May 21, 2007

MMS Alternative Energy & Alternative Use Programmatic EIS
Argonne National Laboratory EVS/900
9700 S. Cass Avenue
Argonne IL 60439

Re: Comments on Draft Programmatic Environmental Impact Statement for Platform Alternative Energy and Alternative Use Program

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Alternative Energy and Alternative Use Program. This letter contains comments on the DEIS from the California Artificial Reef Enhancement Program (CARE). CARE is a nonprofit organization which, through public education and scientific research, promotes awareness and understanding of the benefits of artificial reefs for the marine environment.

While we understand that artificial reefs are not a primary focus of this DEIS, CARE was pleased to see a statement of general support from the Minerals Management Service (MMS) about the value of offshore oil and gas platforms as artificial reefs in the discussion about alternative uses of offshore platforms. DEIS at 6-6. CARE would, however, like to draw your attention to the considerable body of research that has been conducted in the past several years demonstrating the ecological benefits of using oil platforms as artificial reefs. We note that, while the EIS refers to an older review of the field by Holbrook et al., which identified some gaps in the understanding of platform habitat value that then existed, the EIS does not describe or even cite the extensive research that has been conducted more recently to fill those gaps, which conclusively demonstrates the benefits of artificial reefs as fish habitat. These comments contain additional scientific information that should be included as part of the record and evaluated in the Final EIS. 84-001 84-002

Please contact me at (805) 320-8456 if you have any questions or would any further information that CARE may be able to provide.

Sincerely,

George Steinbach
Executive Director

Enclosures

May 21, 2007

Summary of Research Demonstrating the Ecological Value of OCS Oil and Gas Platforms Off California

There is a considerable amount of scientific information that demonstrates that oil and gas platforms off California provide important habitat and ecological functions for groundfish and other species, and that provides evidence of the strong ecological performance of fishes that live on oil and gas platforms. This research is summarized below:

(a) Oil and gas platforms provide habitat for different life stages of rockfish (i.e., larvae, juveniles, adults) (Love et al., 2000), (Love et al., 2001), (Love et al., 2003), (Love et al., 2005), (Love et al., 2006), (Emery et al., 2006).

(b) Oil and gas platforms create hard bottom habitat (via the lattice-work of legs and cross members) in areas that are primarily soft bottom habitat (Love et al., 2003). Each platform creates a variety of habitat (again, via the lattice-work of legs and cross members) (Love et al., 2003). The presence of structures that form sheltering sites likely results in higher densities of many species typically found in hard and complex structures. (Love et al., 2007).

(c) Love et al. (2006) found that the number of juvenile bocaccio found around six platforms in the Santa Barbara Channel constituted 20 percent of the average number of juvenile bocaccio that survive in a year for the species' entire range. He determined that, when adults, these bocaccio will contribute about one percent of the additional amount of fish needed to rebuild the Pacific Coast population. His research demonstrates that, although platforms provide a relatively small amount of habitat area, this habitat can be crucial for rebuilding an overfished species.

(d) The higher densities of adult rockfishes found at oil and gas platforms are so pronounced that, in some locations, platforms provide much or all of the adult fishes of some heavily fished species and thus contribute disproportionately to those species' larval production. (Love et al., 2003; Love et al., 2006)

(e) Oil and gas platforms recruit larval fish, which grow into juveniles that live in the midwaters and are found in greater densities than at natural reefs (Love et al., 2003; Emery et al., 2006). Oil and gas platforms recruit larval fish that would otherwise have perished in the absence of the platform reef (Emery et al., 2006). Love et al. (2003) concluded that the recruitment of juvenile fishes to platforms that are far from shore or in deep waters is from maternal sources, rather that attraction from natural outcrops. Platforms located nearer to shore or in shallow waters may attract juveniles from natural habitats because these platform reefs are located in areas in which it is relatively easy for juveniles to move between habitats. The converse is also true: juveniles may be attracted from platforms to natural habitats. However, because higher densities of young-of-the-

year rockfishes are found at oil and gas platforms, Love et al. (2003) concluded that platform reefs are functionally more important as groundfish nurseries.

(f) Because oil and gas platforms have more adults in higher densities than natural reefs, they produce a disproportionate share of larvae in the region (Love et al., 2003; Love et al., 2005). Love et al. (2005) compared the density and size of bocaccio and cowcod found on oil and gas platforms to those found at natural outcrops. The results indicate that platforms are more important producers of bocaccio and cowcod larva than natural habitat. At Platform Gail in particular, which had the highest densities of mature bocaccio and cowcod of any natural or man-made habitat surveyed, Love et al. (2005) estimated that for bocaccio, one hectare of sea floor at that platform was equivalent to 68 hectares at an average natural reef, and for cowcod one hectare at that platform was equivalent to 26 hectares at an average natural reef.

(g) Furthermore, recent research by Emery et al. (2006) indicates that oil and gas platforms recruit larva that would not have survived were the platforms not there. By simulating surface currents in 1999 and 2002 originating at Platform Irene to model juvenile bocaccio distribution patterns, Emery et al. estimated that only seven percent and 23 percent, respectively, of young bocaccio that recruited to Platform Irene would have survived to reach natural nursery habitat.

(h) Different life stages of the same species inhabit different depths along the platform reef (i.e., adults inhabit the deep waters and juveniles inhabit the midwaters), thereby reducing predation by adults on juveniles (Love et al., 2003).

(i) Juveniles living at oil and gas platforms may grow to adulthood and remain there throughout their lives (Love et al., 2003). Research on the growth rate of young blue rockfish living around oil and gas platforms demonstrates that they grow faster than fishes living around natural reefs in the same area (Love et al., 2003).

(j) Recent research by Love et al. (2007) addressed the ecological performance of fish living on platforms versus those living in natural areas. Love et al. found that, as measured by daily growth rates, blue rockfish living around oil and gas platforms performed at least as well as they did on natural reefs. This research also supports previous findings of the potential benefit that some platforms provide for regional fish populations.

The research discussed above demonstrates that oil and gas platforms perform much like natural outcrops, in that both produce and attract rockfishes. However, there is a difference in scale favoring oil and gas platforms, which indicates that some platforms are especially important to regional rockfish production. (Love et al., 2003; Love et al., 2005; Love et al., 2006) This ecological role is of significant value especially to the recovery of the many overfished rockfish species that populate the platforms, such as bocaccio and cowcod.

References

Love, M. S., E. Brothers, D. Schroeder, and W. Lenarz. 2007. Ecological Performance of Young-of-the Year Blue Rockfish (*Sebestes mystinus)* Associated with Oil Platforms and Natural Reefs in California as Measured by Daily Growth Rates. Bulletin of Marine Science 80(1): 147-157.

Love, M. S., A. York. 2006. The Relationships Between Fish Assemblages and the Amount of Bottom Horizontal Beam Exposed at California Oil Platforms: Fish Habitat Preferences at Man-Made Platforms and (by inference) at Natural Reefs. Fishery Bulletin (104): 542-549.

Love, M. S., D. Schroeder, W. Lenarz, A. MacCall, A. Scarborough Bull and L. Thorsteinson. 2006. Potential Use of Offshore Marine Structures in Rebuilding an Overfished Rockfish Species, Bocaccio (*Sebastes paucispinis)*. Fishery Bulletin (104): 383-390.

Emery, B. M., L. Washburn, M. Love, M. Nishimoto and J. Ohlman. 2006. Do Oil and Gas Platforms off California Affect the Fate of Recruiting Bocaccio (*Sebastes paucispinis*)? An Analysis Based on Trajectories Derived from High Frequency Radar. Fishery Bulletin (104): 391-400.

Love M. S., D. Schroeder and W. Lenarz. 2005. Distribution of Bocaccio (*Sebastes paucispinis*) and Cowcod (*Sebastes levis*) Around Oil Platforms and Natural Outcrops Off California with Implications for Larval Production. Bulletin of Marine Science (77): 397-408.

Love, M. S., D. Schroeder and M. Nishimoto. 2003. The Ecological Role of Oil and Gas Platforms and Natural Outcrops on Fishes in Southern and Central California: A Synthesis of Information. U.S. Department of the Interior, OCS Study MMS 2003-032.

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Love, M. S., J. Caselle and L. Snook. 2000. Fish Assemblages Around Seven Oil Platforms in the Santa Barbara Channel Area. Fishery Bulletin (98): 96-117.

BULLETIN OF MARINE SCIENCE, 80(1): 147–157, 2007

ECOLOGICAL PERFORMANCE OF YOUNG-OF-THE-YEAR BLUE ROCKFISH (*SEBASTES MYSTINUS*) ASSOCIATED WITH OIL PLATFORMS AND NATURAL REEFS IN CALIFORNIA AS MEASURED BY DAILY GROWTH RATES

Milton S. Love, Edward Brothers, Donna M. Schroeder, and William H. Lenarz

ABSTRACT

Decommissioning alternatives regarding offshore oil platforms include leaving some or all of the platform structure in place. However, despite the high numbers of fishes that can reside around offshore platforms, little is known about the comparative ecological performance of fishes living on platforms compared to those inhabiting natural habitats. It would be expected that sites where fishes exhibited better growth, increased reproduction, or greater survival rates would be beneficial to regional fish populations. We determined and compared the birthdate distributions and daily growth rates of 116 young-of-the-year (YOY) blue rockfish (*Sebastes mystinus* Jordan and Gilbert, 1881) among two platforms and two natural reefs in the Santa Barbara Channel region. We found a significant though modest lunar pattern in birthdates where blue rockfish produced (or successfully recruited) more larvae in the week leading up to the full moon. Mean growth rates were significantly different across sites. At one of the two site pairs (platform-natural reef), YOY rockfish growth rates were significantly higher at the platform habitat; there was no statistical difference in growth rates between fish living at the other site pair. This study demonstrates that, as measured by daily growth rates, blue rockfish living around oil and gas production platforms may perform at least as well as those fish living on natural reefs, and supports previous research implying that some platforms may benefit regional fish populations.

All 27 oil and gas platforms located off the coast of southern and central California will at some time reach the end of their economic life spans. California platforms are located in both state and federal waters and are sited in bottom depths ranging from 11 to 363 m. The largest of these structures has a footprint of 10,606 m² (Love et al., 2003). While platform operators are responsible for the costs of disposition of an uneconomical platform, managers must decide what to do with that structure, a process known as decommissioning. Ultimately, a decommissioned platform could be left in place, removed to some point below the sea surface, toppled to lie on the sea floor, or totally removed (Schroeder and Love, 2004). Decommissioning can be a lengthy process, as it requires input from state and federal agencies, corporate entities, and such stakeholders as recreational and commercial fishermen, and non-consumptive users. It may involve extensive analyses of the biological, economic, and other sociological impacts of retaining or removing these structures (Schroeder and Love, 2004).

Since 1995, much of our research has focused on the potential biological impacts of platforms as fish habitats. A number of economically important fishes, particularly rockfishes (genus *Sebastes*), are found at high densities around some California platforms. Rockfishes, a group that dominates many of the shelf and slope habitats

Abstract—Between 1995 and 2002, we surveyed fish assemblages at seven oil platforms off southern and central California using the manned research submersible *Delta*. At each platform, there is a large horizontal beam situated at or near the sea floor. In some instances, shells and sediment have buried this beam and in other instances it is partially or completely exposed. We found that fish species responded in various ways to the amount of exposure of the beam. A few species, such as blackeye goby (*Rhinogobiops nicholsii*), greenstriped rockfish (*Sebastes elongatus*), and pink seaperch (*Zalembius rosaceus*) tended to avoid the beam. However, many species that typically associate with natural rocky outcrops, such as bocaccio (*S. paucispinis*), cowcod (*S. levis*), copper (*S. caurinus*), greenblotched (*S. rosenblatti*), pinkrose (*S. simulator*) and vermilion (*S. miniatus*) rockfishes, were found most often where the beam was exposed. In particular, a group of species (e.g., bocaccio, cowcod, blue (*Sebastes mystinus*), and vermilion rockfishes) called here the "sheltering habitat" guild, lived primarily where the beam was exposed and formed a crevice. This work demonstrates that the presence of sheltering sites is important in determining the species composition of man-made reefs and, likely, natural reefs. This research also indicates that adding structures that form sheltering sites in and around decommissioned platforms will likely lead to higher densities of many species typical of hard and complex structure.

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Fish. Bull. 104:542–549 (2006).

The relationships between fish assemblages and the amount of bottom horizontal beam exposed at California oil platforms: fish habitat preferences at man-made platforms and (by inference) at natural reefs

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Understanding the habitat preferences of deeper-water (below scuba depth) fishes has proven to be elusive. Off the Pacific Coast, several studies (Stein et al., 1992; Yoklavich et al., 2000; Nasby-Lucas et al., 2002) have demonstrated that habitat characteristics play a major role in shaping deeper-water fish assemblages. In those studies it was apparent that, although individuals of many species may be found in a number of habitats, most species showed distinct preferences. These studies clearly showed the role that hard structure plays for many species. How more subtle habitat characteristics, such as the presence of sheltering sites, may influence species composition was still unclear.

Between 1995 and 2002 we surveyed fish assemblages associated with southern California oil and gas platforms. Platforms may serve at least two functions for these fishes. First, the water column around many platforms serves as a nursery ground for a suite of rockfishes (*Sebastes* spp.) and other fish species, often harboring higher densities of these species than do nearby natural outcrops (Love et al., 2003). Second, platform bottoms, where the platform jacket and well pipes meet the sea floor, may harbor high densities of subadult and adult fishes. Most of these fishes are rockfishes, but lingcod (*Ophiodon elongatus*), painted greenling (*Oxylebius pictus*), and various members of the surfperch family (Embiotocidae) may also be abundant (Love et al., 1999; Love et al., 2003).

The platforms we surveyed were designed to have large, circular (1 m in diameter) horizontal beams that connect vertical and diagonal jacket elements at or near the sea floor. In some instances, these beams were buried, either by shells that had fallen from shallow parts of the jacket or by a combination of shells and fine sediment. In other instances, beams were partially exposed (full width of beam or partial width of beam was resting on the sea floor) or completely exposed (thus leaving a gap between the beam and sea floor). During our fish surveys, we noted that fishes appeared to be patchily distributed along the platform bottom and that some species seemed to be responding to the presence or absence of the beam and to the amount of space under the beam. Because the beams are all composed of similarly shaped steel and differ only in the amount of surface exposed, we hypothesized that patterns of fish associations with this structure would present insights into the role that sheltering spaces play in determining species assemblages in both natural and man-made habitats.

Fish assemblages around seven oil platforms in the Santa Barbara Channel area

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Abstract.—In 1996 we surveyed the fishes living on and around seven offshore oil platforms in the Santa Barbara Channel area. We conducted belt transects at various depths in the midwater and around the bottoms of each platform using the research submersible *Delta*. The bottom depths of these platforms ranged from 49 to 224 m and the midwater beams ranged from 21 to 196 m. We found that there were several distinct differences in the fish assemblages living in the midwater and bottom habitats around all of the platforms. Both midwater and bottom assemblages were dominated by rockfishes. Platform midwaters were dominated by young-of-the-year (YOY) or juveniles up to two years old. Rockfishes larger than about 18 cm total length were rarely seen in the midwater. The fish assemblages around the bottoms of the platforms were dominated by larger individuals, primarily subadults or adults. Density of all fishes was similar between the bottoms and midwater of any given platform. However, the total biomass was much greater on the bottoms, owing to larger fish living there. There was a consistently greater number of species on the bottom than in the midwater of each platform, likely because of a larger variety of habitat types on the bottom. The fish assemblages also differed among platforms. We found significantly higher densities of young-of-the-year rockfishes around platforms north of Pt. Conception compared with those in the Santa Barbara Channel, probably because the more northerly platforms are located in the more productive waters of the California Current.

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Fish. Bull. 98:96–117 (2000).

Petroleum production has been a part of the southern California economy since the nineteenth century. The earliest drilling took place on land, but by the early twentieth century a large number of piers lined the coast, tapping into offshore oil deposits. Hazel, the first offshore oil platform, was constructed off Summerland in 1958 (Carlisle et al., 1964). At the peak of oil drilling in the early 1980s, there were 30 platforms operating in southern and central California. Currently, there are 19 platforms in operation in the Santa Barbara Channel and off Point Conception (Fig. 1).

Oil platforms provide considerable habitat for marine organisms. The earliest structures were relatively small (23 m long at the surface), newer platforms, however, are over 100 m long (MBC[1]). Sessile invertebrates (primarily mussels, barnacles and anemones) encrust the pilings and well pipes and cover the bottom to form additional habitat.

Oil platforms have a finite economic lifespan and a number of them are becoming uneconomical to operate. In 1996, four platforms were removed from the Santa Barbara Channel, although not without controversy. There is considerable debate regarding the fate of these structures. Some interest groups would like to leave part or all of them in place, claiming protection of fish habitat; others favor complete removal. Understanding the biological communities on the platforms is crucial to making rational decisions regarding the fates of these structures. In addition, research on these platforms could also address questions regarding the role that artificial reefs might play in coastal fish communities. Ultimately, this research will allow us to contrast the fish assemblages on platforms with those of nearby reefs.

Currently, very little is known about the fish fauna around these platforms. One relatively comprehensive SCUBA survey examined fish populations around two shallow inshore platforms, Hazel and Hilda, during Hazel's first three years and Hilda's first year of operation (Carlisle et al., 1964). Additional cursory surveys were conducted around these two platforms in 1970 and 1975; Bascom et al., 1976; Allen and Moore[2]). With the exception of a short-term study of fishes around platform Hidalgo using a remotely operated vehicle (ROV) (Love et al., 1994) and a survey of recreational fishing around Santa Bar-

[1] MBC (Marine Biology Consultants). 1987. Ecology of oil/gas platforms offshore California. Outer Continental Shelf (OCS) Study Minerals Management Service (MMS) 86-0094.

[2] Allen, M. J., and M. D. Moore. 1976. Fauna of offshore structures. South. Calif. Coast. Water. Res. Proj. Annu. Rep., Long Beach, CA, p. 179–186.

Research on Platform Reefs

Recent Research on the Ecological Role of Oil and Gas Platforms Offshore California

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OCS Study MMS 2001-028

The Ecological Role of Natural Reefs and Oil and Gas Production Platforms on Rocky Reef Fishes in Southern California
1998-1999 SURVEY REPORT

by

Milton Love

Mary Nishimoto

Donna Schroeder

MARCH 2001

Prepared under
Cooperative Agreement (#1445-CA09-95-0836)
between the
US GEOLOGICAL SURVEY,
Biological Resources Division
and the
UNIVERSITY OF CALIFORNIA, SANTA BARBARA
Marine Science Institute
in cooperation with the
MINERALS MANAGEMENT SERVICE
Pacific OCS Region

OCS 085

WASHINGTON STATE DEPARTMENT OF
Natural Resources

DOUG SUTHERLAND
Commissioner of Public Lands

May 3, 2007

Argonne National Laboratory EVS/900
9700 S. Cass Ave.
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RE: **MMS Alternative Energy & Alternate Use Programmatic EIS**

To Whom It May Concern:

Thank you for the opportunity to provide input on potential environmental impacts associated with possible alternative energy and alternate use projects on the Outer Continental Shelf (OCS) of Washington State.

As the Department of Interior, Mineral Management Service (MMS) may already be aware, the Washington Department of Natural Resources (DNR) manages over 2.4 million acres of state-owned aquatic lands and attached resources, including the bedlands, shorelands, tidelands, and harbor areas. Resources located upon aquatic lands include aquatic plants, aquatic animals; and valuable materials and minerals.

DNR management authority derives from the State's Constitution (Articles XV, XVII, XXVII), Revised Code (RCW 79.02, 79.10, 79.14 and, 79.105 to 79.145) and Administrative Code (WAC 332-30). Based upon this statutory authority, it appears that portions of the proposed projects (e.g., subsea cables) will involve state aquatic lands. DNR would like to issue the following comments on the OCS Alternative Energy Programmatic EIS. DNR is limiting the scope of comments to wind and wave projects only. The moratorium on offshore leasing of oil and gas (RCW 43.143.010) excludes the need to review the alternate use of oil and gas platforms, and it appears that MMS has determined ocean current energy is only feasible off the Florida coast.

1. **Clarification – Location of state-owned aquatic lands off of the coast of Washington**

Under section 1.3.2, the scope of federal jurisdiction in the Outer Continental Shelf is defined as 5.6 to 17 km (3 to 9 nautical mi) off coastal shorelines and extends to about 370 km (200 nautical mi) offshore, with depths ranging from a few meters to thousands of meters. The MMS states that for the next 5 – 7 years, with the exception of ocean current technology, projects are expected to occur nearer to shore with maximum water depths of 100 m (328 ft).

DNR would like to clarify that the line of state/federal jurisdiction does not follow a bathymetric contour. Any projects falling within 3 nautical miles/3.5 miles/5.6 kilometers will require a use authorization from DNR for state-owned aquatic lands. 85-001

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2. Comment - Clarify Scope of Regional Analysis in OCS Alternative Energy Programmatic EIS

The OCS Alternative Energy Programmatic EIS should make it explicitly clear to the reader, at the beginning of the document, what projects may be occurring in a given region, and during what timeframe. For example, in Washington, there will be no alternate use of oil and gas structures due to a moratorium on oil and gas leasing. 85-002

3. Comment - Clarify Purpose of OCS Alternative Energy Programmatic EIS

It is unclear to DNR how the MMS intends to use or incorporate this document into the existing federal regulatory processes. For example, will other NEPA documents tier off of it, or incorporate it by reference? Will this Programmatic EIS be a "living or dynamic" analysis, and incorporate "site-specific" NEPA in the future? The applicability of this document after seven years is also unclear. 85-003

4. Comment - Support for Demonstration of Technology prior to Commercialization

DNR supports MMS in the recommendations to demonstrate alternative energy technologies as economically and environmentally feasible, with or without cable installation, prior to granting a commercial lease (section 3.5.1 – 3.5.2). DNR also supports MMS recommendations that a demonstration site will be subject to the same site characterization, construction, and operation and removal requirements as a commercial application. DNR suggests emphasizing that permitting requirements will be the same for both testing (demonstration) and a commercial facility. DNR encourages MMS to minimize extrapolation of results from the demonstration scale to the commercial scale with these new technologies, unless the results are clearly applicable. 85-004

5. Comment - Subsea Cable Installation

A use authorization is required for installation and maintenance of a subsea cable and associated structures on state-owned aquatic lands. No information is provided on how MMS intends to ensure applicants obtain such a use authorization, or integrate such requirements into the MMS leasing program. At a minimum, DNR recommends an enhanced discussion of standardized installation practices and/or best management practices for subsea cable installation. 85-005

6. Clarification - Natural Resource Damages

The installation of a subsea cable on state aquatic owned land where natural resources exist, such as shellfish or eelgrass beds, would not be considered a public benefit. DNR encourages MMS to provide requirements in its leasing program for applicants to use standardized utility corridors for installing subsea cables whenever possible. This requirement could decrease the overall cost associated with surveying, delineating, reporting on, and compensating for damage to submerged natural resources. 85-006

7. Clarification - Ocean Resources Management Act

Uses or activities that require federal, state, or local government permits or other approvals and that will adversely impact renewable resources, marine life, fishing, aquaculture, recreation, navigation, air or water quality, or other existing ocean or coastal uses, may be permitted only if the criteria listed under the Ocean Resources Management Act, RCW 43.143.030 (2) (a)-(f) are met or exceeded. MMS can locate the Ocean Resources Management Act (RCW 43.143.030) here: 85-007

http://apps.leg.wa.gov/RCW/default.aspx?cite=43.143

8. Comment/Question - Wave Height Impact Analysis

It is not clear from the document where the analysis on wave height impacts was derived from (section 5.3.1.3, p. 5-152). The analysis states a "large" wave energy facility could cause a reduction in wave height by 10 – 15% and a lowering of wave energy with the greatest impacts occurring within 1.2 miles of the device. DNR recommends that MMS provide citations for these numbers, and explain what "large" means (meters, acres, square feet). 85-008

MMS also states that in areas with a narrow continental shelf, such as Washington, it may be necessary to site wave energy facilities closer to shore. Therefore, it is imperative that MMS provide more information on how large wave energy facilities, placed close to shore, and are likely to influence wave energy and height.

9. Comment/Suggestion - Relationship of Wind, Wave energy to Climate Processes

DNR requests that MMS provide a clear analysis of how large wind and wave projects off the coast of Washington could influence (if at all) the California and Davidson current, local thermocline currents, and Rossby waves, at multiple spatial scales. DNR suggests that MMS also consider adding a section that addresses potential impacts of wind, wave and ocean current energy projects on climate processes. 85-009

10. Comment - Washington Ports and Dredging

The PEIS references the possibility that Washington ports may not be large enough to accommodate shipping of wind or wave energy components. The PEIS goes on to discuss that Washington ports may need expansion, including dredging, in order to accommodate such building material (section 5.2.13.3, p. 5 – 75, and elsewhere).

This appears to be a reasonable assumption for this document, but no analysis is associated with the statement. Did MMS review the capabilities of Washington ports? How much expansion is really required? Are there any ports along the western coast currently capable of handling the building materials? If so, instead of impacting the listed habitats by expanding smaller ports up and down the western coast, would it be more appropriate to use the existing ports for points of assembly? 85-010

In general, while the analysis is helpful, it appears port expansion or dredging is outside of the MMS jurisdiction. At a minimum, further detail on why such activities are truly required is requested. Both would need coordination with DNR Aquatics Program, Ports Program and Dredged Materials Management Program. 85-010 (cont.)

11. Question - Why is the lifespan of a wind park averaged at 20 – 25 years?

Given this knowledge, DNR recommends basing the life of the MMS lease upon ½ of the entire lifespan. This would provide MMS with an opportunity to re-evaluate the lease and impacts in 10 – 12.5 years. As a general rule, the DNR generally does not issue bedland leases for longer than 12 years without adequate justification. 85-011

12. Comment - Spills and Discharges

The PEIS is not clear about what types of hazardous materials will be used, including explosives, hydraulic fluids, or dielectric oils, and how a spill or discharge could potentially influence state owned aquatic land or waters. Mineral oil is referenced (page 5-33, section 5.2.6.3). In the State of California, mineral oil dielectric fluid is listed as a suspected carcinogenic agent. DNR suggests that applicants are provided with information on "green" dielectric fluids such as ester-based projects. 85-012

Thank you for this opportunity to comment,

Rich Doenges, Division Manager
Aquatic Resources Division

OCS 086

North Carolina Department of Cultural Resources
State Historic Preservation Office
Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

May 15, 2007

MMS Renewable Energy and Alternate Use
Programmatic EIS Scoping
Argonne National Laboratory
9700 S. Cass Avenue
Argonne, Illinois 60439

Re: Proposed Draft Programmatic EIS for alternate energy on the Outer Continental Shelf (OCS) Alternate Energy-Related Use (AEUR Program), CH 07-0862

Dear Sir or Madam:

We have reviewed the draft Programmatic EIS for the above project and offer the following comments. We concur with the discussion in Section 4.2.19 that there is a high probability for the presence of archaeological resources in the project area. This is particularly true for shipwrecks located off of North Carolina's Outer Banks, an area frequently referred to as "the Graveyard of the Atlantic." Our Underwater Archaeology Branch maintains historic research files that document over 5,000 shipwrecks along the state's coast. We also support the measures, outlined in sections 5.2.19 – 5.2.19.5 of the DEIS, designed to locate significant archaeological resources and mitigate the impact on those resources. 86-001

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-733-4763, ext. 246. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Peter Sandbeck

cc: State Clearinghouse

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-4763/733-8653
RESTORATION	515 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-6547/715-4801
SURVEY & PLANNING	515 N. Blount Street, Raleigh, NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-6545/715-4801

STATE OF CALIFORNIA
resources
AGENCY

ARNOLD SCHWARZENEGGER, Governor
MIKE CHRISMAN, Secretary

May 24, 2007

Mary Boatman, Programmatic EIS Coordinator
Alternative Energy and Alternate Use Program
Minerals Management Service
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9700 South Cass Avenue
Argonne, Illinois 60439

Dear Ms. Boatman,

Thank you for this opportunity to provide comments on the Mineral Management Service's (MMS) Draft Programmatic Environmental Impact Statement for the Alternative Energy and Alternate Use of Facilities on the Outer Continental Shelf (draft Programmatic EIS).

In September 2006, the Governors of California, Oregon, and Washington established the West Coast Governors' Agreement on Ocean Health. This agreement is a pledge by the three governors to work together to advance goals such as ensuring healthy ocean ecosystems, reducing impacts of offshore development, and fostering sustainable economies of coastal communities. The agreement also underscores the importance of managing activities that affect our oceans to account for the relationships among all ecosystem components, including humans and nonhuman species and the environment in which they live. The three states are currently collaborating on a regional action plan to address critical ocean and coastal protection and management issues, including the development of renewable energy projects.

California currently receives approximately 11 percent of its electricity from wind energy, geothermal resources and biomass sources located on land. As we look out to 2030, renewable energy could account for 33 percent or more of our electricity. Within that goal, energy from ocean waves is under serious consideration by the California Energy Commission's (CEC) research and development program and our investor-owned utilities have indicated possible interest as well. The CEC is in the final stages of preparing an ocean energy resource assessment for California. In addition, within the next few months, the California Ocean Protection Council will collaborate with the CEC on a study investigating the potential impacts to the marine environment resulting from ocean energy projects. Because of the potential for new alternative energy production in the California Outer Continental Shelf (OCS), we believe that the 'no action' alternative provided in the draft Programmatic EIS is not an appropriate or viable alternative for California. 87-001

1416 Ninth Street, Suite 1311, Sacramento, CA 95814 Ph. 916.653.5656 Fax 916.653.8102 http://resources.ca.gov

Further, the draft Programmatic EIS focuses on potential alternative energy development that may be initiated in the next five to seven years as well as potential alternate uses of offshore facilities in the same time frame. Because California's planning horizons for both alternative energy development and alternate uses of offshore facilities is well beyond seven years, we encourage the MMS to begin planning for long-term and large-scale projects. For example, there are currently twenty-three oil and gas platforms operating in the California OCS but to our knowledge no oil company has immediate plans to decommission any of these platforms. Public discussions regarding the alternative uses of decommissioned oil and gas platforms, be it creating artificial reefs, establishing aquaculture, or other uses are just beginning in California and often have been contentious. Under current law, these facilities are required to be removed upon termination of oil and gas extraction. 87-002 87-003

The Energy Policy Act of 2005 created an environment where the MMS has energy facility siting authority in the Exclusive Economic Zone while the Federal Energy Regulatory Commission (FERC) retains authority for siting within the Territorial Sea. In addition, the historic permitting and licensing processes developed under the Outer Continental Shelf Lands Act and the Federal Power Act, administered by the MMS and FERC respectively, do not appear to have much in common. In order to foster the renewable energy technology and industry, we urge the MMS to work with FERC to develop a process that makes permitting and licensing under the two agencies as consistent and seamless as possible. 87-004

While much is known about the technology and effects of oil and gas development, little is known about the technology and effects of alternative energy development on the OCS. Undoubtedly, much of this knowledge will be obtained through NEPA studies for individual projects. However, this does not preclude the need for research on new alternative energy technology or the alternate uses of OCS facilities. It is also important once the locations of potential new alternative energy or alternate use projects are identified, that the cumulative impacts from these projects be assessed. 87-005 87-006

If you should have any questions regarding our comments, please contact Assistant Secretary for Ocean and Coastal Policy Brian Baird. Brian can be reached by e-mail at brian@resources.ca.gov or by phone at (916) 657-0198.

We appreciate the leadership that the MMS has demonstrated in looking to the OCS as a source of renewable energy and we look forward to working with the agency as it develops an Alternate Energy-Related Use Program for the OCS.

Sincerely,

Mike Chrisman

Mike Chrisman
Secretary for Resources

cc: The Honorable Dirk Kempthorne,
Secretary of the Interior

The COMMONWEALTH OF MASSACHUSETTS
BOARD OF UNDERWATER ARCHAEOLOGICAL RESOURCES
OFFICE OF COASTAL ZONE MANAGEMENT
251 Causeway Street, Suite 800, Boston, MA 02114-2136
Tel. (617) 626-1200 Fax (617) 626-1240 Web Site: www.mass.gov/czm/buar/index.htm

May 15, 2007

Maureen A. Bornholdt
Program Manager
Alternative Energy & Alternative Use Program
Minerals Management Service
Argonne National Laboratory EVS/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: MMS Alternative Energy and Alternative Use Programmatic EIS

Dear Ms. Bornholdt:

The staff of the Massachusetts Board of Underwater Archaeological Resources (MBUAR) has completed its review of the *Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf* (Draft Environmental Impact Statement – March 2007).

Established in 1973, the MBUAR is the sole trustee of the Commonwealth's underwater heritage, promoting and protecting the public's interests in these resources for recreational, economic, environmental and historical purposes. Under Massachusetts General Law Chapter 6, sections 179-180, and Chapter 91, section 63, the MBUAR is charged with the responsibility of encouraging the discovery and reporting, as well as the preservation and protection, of underwater archaeological resources. The MBUAR's jurisdiction extends over the inland and coastal waters of the state. The MBUAR has been closely involved as a consulting party in the review of numerous federally assisted projects.

The MBUAR is pleased with the MMS's recognition of the archaeological sensitivity of the OCC, particularly in regard to potential submerged prehistoric archaeological sites. The MBUAR acknowledges that MMS will review projects and develop mitigation measures on a project-specific basis in consultation with the appropriate State Historic Preservation Officer(s) or the Advisory Council on Historic Preservation and Native American Tribes, including Tribal Historic Preservation Officers. However, the MBUAR suggests that the process for such consultation be specified in the FEIS along with more details of the MMS procedures for the unanticipated discovery of archaeological and or human remains. 88-001

Regarding the archaeological resources regulations for the development of alternative energy, which the DEIS states are currently being drafted (page 5-116), the MBUAR urges the MMS to solicit input from state historic preservation agencies. It is important that such regulations be flexible enough to allow for varying local historical and environmental conditions. In Massachusetts waters for example, experience has shown 15-meter lane spacing for magnetometer surveys to be more effective than the 30-meter lane spacing specified in the DEIS for magnetometer tows "along the East Coast". In addition to providing more accurate data and predictive models, consultation with state historic preservation agencies will provide greater continuity in regulations and site protection standards between the MMS and the various coastal states. 88-001 (cont.)

A lack of national and state inventories of submerged archaeological sites has been a serious impediment to preservation efforts. The MBUAR strongly encourages the MMS to undertake survey and assessment of those portions of the OCS that are considered to be archaeological sensitive. This task could be performed through the Coordinated OCS Mapping Initiative (Section 388b of the Energy Policy Act of 2005) and would be a significant step towards fulfillment of Section 110 of the National Historic Preservation Act of 1966 as amended (16 U.S.C. 470h-2), which requires the MMS to locate, identify, evaluate, nominate and protect National Register eligible historic properties and archaeological resources. 88-002

Plans for this resource identification and assessment, including provisions for the dissemination of survey results and the protection of sensitive resource locational data, should be included in the FEIS. 88-003

The Board appreciates the opportunity to provide these comments and looks forward to working with the MMS in the future to ensure the responsible and effective stewardship of our submerged cultural resources and maritime heritage. Should you have any questions regarding this letter, please do not hesitate to contact me at the address above, by telephone at (617) 626-1141 or by email at victor.mastone@state.ma.us.

Sincerely,

for Victor T. Mastone
Director

Cc: Brona Simon, MHC
Truman Henson, MCZM
MA Commission on Indian Affairs
Cheryl-Andrews Maltais, THPO, Wampanoag Tribe of Gay Head (Aquinnah)

OCS 089

THEODORE R. KULONGOSKI
GOVERNOR

May 21, 2007

MMS Alternative Energy & Alternate Use Programmatic Draft EIS
Argonne National Laboratory EVS/900
9700 South Cass Avenue
Argonne, IL 60439

Subject: MMS PDEIS for Alternative Energy and Alternate Use on the OCS

Dear Sir/Madam:

On behalf of Oregon Governor Ted Kulongoski, thank you for the opportunity to review the Minerals Management Service draft Programmatic Environmental Impact Statement (PDEIS) for the Outer Continental Shelf (OCS) Alternate Energy-Related Use Program. Governor Kulongoski is a strong proponent of wave energy development on Oregon's coast, and encourages your agency to establish a transparent, coordinated, and streamlined energy program. We offer the following comments to guide the development of that proposal. 89-001

Alternative energy is a topic of interest not only to the State of Oregon, but to our neighboring states of Washington and California. In September 2006, Governor Kulongoski joined Governor Gregoire and Governor Schwarzenegger to establish the West Coast Governors' Agreement on Ocean Health, a coordinated Pacific Coast ocean and coastal collaboration to address critical ocean and coastal protection and management issues faced by the states. This Agreement is a pledge by the governors to work together to advance goals such as ensuring healthy ocean ecosystems, reducing impacts of offshore development, and fostering sustainable economies of coastal communities. The Agreement also underscores the importance of managing activities that affect our oceans to account for the relationships among all ecosystem components. Under the Agreement, the states are currently developing a regional action plan, which may include items related to alternative energy projects.

Discussion of Impacts

The Minerals Management Service (MMS) has put an impressive amount of effort into the PDEIS. However, the tiered EIS system which is effective in the context of OCS oil and gas leasing is not as successful in the context of alternative energy development. Whereas much is known about the technology and effects of oil and gas development, little is known about the technology and effects of alternative energy development on the OSC. We recognize that much of this knowledge will be obtained at a later date, such as through analyses conducted under the National Environmental Policy Act (NEPA) for specific sites. 89-002

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It is important that future flexibility for management is ensured if new issues arise or study results reveal new concerns. We urge you to take an adaptive management approach to the siting and approval of projects, so that new projects can adjust according to lessons learned from previous projects to avoid or minimize adverse impacts on ocean resources. In addition, once the locations of potential new alternative energy or alternate use facilities are identified, the cumulative impacts from the facilities should be assessed. 89-002 (cont.)

The potential impacts of the proposed action to develop alternative energy facilities listed in Section 7 of the PDEIS includes the major categories we have explored in Oregon over the past two years of our own analysis and outreach on wave energy development. Governor Kulongoski initiated a collaborative process for the Reedsport Wave Energy Project proposed by Reedsport Ocean Power Technologies Wave Park, LLC. As part of a future Settlement Agreement for the Federal Energy Regulatory Commission (FERC) energy facility siting license for the Reedsport project, participants in the collaborative effort developed a list of scoping issues (attached). The highest priority issues that have been identified to date for the Reedsport project include: 89-003

- marine mammal injury and/or entanglement;
- effects of acoustic guidance on bird, fish and mammal behavior;
- effects of electromagnetic fields on sharks and rays;
- effects on or alteration of marine habitats and species assemblages within project areas;
- erosion, accretion and littoral cell modification;
- displacement of existing ocean users and uses; and
- public safety.

While there are many issues yet to be thoroughly evaluated, the 'no action' alternative is not an option for Oregon. The need to meet increasing energy demands, maintain alternative energy competitiveness, reduce energy imports, and reduce emissions associated with fossil fuel resources justify the need to explore alternative energy resources in the OCS. In addition, there appear to be significant advantages (energy density, predictability, location of resource to load centers, etc.) of ocean resources compared to conventional renewable resources. The development of alternative energy resources in the OCS will play a major role in the U.S. energy resource mix now and well into the future. 89-004

Regulatory Framework

A well-defined regulatory process is critical to the development of alternative energy facilities. We encourage MMS to fully develop the regulatory roadmap that developers would follow during the permitting process. Such a plan will create certainty in the regulatory process and support an estimate of resources required for development. 89-005

The Energy Policy Act of 2005 created a situation wherein MMS apparently has energy facility siting authority in the Exclusive Economic Zone, whereas FERC retains authority for siting within the Territorial Sea. Further, the historical permitting and licensing processes developed under the Outer Continental Shelf Lands Act (administered by MMS) and the Federal Power Act (administered by FERC) do not appear to have much in common. In the interest of developing renewable energy technology and industry, Oregon urges MMS to work with FERC to develop a memorandum of understanding that will serve to make permitting and licensing under two authorities as consistent as possible, or alternatively, to develop legislative concepts necessary to address this problematic discontinuity. We also ask that you include Oregon in discussions between MMS and FERC, as we have developed unique permitting perspectives based on the Reedsport experience.

89-006

Oregon's Leadership in Alternative Energy

The State of Oregon looks forward to participating with MMS at its national workshop on alternative energy environmental effects in Reston, Virginia on June 26-28, 2007. We also appreciate MMS' partial sponsorship and active participation in the workshop on Wave Energy Ecological Effects to be conducted at Oregon State University's Hatfield Marine Science Center on October 11-12, 2007. These exercises should identify priorities for the design of monitoring programs and adaptive management under which alternative energy demonstration projects can be responsibly developed.

The PDEIS identifies potential negative impacts that alternative energy activities may have on marine ecosystems as well as possible socioeconomic changes that may be realized by coastal communities. Oregon has positioned itself to deploy wave energy facilities within the Territorial Sea off that will contribute to the analysis required to verify whether this renewable energy technology benefits our state as we believe it will. We look forward to working with MMS as the agency develops its Alternate Energy-Related Use Program for the OCS. Thank you for inviting Governor Kulongoski's comments.

Sincerely,

Michael Carrier
Natural Resources Policy Director

MC:JH:ab
enclosure

OREGON SOLUTIONS

DECLARATION OF COOPERATION

Reedsport Wave Energy Project

May 15, 2007

Project Conveners

Senator Joanne Verger, Oregon State Senate District 5
Keith Tymchuk, Mayor of Reedsport and Port of Umpqua Commissioner

Preface

The Reedsport Wave Energy Project was designated as an Oregon Solutions project by Governor Kulongoski in October 2006. The goal of the project is to define and ensure broad stakeholder involvement in the regulatory process for the Reedsport Wave Energy Project proposed by Reedsport OPT Wave Park, LLC (OPT). It is intended that as an ancillary benefit this project will also provide valuable information for other wave energy projects along the Oregon Coast.

Background

Oregon is actively working to become a national and international leader in wave energy. Over the past two years, stakeholders, state and federal agencies have been working to understand the impacts and the regulatory processes required for development of this industry in Oregon.

To advance the efforts in the state, the Oregon Innovation Council has recommended that the State Legislature designate wave energy as an emerging industry and invest $5.23 million in production incentives and investments. The Council estimates the investment in wave energy will provide 243 new jobs and generate more than $9 million in new labor income.

However, to fully maximize the potential future benefits, Oregon must ensure a thorough and timely planning and regulatory process. The Reedsport Wave Energy Project was designated as an Oregon Solutions project to provide a collaborative environment within which to clarify and define project-specific requirements.

The Reedsport project will provide very useful project-specific information while also highlighting many state-wide issues that must be addressed. These issues are under discussion in other forums and are not intended to be addressed by this project. Further,

OCS 090

STATE OF CALIFORNIA — ARNOLD SCHWARZENEGGER, *Governor*

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

PAUL D. THAYER, *Executive Officer*
California Relay Service From TDD Phone **1-800-735-2922**
from Voice Phone **1-800-735-2929**

Contact Phone: (916) 574-1890
Contact FAX: (916) 574-1885

May 16, 2007

MMS Alternative Energy and Alternate Use Programmatic EIS
Argonne National Laboratory
9700 S. Cass Avenue, EVS/900
Argonne, IL 60439

SUBJECT: **OCS ALTERNATIVE ENERGY AND ALTERNATE USE PROGRAMMATIC EIS**

Staff of the California State Lands Commission (CSLC) has reviewed the Draft Programmatic Environmental Impact Statement (EIS) for the above referenced proposed project. Based on this review, we offer the following comments.

By way of background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation and open space. The State's sovereign ownership includes a three-mile wide band of tide and submerged land adjacent to the coast and offshore islands of the State. The landward boundaries of the State's sovereign interests are often based upon the ordinary high water marks of these waterways as they last naturally existed, prior to artificial influences which may have altered or modified the shoreline characteristics. Such boundaries may not be readily apparent from present day site inspections. The State's sovereign interests are under the jurisdiction of the CSLC.

The facts pertaining to the project, as we understand them, are these:

The Energy Policy Act of 2005 delegates to the United States Department of the Interior (DOI) discretionary authority to grant leases, easements, or rights-of-way for activities on the U.S. Outer Continental Shelf (OCS) for the development and support of energy resources other than oil and gas and to allow for alternate uses of existing facilities on the OCS. This authority is to be exercised by the Minerals Management Service (MMS), a bureau of the DOI. A new program within MMS is in the process of being established to oversee these new operations on the OCS. It will be known as the OCS Alternative Energy and Alternate Use Program. The projects to be considered

under the Program include, but are not limited to, offshore wind, wave, ocean current, and solar energy capture technologies. The technology of generating hydrogen using the energy captured from one of the above alternative resources on the OCS and transporting the hydrogen to the shore is also included among the OCS Program projects. MMS was also given jurisdiction over other projects that make alternate use of existing oil and natural gas platforms in Federal waters. Alternate uses of these facilities may include, but would not be limited to, offshore aquaculture, research, education, recreation, support for other offshore operations and facilities, and telecommunications. The Draft Programmatic EIS only addresses those projects anticipated to be pursued within the next five to seven years.

After review of the information contained in the Draft Programmatic EIS, it is possible that some of the alternative energy projects or their components (including pipelines, conduits, or cables) may extend onto State-owned sovereign lands in the Pacific Ocean. A lease from the CSLC is required for any portion of a project extending onto State-owned lands under its jurisdiction. The CSLC has issued right-of-way leases in conjunction with existing OCS platforms. Alternate use of these platforms may require amendments to the existing CSLC leases. The Draft Programmatic EIS does not contain sufficient information to determine whether any of the projects to be considered encroach onto sovereign lands under the jurisdiction of the CSLC. Please provide detailed plans of specific projects at such time as they are available so that the CSLC can make an accurate determination as to its jurisdiction. 90-001

In addition, the Draft Programmatic EIS does not contain project specific information or analysis as required by the California Environmental Quality Act (CEQA). Therefore, any projects developed within the CSLC's jurisdiction will be subject to additional environmental review. Standards for this review are set forth in the CEQA, the State CEQA Guidelines, and the Public Resources Code.

Questions concerning the CSLC's jurisdiction may be directed to Colin Connor, Assistant Chief, Land Management Division at (916) 574-1241. You may contact Scott McFarlin, Environmental Scientist, at (916) 574-1310 to discuss environmental review.

Sincerely,

Marina R. Brand

Marina R. Brand, Assistant Chief
Division of Environmental Planning
and Management

cc: Colin Connor, CLSC
cc: Scott McFarlin, CLSC

OCS 091

The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

May 4, 2007

Maureen A. Bornholdt
Program Manager
Alternative Energy & Alternative Use Program
Minerals Management Service
Argonne National Laboratory EVS/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: MMS Outer Continental Shelf Alternative Energy & Alternative Use Programmatic EIS.
MHC #RC.42049.

Dear Ms. Bornholdt:

The Massachusetts Historical Commission (MHC) has reviewed the *Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf.* MHC should be provided a paper copy of the Final Environmental Impact Statement (EIS) when it is published and available for comment.

The MHC, the office of the State Historic Preservation Officer, has broad duties in historic preservation to protect the Commonwealth's interest in historic and archaeological resources. MHC has an important role in both state and federal historic preservation laws and regulations, as part of environmental review for proposed projects that seek state or federal funding, permits, licenses, or approvals (16 USC 470f (36 CFR 800); MGL c. 9, ss. 26-27C (950 CMR 71)). In addition, the MHC is the office of the State Archaeologist (MGL c. 9, ss. 26A-27C (950 CMR 70)). The Executive Director of the MHC and the State Archaeologist both serve on the Massachusetts Board of Underwater Archaeological Resources (MGL c. 6, s. 179). The Massachusetts Board of Underwater Archaeological Resources has particular expertise in underwater archaeological resources, and has been closely involved as an interested and consulting party in reviews of Federally assisted projects.

Minerals Management Service (MMS) proposes that project-specific reviews and consultation will be undertaken with the appropriate SHPOs and THPOs. The Final EIS should indicate how the SHPOs and THPOs and other consulting and interested parties will be determined and how direct notification and consultation is proposed to occur consistent with 36 CFR 800. 91-001

The regulations and guidance to lessees for cultural resources cited on page 4-105 and 5-116 should be included as appendices for the convenience of the readers of the Final EIS. MHC is very interested in receiving direct notice to review and comment on the similar regulations to 30 CFR 250.194 (archaeological resource review by MMS) currently being drafted, as described on page 5-116.

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www.sec.state.ma.us/mhc

In addition to Section 106 noted in the Draft EIS, the Final EIS should outline how MMS proposes to comply with Section 110 of the National Historic Preservation Act of 1966 as amended (16 U.S.C. 470h-2). Section 110 requires that MMS should undertake cultural resource surveys to locate, identify, evaluate, nominate, and protect historic and archaeological properties that are eligible for listing in the National Register of Historic Places. Section 110 has other specific requirements regarding the protection of significant historic and archaeological properties on federal property. 91-001 (cont.)

MHC suggests that MMS can begin the identification and evaluation effort required under Section 110 through the Coordinated OCS Mapping Initiative (Section 388b of the Energy Policy Act of 2005), by which MMS is required to undertake a survey and assessment of the OCS that are likely to contain submerged cultural resources. MHC recommends using state-of-the-art archaeological and geotechnical sciences and technologies, implemented by experienced professionals who are versed in recent, relevant, regional literature and findings reported to State and Tribal Historic Preservation Offices, state archaeologists, state underwater archaeology commissions, national and international archaeological organizations, academics, avocationalists, and federal agencies (such as the US Navy, NOAA, the Coast Guard, the US Army Corps of Engineers, and other agencies in the Department of Interior). Technical reports of these survey efforts should be provided, as appropriate, to interested constituencies. 91-002

The Draft EIS (pp. 4-105 to 4-109) concisely summarizes generally the likely presence of significant historic and archaeological resources in these areas of potential effect. Reference to more current published research summaries should be included in the Final EIS. Important advances are being made in studies of submerged and emergent lands containing maritime-related cultural resources in North America (particularly in the Gulf of Maine and the Canadian Maritimes regions) and important comparatively in Europe (particularly in the North Atlantic) (see http://www.science.ulster.ac.uk/cma/slan/). A major, and broadly applicable research statement was recently published as the lead article in the new *Journal of Island and Coastal Archaeology* (J.M. Erlandson and S.M. Fitzpatrick 2006 Oceans, islands, and coasts: Current perspectives on the role of the sea in human prehistory. *JICA* 1(1): 5-32). Advances in management and public interpretation of underwater cultural resources are also considered in recent literature. MMS staff have made notable contributions to public interpretation of shipwreck sites, especially using internet-base formats (see J.H. Jameson, Jr., and D.A. Scott-Ireton (Eds.) 2007 *Out of the Blue: Public Interpretation of Maritime Cultural Resources.* Springer, New York.). 91-003

Regarding archaeological surveys for specific projects, a complement of advanced technologies are required to locate and identify archaeologically sensitive areas, particularly those likely to contain buried ancient Native American sites. Predictive modeling needs to be based on the relevant, regional culture history, archaeology, and geology and so requires regional specialists. The research teams should include individuals in the earth sciences with particular experience in the reconstruction of ancient landforms, the submergence and emergence processes, and site formation and transformation processes in the relevant region. The vast and often highly technical literature relevant to particular investigations requires a coordinated and experienced research team.

The results of these technical studies have important research value to scholars and the public. As with all vulnerable cultural resources, sensitive cultural resource locational data should be confidential, and access to the data should be carefully considered and strictly limited to protect the resources from looting, vandalism, and desecration. Means to disseminate data to state, federal, and tribal agencies, interested scholars, and the public should take into account the purposes and the variable qualities and detail of data required by these various constituencies. Technical research reports, and the associated data, specimens, and samples (including sediment cores) have permanent archival value and must be preserved in a suitable curatorial facility to ensure access and security.

In some places, human remains may be present on the OCS, and these locations are considered to be graveyards by affiliated descendants and the public at large. Disrespectful interference with these last resting places is viewed with abhorrence by the nation, and even internationally when remains of citizens from other countries are involved. Federal and international maritime law and diplomatic agreements govern the protection of human remains and lost vessels, both civilian and military, on the OCS. The Final EIS should outline how MMS proposes to treat locations with human remains, consistent with the spirit and letter of federal and international law and agreements about these matters. 91-004

In addition to the typical archaeological data recovery sampling and documentation, enhanced mitigation measures should be incorporated in situations where destruction of a significant cultural resource cannot be feasibly avoided (however, given the vastness of the ocean, avoidance is typically feasible). Public education initiatives; land purchases; off site mitigation such as funding collections and archives conservation; and endowing scholarly research, publication, and preservation funds for maritime-related resources, should be incorporated as part of the mitigation and the lease agreements. 91-005

These comments are offered to assist in compliance with Sections 106 and 110 of the National Historic Preservation Act of 1966 as amended. If you need further information or have any questions concerning these comments, please contact Edward L. Bell of my staff.

Sincerely,

Brona Simon

Brona Simon
State Historic Preservation Officer
Executive Director
State Archaeologist
Massachusetts Historical Commission

xc:
Advisory Council on Historic Preservation
National Conference of State Historic Preservation Officers
National Association of Tribal Historic Preservation Officers
National Association of State Archaeologists
Massachusetts Commission on Indian Affairs
Wampanoag Confederacy
Vernon Lopez, Mashpee Wampanoag Tribe
Guy Cash, Mashpee Wampanoag Tribe
Glen Marshall, Mashpee Wampanoag Tribe
Cheryl-Andrews Maltais, THPO, Wampanoag Tribe of Gay Head (Aquinnah)
Secretary Ian A. Bowles, Massachusetts Executive Office of Energy & Environmental Affairs
Massachusetts Coastal Zone Management
Massachusetts Board of Underwater Archaeological Resources
Society for American Archaeology
Society for Historical Archaeology
Advisory Council on Underwater Archaeology

OCS 092

Florida Power & Light Company, Environmental Services Dept., P.O. Box 14000, Juno Beach, FL 33408

FPL

May 18, 2007

MMS Alternative Energy & Alternative Use Programmatic EIS
Argonne National Laboratory EVS/900
9700 S. Cass Ave.
Argonne, IL 60439

RE: Comments on Draft Programmatic EIS

To Whom it may Concern:

FPL Group represents both Florida Power & Light Company (FPL- the regulated electric utility in Florida) and FPL Energy (the unregulated entity with projects located throughout the U.S.) is pleased to submit this letter to the Minerals Management Service (MMS) regarding the draft Programmatic EIS (PEIS) on Outer Continental Shelf (OCS) Alternative Energy. FPL Group owns and operates over 37,000 megawatts (MW) of electric capacity throughout the country. We are also one of the leaders in the development, construction and ownership of renewable energy sources. FPL Energy is the largest developer of wind energy in the world and also owns the largest solar plant in the country. FPL Energy is also currently involved in developing the Long Island Offshore Wind Park including the ongoing preparation of the Draft Environmental Impact Statement by the Minerals Management Service (MMS). In addition, FPL is the largest electric utility in Florida and serves basically the entire east coast of the Florida peninsular. This is important since a part of potential alternative energy development of the OCS over the next decade could occur off the east coast of Florida.

FPL Group applauds the MMS for taking a leadership role in the preparation of this draft PEIS. We believe that there will be a growing demand for renewable energy options as the U.S. begins to address climate change issues and starts to promote the aggressive development of alternative energy. The renewable energy opportunities potentially available on the OCS are of significant national importance. They will provide energy security, economic development, and environmental benefits. In addition to our ongoing development of offshore wind, FPL Group is working with several developers and academic institutions to assess some of these emerging technologies. In this process, we are looking at technologies that may be available in the next decade that would be reliable, cost effective, and environmentally sound. 92-001

We believe that the MMS has done a comprehensive job in the draft PEIS of trying to identify and address the potential environmental impacts of these alternative energy technologies. FPL Group strongly encourages MMS to finalize this PEIS and the corresponding regulations currently being developed in order to promote the appropriate 92-002

implementation of these renewable energy projects in a timely manner. The demand for electricity continues to grow in the U.S. In Florida the demand is growing almost twice as fast as the national average. Therefore the sooner the MMS can finalize the PEIS and related rules, the more quickly companies can establish demonstration and commercial projects and conduct the necessary site specific studies required to introduce these new technological options to our mix of renewable energy choices. Furthermore, FPL Group concurs with the Draft PEIS that it is premature to focus upon any programmatic development that would presume widespread viability on the Outer Continental Shelf (OCS) in the near future. Alternative energy development companies must have the opportunity to identify proposed sites that could be commercially viable. This will allow project developers to operate efficiently and develop available sites appropriately. 92-002 (cont.)

FPL Group does recommend that the MMS consider several environmental issues as part of any project assessment of environmental impact. First, the regulatory review process must limit the analytical review to criteria applicable to anticipated environmental impacts and not insignificant or hypothetical assumed impacts. Second, any alternatives analyses consistent with the National Environmental Policy Act must be reasonable. Finally, provisions in the rules currently under development should provide for streamline permitting on an expedited basis, especially for small pilot projects, that would be necessary to determine the feasibility of a particular new technology. This would allow for developers, academic institutions, scientists and others to gather "real time" operational data as well as promote the development of new technologies. We believe that in order to be leaders in these new energy technologies, the U.S. needs to aggressively pursue many of these new technologies. By having a streamline permitting process, the MMS will provide a tremendous boost to the development of new technologies, reduce our impact on the environment and provide for greater national energy security. 92-003 92-004

FPL Group will be actively involved in the finalization of this Programmatic EIS as well as the ongoing rulemaking process. We encourage MMS to continue to move expeditiously to complete this effort consistent with the Energy Policy Act of 2005 and its goal of encouraging clean, alternative energy technologies on the OCS. FPL Group has participated in this Programmatic Draft Environmental Impact Statement process including submittal of comments in February 2006, attendance at Programmatic Draft EIS scoping hearings, and the May 2, 2007 public hearing in Miami. We look forward to continuing to work together on this important issue.

Please feel free to contact me directly at Winifred_Perkins@fpl.com or at (561) 691-7046.

Sincerely,

Winifred G. Perkins
Manager of Environmental Relations

OCS 093

Mr. Chris Oynes
MMS Alternative Energy & Alternate Use Programmatic EIS
Argonne National Laboratory EVS/900
9700 S. Cass Ave.
Argonne IL 60439

Dear Mr. Chris Oynes, May 21, 2007

I am concerned about allowing energy companies to abandon unused oil platforms. MMS should not allow energy companies to avoid paying the costs of removing their rigs. Nothing in the 2005 Energy Act gives MMS such new authority. 93-001

I also am concerned that MMS plans to establish a program to permit industrial fish farming in federal waters. The draft PEIS does not adequately address the ecological, human health, & economic impacts of fish farming. Fish farms anchored off oil rigs may: 93-002

- Cause long-term contamination of the marine environment.
- Threaten the environment & consumers (1. the connection between oil & gas rigs & elevated mercury levels in surrounding sediments & fish & 2. chemicals, antibiotics, & hormones used to raise fish in crowded conditions).
- Transmit disease & parasites to wild fish populations.
- Deplete wild fish populations (farmed finfish require wild fish for feed).
- Harm marine ecosystems (when non-native or genetically distinct farmed fish escape & interact with wild fish populations).

I respectfully request you consider these factors & do not exceed the authority granted to you under the Energy Act of 2005.

Linda Demler
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OCS094

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

May 23, 2007

Maureen A. Bornholdt
MMS Alternative Energy & Alternate Use Programmatic EIS
Argonne National Laboratory, EVS 900
9700 S. Cass Ave
Argonne, IL 60439

RE: **Draft Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf**

Dear Ms. Bornholdt,

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) has completed its review of the Draft Programmatic Environmental Impact Statement (DPEIS) for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf. We offer the following comments for your consideration.

The Minerals Management Service (MMS) should evaluate an alternative under which MMS conduct advanced planning to identify the best locations and consider the cumulative impacts of alternative uses of the outer continental shelf (OCS). This approach contrasts the proposed action in which MMS proposes to establish a program characterized by MMS reaction to, and review of, developer-selected projects with no advanced stakeholder/MMS planning process. A proactive approach to program development and permit approvals would ensure minimization of impact to natural resources and conflicting uses. The proper placement of facilities cannot be done without baseline studies for species usage, existing human uses, and knowledge of resource potential. MMS should not just dismiss this alternative without discussion. 94-001

In support of a planning approach to program development, MMS should explore the creation of regional and/or state partnerships with interest in developing offshore alternative energy opposed to leaving the siting consideration up to potential developers. This would ensure an increase in stakeholder buy-in, properly addressed siting issues prior to developer proposals, decreased conflicts with critical existing uses such as 94-002

shipping and navigation, minimizing impacts to species such as marine mammals, migratory and resident avian populations and other natural resources. Information regarding essential habitats, migration patterns, and behavioral responses of species to habitat alterations must inform decisions with regards to the appropriate placement of offshore facilities and is essential to the successful implementation of this program. MMS should initiate a program to gather this information and enter into cost sharing efforts with states interested in pursuing responsible development of offshore alternative energy. 94-002 (cont.)

Cumulative impacts needs a more robust assessment. The 5-7 year timeframe of the PEIS is not a reasonable indicator of the impact this program will have on the OCS. The existing interest in development of alternative energy on the OCS indicates a massive increase in facilities built in an environment where none have existed prior. To achieve the benefits stated within the DPEIS, large areas of the OCS will have to be developed and it will most likely fall outside of the 5-7 year timeframe. Although addressing the cumulative impacts from future developments is difficult, it is a necessity in determining that this program would not have an undue impact to natural resources and existing uses. By addressing this program within a 5-7 year timeframe, MMS is afforded the ability to dismiss potential impacts from a future where there is large-scale deployment of alternate energy facilities. A robust examination of cumulative impacts should not be left to individual projects. 94-003

In comparing alternatives, looking at increased fossil fuel usage on land if offshore isn't developed, ignores the fact that the majority of renewable energy is and will continue to be developed onshore. Even in European countries that have offshore wind energy, the amount of energy produced offshore is small relative to the amount generated onshore. The United States is not at a land deficit as many European countries are, and the interest in offshore development is driven by the desire to site near load centers to take advantage of energy pricing structures in these areas. In addition to developing more renewable energy facilities, there is a great opportunity to reduce greenhouse emissions through the use of conservation and energy efficiency measures. 94-004 94-005

Also attached is the testimony given at a previous public hearing by a representative of the NJDEP's Coastal Management Program regarding the Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf. Thank you for giving the New Jersey Department of Environmental Protection the opportunity to comment on the DPEIS.

Sincerely,

Kenneth C. Koschek

Kenneth C. Koschek
Supervising Environmental Specialist
Office of Permit Coordination
and Environmental Review

C: Ruth Ehinger, NJDEP
Attachment

Good Evening, My Name is Kevin Hassell. I'm with New Jersey's Coastal Management Program. I make my comments this evening on behalf of the New Jersey Department of Environmental Protection.

We are pleased to have an opportunity to comment on the Draft programmatic EIS and we appreciate the effort by MMS that has obviously gone into preparing this document. At the same time, we realize that much hard work by MMS on this issue remains. My comments this evening are preliminary and the Department will furnish more specific written comments soon in response to the Programmatic EIS posting.

Both the current economic environment and concerns regarding greenhouse gas emissions have created substantial interest in the development of renewable and alternative sources of energy. However, suitable sites for creating land based renewable energy facilities in the vicinity of major load centers are often scarce or unavailable. This situation has spurred considerable interest in potential offshore resources, such as wind, waves and currents. New Jersey is no exception.

New Jersey is moving forward with bold initiatives that recognize the effects of our energy use upon the environment. One such progressive action is Governor Corzine's recent Executive Order No. 54, which calls for aggressive reductions in statewide greenhouse gas emissions. Another significant step is the updating of New Jersey's Energy Master Plan, which is being undertaken by the New Jersey Board of Public Utilities.

Renewable energy technologies, coupled with conservation and energy efficiency, hold great promise in providing for our energy needs. New Jersey fully supports development of offshore alternative energy facilities that are compatible with our natural resources, our tourism economy, and critical existing uses such as shipping, navigation and fisheries. Establishment of the Alternate Energy-Related Use Program is an important step regarding regulation of offshore energy facilities on the Outer Continental Shelf.

As presented in previous comments to MMS, New Jersey is concerned about the absence of baseline data for a variety of species including birds, fish, marine mammals, and reptiles, some of which are endangered or threatened, that may be affected by the construction of offshore facilities.. Information regarding essential habitats, migration patterns, and behavioral responses of species to habitat alterations must inform decisions with regards to the appropriate placement of offshore facilities and is essential to the successful implementation of this program.

Perhaps more difficult to quantify are the cumulative impact of sitting decisions. The actual impact of this program will not be fully evident within the 5-7 year timeframe discussed in the EIS but rather many years in the future. I would like to emphasize that New Jersey strongly feels that cumulative impact analyses are an essential element that must be considered in siting offshore energy projects. The Department of Environmental Protection looks forward to pursuing technical and cost-sharing opportunities with MMS to advance these goals of environmentally responsible offshore energy production..

The Department is pleased to announce that its Division of Science, Research and Technology issued a Solicitation for Research Proposals less than a week ago on April 19th. The objective of this approximately $4.5 million study, funded with the approval of Governor Corzine, is to conduct baseline studies in waters off New Jersey's coast to elucidate the use of this area by marine and marine-associated species. This investigation will include collection of data on the distribution, abundance and migratory patterns of avian, marine mammal, sea turtle and other species in the study area during an 18-month period. The SRP can be viewed at www.nj.gov/dep/dsr

The Department established an internal Technical Review Committee, which was responsible for drafting the SRP, and will review the proposals and select a contractor to undertake this important work. Because of the importance of this project, New Jersey felt it was appropriate to request the involvement of federal agencies, including NMFS, USFWS and of course MMS. Once again, the Department would like to thank the Minerals Management Service for agreeing to serve as part of New Jersey's review committee.

Baseline ecological studies such as the one New Jersey has initiated are essential to an appropriate and functional alternative energy program on the OCS. We vigorously encourage MMS to urge other states to undertake similar endeavors. In the future, New Jersey hopes to continue its relationship with MMS as a funding partner in the examination of essential offshore energy facility issues.

New Jersey recognizes that we face a serious and growing threat from climate change that must be addressed, and New Jersey has set out to be a leader in developing clean, renewable sources of energy that will contribute to mitigating this threat.

In considering proposals to generate energy from alternative sources on the Outer Continental Shelf, we must be vigilant to the potential for unintended consequences. We should require a comprehensive EIS for each project, and then proceed secure in the knowledge that we have fully considered the consequences of each proposals and practicable alternatives.

Thank you for your efforts to date in addressing this complex issue. As previously indicated, the State of New Jersey will provide written comments to this panel that address specific issues within the scope of the Draft Programmatic EIS.

OCS 095

From: Egeland, Tom A CIV ASSTSECNAV IE WASHINGTON DC, OASN(I&E) [mailto:tom.egeland@navy.mil]
Sent: Monday, May 14, 2007 1:50 PM
To: Maureen Bornholdt
Cc: james.bennett@mms.gov; mary.boatman@mms.gov; Biwer, Bruce M.
Subject: DON Comments on DEIS for AEAU

Maureen -- Department of the Navy comments on the MMS prepared draft programmatic environmental impact statement for Alternative Energy and Alternate Use are attached.

For more detailed information concerning offshore military use areas and activities, please contact:

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An excellent source document for information on DoD ranges is the Department of the Defense Annual Report to Congress on Sustainable Ranges submitted by the Office of the Secretary of Defense, Under Secretary of Defense (Personal and Readiness). Our POC for this report is:

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8/6/2007

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Please let me know if you have any questions. Thanks, Tom

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GENERAL COMMENTS

The EIS does not accurately portray the Navy's Range Complexes (Range Complexes consist of: Restricted Areas, Warning Areas, and Military Operating Areas.) The Navy has many offshore training locations that need to be represented in this document. 95-001

The DoD utilizes many offshore locations for training purposes and to ensure safety of all, site consultation with the DoD needs to be conducted prior the implementation of any surveys or other information gathering efforts. This requirement needs to be better addressed throughout the document. 95-002

The EIS does not sufficiently acknowledge the potential for impacts upon DoD readiness and training. DoD is mentioned only once in the Executive Summary (Cumulative Impacts of the Proposed Action). The likely interaction between MMS and DOD regarding planned activities on or near DoD operating areas should be addressed more extensively throughout the document. 95-003

SPECIFIC COMMENTS

- Executive Summary (Wind Energy),pg. ES-5, Site Characterization, after the first sentence, add the following: "Prior to conducting these studies, MMS will consult with DoD, to ensure proposed site location does not conflict with the national defense mission and related military training operations and exercises." 95-004

- Executive Summary (Wind Energy), pg. ES-6, Mitigation Measures, first sentence, add the following: after "archaeological sites" ... "and DoD training and exercise activities, to include land, air, surface and sub-surface operations." 95-005

- Executive Summary (Wave Energy),pg. ES-8, Site Characterization, after the first sentence, add the following: "Prior to conducting these studies, MMS will consult with DoD, to ensure proposed site location does not conflict with the national defense mission and related military training operations and exercises." 95-006

- Executive Summary (Wave Energy), pg. ES-9, Mitigation Measures, first sentence, add the following: after "archaeological sites" ... "and DoD training and exercise activities, to include land, air, surface and sub-surface operations." 95-007

- Executive Summary (Ocean Current Energy),pg. ES-10, Site Characterization, after the first sentence, add the following: "Prior to conducting these studies, MMS will consult with DoD, to ensure proposed site location does not conflict with the national defense mission and related military training operations and exercises." 95-008

- Executive Summary (Ocean Current Energy), pg. ES-11, Mitigation Measures, first sentence, add the following: after "archaeological sites" ... "and DoD training and exercise activities, to include land, air, surface and sub-surface operations." 95-009

- Executive Summary (Summary of Potential...), pg. ES-13, Mitigation Measures, add the following: after last sentence, "In all cases, alternate use of existing facilities should take into account impacts on DoD at-sea training activities, to include air, surface and sub-surface operations." 95-010

- Executive Summary (Cumulative Impacts ...), pg. ES-14, add the following: 3rd paragraph, after "commercial fisheries," add "DoD training and exercises," 95-011

- Executive Summary (Cumulative Impacts ...), pg. ES-14, add the following: 4th paragraph., after 3rd sentence, add new sentence ..." Cumulative impacts to DoD training activities could be of concern if exclusion areas were established in the vicinity of Fleet concentration areas and/or adjacent to DoD areas of operations." 95-012

- Question/Comment... Chapter 1 (Intro), pg. 1-13, Section 1.6. Second paragraph: Is MMS not required to consult with DoD as with other federal agencies? 95-013

- Chapter 3 (Overview), pg. 3-18, Section 3.5.2 (Site Characterization), 1st paragraph, 1st sentence, add: "...commercial fishing and DoD training and operations)." 95-014

- Chapter 3 (Overview), pg. 3-18, Section 3.5.2 (Site Characterization), Add the following bulleted-paragraph prior to the 1st bulleted paragraph, "to ensure the alternative energy project does not interfere or conflict with military training operations consultation with DoD will occur prior to the initiation geological, geophysical, and geotechnical surveys. 95-015

- Chapter 4, pg. 4-92, Section 4.2.16, first paragraph, add: "..U.S. Air Force, Navy, Marine Corps and Special Operations Forces to conduct ..." 95-016

- Chapter 4, pg. 4-93, Section 4.2.16, fourth paragraph, It is stated that "Warning areas are the most relevant to the alternative energy program", Warning Areas define where military Air Operations will occur, however many of these same Warning Area footprints are also classified as military operating areas (OPAREAs). OPAREAs define where the Navy conducts surface and subsurface training and operations. These areas are the most "relevant" to the alternative energy program. Furthermore, suggest adding the following sentence: "Most importantly, Navy Fleet and Marine Corps amphibious training occurs nearly 365 days per year all along the east coast (OPAREAs, Warning Areas and Restricted Areas from the Virginia Capes to Jacksonville). The level of activity varies from unit level training to full scale Carrier/Expeditionary Strike Group operations and certification." 95-017

- Chapter 4, pg. 4-176, section 4.3.16, add the following sentence: "The Gulf of Mexico region supports a wide variety of military test and training activities that stretch from the eastern Gulf adjacent to Key West all the way west to include the onshore and offshore areas of Texas." 95-018

- Chapter 4, pg. 4-255, section 4.4.16, add the following sentence: "Navy Fleet and Marine Corps amphibious training occurs nearly 365 days per year all along the west coast (Warning Areas and Restricted Areas from Washington to Southern California). The level of activity varies from unit level training to full scale Carrier/Expeditionary Strike Group operations and certification." 95-019

- Figures 4.2.17-1, 4.2.17-2, 4.3.17-1, 4.3.17-2, 4.4.17-1, 4.4.17-2, do not accurately depict the Navy's training areas in the Atlantic, Gulf of Mexico and the Pacific. (the attached pdf, illustrates the Navy's training areas). Recommend revising the figures and label the Navy Range Complexes. The Navy Range Complexes include the associated restricted, warning and operating areas. 95-020

- Ch 5 "Potential Impacts": Sect 5.2.16, 5.3.16, 5.4.16 address in a superficial analysis the potential impacts on "Military Use Areas" from Wind, Wave and Ocean Current alternative energy projects. The mitigation measures say only that effective coordination is required w/ DoD to minimize or eliminate impacts. These paragraphs should be rewritten to be stronger and specific in their analysis. 95-021

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