; federal efforts did not fare as well, with federal shortcomings also implicated in hampering state efforts: "While the problems facing marine ecosystems must be addressed at the local level, additional tools and support that the federal government can provide are also needed to truly resolve the most pressing issues."

The Coastal Zone Management Act (CZMA) of 1972 authorized the framework for the wise stewardship of the nation's coastal resources. CZMA established a unique partnership among federal, state, and local governments to ensure balanced consideration of competing coastal resource uses. CZMA encourages coastal states to develop coastal management plans, subject to review and approval by the federal government. In addition to its oversight function, the federal role in the partnership consists of a combination of financial assistance to states and the assurance of consistency of federal activities with approved state management plans.

To date, the partnership established by CZMA has been remarkably productive. More than 99 percent of national coastal areas now fall under a state coastal zone management plan; 34 of 35 eligible coastal states and territories have instituted these plans. Because of their experience in managing these programs, coastal states and territories have developed unique expertise in dealing with coastal zone management issues. This expertise will become increasingly important as pressures on the nation's finite coastal resources continue to increase.

A reauthorized CZMA should also contain provisions that authorize grants to coastal states to support state efforts and federal partnerships to initiate and complete surveys of state waters and adjacent federal waters. Intelligent and responsible siting of energy facilities—both traditional and renewable—will require that significant effort be devoted to identifying the most appropriate locations for these facilities. Adequate and current information is needed to identify and understand critical components such as living marine resources like fish, marine mammals and endangered species; physical and chemical conditions like bathymetry, seafloor geology, and salinity; and ocean uses like fishing, navigation, and recreation.

Section 307 of the Coastal Zone Management Act, known as the federal consistency provision, grants states authority to review federal activities, licenses and permits that have reasonably foreseeable effects on any land or water use or natural resource of the coastal zone. These activities must be consistent to the maximum extent practicable with the enforceable policies of a coastal state's federally approved coastal management program. This has been a primary method of ensuring more sustainable development of the nation's coasts.

Consistency applies before a federal permit is issued; thus, it facilitates early consultation between states, federal agencies and permit applicants in order to avert disputes from arising after substantial commitments have been made by agencies and applicants. Without these early reviews, there would be much more uncertainty, litigation and calls for federal legislative intervention in actions in coastal communities. To increase efficiency for states, federal agencies and applicants, many states have created streamlined approaches to energy related activities.

In granting states consistency authority, Congress recognized that federal interests and activities must be balanced with the sovereign interests of states in managing coastal resources. This is the underlying philosophy of the CZMA and the consistency provision. State coastal programs must receive federal approval for a state to exercise its consistency authority; likewise, each enforceable policy upon which it relies must also receive federal approval.

Furthermore, the resources of the OCS and the coastal zone are many times difficult, if not impossible, to differentiate. Fish, currents, wind and wave care little about an imaginary line drawn three nautical miles from our shores. As the committee considers offshore energy, the retention of consistency under the CZMA must be a priority.

To support the application of this expertise and augment financial resources available to state coastal and ocean managers, the U.S. Commission on Ocean Policy recommended that a portion of OCS revenues should be shared with coastal states (Recommendation 24-1). Revenues shared with the states should further the goals of improved coastal and ocean management. The establishment of a Trust Fund provides a mechanism for the reinvestment of revenues generated from these public lands toward protection of coastal resources and communities. The Trust Fund can support the focused efforts of coastal states, territories and commonwealths, other appropriate coastal authorities, and federal agencies in addressing critical ocean and coastal management needs of our nation including restoration, protection, and enhancement of natural processes and habitats. This will help minimize and plan for the impacts of sea level rise, climate change, and ocean acidification on ocean and coastal resources.

In 2006, the Coastal States Organization—which represents the interests of the 35 coastal states, Commonwealths, and Territories on federal legislative, administrative, and policy issues relating to sound

coastal, Great Lakes, and ocean management—adopted a policy on revenue sharing. The policy holds that “because the coastal states face a number of challenges in conserving their coastal resources and protecting their coastal communities, OCS receipts should be used to further the goals of coastal and ocean restoration, conservation, preservation, mitigation, research, and education.” Furthermore, these funds should be provided over and above existing appropriations to meet the increasingly complex and unmet needs of ocean and coastal managers.

As federal agencies move forward with the implementation of a new energy policy, it is imperative that they do so in close and active partnerships with state governments and the private sector. States like Massachusetts are actively engaged in near and offshore ocean planning and the identification of appropriate locations for the development of renewable energy facilities both in state waters and on the Outer Continental Shelf. They need regular and consistent support from and coordination with their federal agency counterparts. NOAA has done very well in this aspect, and we would strongly recommend that MMS follow suit with an increased regional and even state presence and dialogue.

## **Conclusion**

The wise use and management of our ocean resources is essential to protecting the marine ecosystem for current and future generations, meeting the nation’s energy needs, feeding and ensuring the health of its citizens, and responding effectively to the impacts of climate change. In legislation related to state and federal coastal and ocean management, Massachusetts recommends that Congress:

- (1) Elevate the energy policy priority of offshore wind.** Europe has moved well ahead of the United States on the development of offshore wind resources. Offshore wind is superior to onshore wind in terms of capacity factor, reliability and proximity to the major load centers of the East Coast. Once the OCS rule is completed, MMS and FERC should turn their focus toward resolving the technical issues surrounding an offshore wind transmission system and DOE should invest in accelerating the commercialization of deeper water wind technologies.
- (2) Clarify the National Oceanic and Atmospheric Administration’s mission in supporting new approaches to ocean and coastal management.** NOAA is a vital resource for our states, providing data, coastal management expertise in all disciplines, and financial resources in support of state coastal interests. Given the extent of NOAA’s line agencies’ jurisdiction, their constructive participation in and support for new approaches to ocean management will be critical as we increase the scope of our ocean activities. Legislation should ensure that NOAA’s structure is consistent with the principles of ecosystem-based management and with its primary functions of assessment, prediction, and operations; management; and research and education.
- (3) Reauthorize CZMA to enhance the federal-state partnership on managing state and federal waters.** The Coastal Zone Management Act is a critical tool by which both federal and state governments effectively manage the multiplicity of uses and resources in state waters. To aid the states in their efforts to develop workable coastal zone management plans, it is critical that the federal government continue to support and enhance a national partnership framework.
- (4) Establish an Ocean and Coastal Trust Fund.** Funded by a portion of Outer Continental Shelf revenues, the Trust Fund would support the focused efforts of coastal states, territories and

commonwealths, other appropriate coastal authorities, and federal agencies in addressing critical ocean and coastal management needs of our nation, including restoration, protection, and enhancement of natural processes and habitats. This will provide resources to help minimize and plan for the impacts of sea level rise, climate change, and ocean acidification on ocean and coastal resources.

In closing, this is a time of great challenge but also great opportunity when it comes to the vast resources found in our ocean waters. We in Massachusetts are particularly hopeful about the prospect of offshore wind helping to meet our energy and climate goals and obligations, and excited about the process of bringing a comprehensive approach to managing our ocean resources in a productive and environmentally responsible way. We look forward to the federal government being vital partner in both.

Thank you for holding this important hearing and for the opportunity to address the joint subcommittees.