A COMPARATIVE ANALYSIS OF THE DEVELOPMENT AND APPLICATION OF MARINE NAVIGATION SAFETY AND MARINE ENVIRONMENTAL PROTECTION CRITERIA FOR OFFSHORE RENEWABLE ENERGY INSTALLATIONS

HON. PAUL C. BROUN

OF GEORGIA

IN THE HOUSE OF REPRESENTATIVES

Thursday, July 18, 2013

Mr. BROUN of Georgia. Mr. Speaker, on April 16, 2013, the House Science, Space, and Technology Subcommittees on Oversight and Energy held a joint hearing titled, ''Assessing the Efficiency and Effectiveness of Wind Energy Incentives.'' The attached document contains excerpts from an analysis that is part of the record for that hearing.

''A COMPARATIVE ANALYSIS OF THE DEVELOPMENT AND APPLICATION OF MARINE NAVIGATION SAFETY AND MARINE ENVIRONMENTAL PROTECTION CRITERIA FOR OFFSHORE RENEWABLE ENERGY INSTALLATIONS, MARCH 11, 2013'', BY: JOHN F. MCGOWAN, RADM USCG (RET), FOR: THE MCGOWAN GROUP, LLC.

INTRODUCTION

The following has been excerpted from an analysis performed in March 2013 by The McGowan Group, LLC.

In recent years, the Department of the Interior's Bureau of Ocean Energy Management (BOEM) and the U.S. Coast Guard (USCG) has taken steps to establish a process and standards for the leasing of areas for development of Offshore Renewable Energy Installations (OREIs) on the U.S. Outer Continental Shelf (OCS). In 2006, the USCG embarked on setting standards to safeguard marine safety and marine environmental protection for the siting and operation of OREIs on the nation's waterways and oceans. In response to special legislation enacted in 2006, the USCG was also required to establish navigational safety terms and conditions (T&C) specifically for Nantucket Sound due to the proposal for the 130 turbine Cape Wind Associates (CWA) OREI.

This report provides a comparative analysis of the T&C for Nantucket Sound under Section 414 of the Coast Guard Maritime Transportation Act of 2006 (CGMTA) and the navigational safety actions taken elsewhere or now under development by USCG and BOEM. As this report concludes, the Nantucket Sound standards provide significantly less protection for navigation safety than the comparative measures established or proposed for every other OREI location.

THE SITE AND THE DESIGN (NANTUCKET SOUND AND CAPE WIND)

Nantucket Sound is not only a heavily used body of water, but one of the most dangerous places to navigate in the U.S. In fact, the seaman's' handbook, The Coast Pilot, singles out Nantucket Sound for special caution due to the frequent occurrence of wind, fog, and high velocity currents.

Horseshoe Shoal, found near the center of Nantucket Sound, is a well-known and marked hazard whose rocks are seldom visible above the Sound's surface. Water depths in and around the Shoal vary from 2 ft. to nearly 60 ft. The shoal is bounded by the North Channel, which runs below Great Neck and Hyannis, and the Main Channel, which runs from Vineyard Sound from the west to the Atlantic Ocean to the east. The Main Channel that the CWA facility would abut has a controlling depth of thirty feet. The proposed project site is virtually surrounded by general anchorages for vessels awaiting entry into port, conducting repairs, or escaping or riding-out bad weather or visibility that is common in Nantucket Sound.

Other than marked channels and charts, there are no Traffic Separation Schemes (TSS), vessel traffic reporting or control systems in place in the Sound. The port of Boston, Buzzards Bay, the Cape Cod Canal, and Rhode Island Sound all have TSS ship routes, or in the case of the Cape Cod Canal and Buzzard's Bay, vessel reporting systems in place. These USCG systems significantly mitigate navigational risk and play a prominent role in the navigational risk assessment for other areas being considered as potential sites for offshore wind facilities on the Atlantic coast. The absence of TSS or other vessel control measures makes navigational risk in the Sound subject to comparatively greater risks.

While the Main Channel in Nantucket Sound can support vessels with drafts up to 24 ft., including cruise liners, it also serves as the main artery for ferries connecting the Sound's islands and for an estimated 250 large oceangoing fishing vessels. The proposed site for the CWA facility borders these channels and routes extensively used yearround by the ferry systems, some of which offer high-speed service at 30 knots on all its sides.

The CWA proposal would place the WTGs directly adjacent to these busy vessel routes, in some cases to be constructed within 975 ft. to 1,200 ft. from the edge of the North and Main channels, respectively. Without an additional buffer from these routes, an allision with the nearest WTGs would occur in a mere 60 seconds, at normal speeds, for a vessel or boat that leaves the channel. A high speed ferry would have 20 seconds to detect, take action, and respond to avoid such allisions. Collision risk with vessels traveling within or adjacent to the project site also would be a problem due to WTG interference with navigation and collision avoidance radar.

SECTION 414 AND THE 2008 MMS FEIS

In 2005, Congress enacted Section 414 of the Coast Guard Maritime Transportation Act of 2006 (CGMTA). Section 414 requires the USCG to ''specify the reasonable terms and conditions the Commandant determines necessary to provide for navigational safety with respect to the proposed lease, easement, or right-of-way and each alternative to the proposed lease, easement or right-of-way considered by'' the Secretary of the Interior for an offshore wind energy facility in Nantucket Sound.

Section 414 makes it clear that the T&C are to protect the navigational status quo, not to protect CWA or its design. The USCG can fulfill this duty only by developing T&C that ensure the project does not present navigational risks, including the possible need to alter the project design through the establishment of a buffer zone from existing shipping and ferry routes, or to deny the lease application at the proposed location. The burden to provide for navigational safety belongs to CWA, not to mariners, fishermen, or the public.

In late 2008, USCG altered its approach that would have addressed navigation safety concerns by including changes to the project, to instead adopt the position that the project had to be accepted as it was proposed. As a result, all burden for safety was placed on mariners and USCG did not recommend a safety separation or buffer zone from the Sound's established channels and shipping routes. Several lawsuits are pending against the CWA project, including challenge of the USCG T&C.

BOEM'S EAS

BOEM began implementing DOI's ''Smart from the Start'' initiative in 2011 with USCG and other agencies to produce environmental assessments (EAs) for offshore wind development. The initiative called for the identification of areas on the Atlantic OCS that were most suitable for commercial wind energy and the availability of those areas for leasing and site assessment. During 2011, BOEM published Notices identifying those ocean areas and requested public comment.

Significant public comment was received from maritime interests in response to the BOEM Notices. Major changes were made to the various Wind Energy Areas (WEAs) including excluded areas. The EAs provide mitigation of marine navigation risk by outright exclusion of areas that could produce navigation or fishing conflict and by providing safe separation/buffer zones between WEAs and vessel routes. The following safety criteria are evident from the final selection of lease blocks in these EAs:

The presence of Traffic Separation Schemes (TSS) or other vessel routing/control measures facilitate the safe designation of WEAs in ocean areas bearing volumes of marine traffic and/or fishing activity.

Safety separation/buffer zones of 1 nm from TSSs and from shipping routes should be applied in WEA identification as well as in subsequent site selection.

Marine traffic routes and fishing areas should be identified and their densities estimated and projected for future growth and expansion in defining the limits of WEAs.

Blocks should be excluded which would conflict with the safe operation and transit of shipping on recognized routes and from vessels working in traditional fishing areas.

None of these criteria were applied to the siting, size and shape of the CWA proposal for Nantucket Sound.

USCG ACPARS

Concurrent with the BOEM ''Smart from the Start'' process, in 2011, USCG embarked on a separate study whose scope would influence OREI facility siting and design. The USCG issued its first and interim report in July 2012. The final report is not expected to be issued until the end of 2013.

The core of the USCG ACPARS analysis and the basis for its recommended exclusions from the WEAs proposed in the BOEM Notices is the ''R-Y-G'' methodology developed from standards and criteria for OREIs applied in the UK and which provide three break points between WEAs and vessel traffic routes:

1 nm—The minimum separation distance to the parallel boundary of a TSS. At this distance there would still be S band radar interference and automatic radar plotting aid (ARPA) is adversely affected. This is also the boundary between High/Medium navigational safety risk.

2 nm—The separation distance where compliance with COLREGS becomes less challenging, mitigation measures would still be required to reduce risk As Low as Reasonably Practicable (ALARP). This is also the boundary between Medium/Low navigational safety risk.

5 nm—The separation distance where there are minimal impacts to navigational safety and risk should be acceptable without additional mitigation. This is also the boundary between Low/Very Low navigational safety risk.

ACPARS examined the shipping routes and patterns for each area as well as individual blocks in the WEAs proposed by BOEM. Blocks that were determined to be hazardous to marine navigation and to the marine environment were ''colored'' RED, which the group defined as: ''those blocks, or portions of blocks, that cannot/should not be developed now or in the future because of vessel traffic usage. Development of these blocks

would have an unacceptable impact to navigational safety and precludes development.'' YELLOW BLOCKS were defined as ''those blocks, or portions of blocks, that require further study/analysis of existing traffic usage/patterns as well as projected future traffic increases based on development of adjoining/adjacent blocks. Development of these blocks would potentially have an unacceptable impact on navigational safety which requires additional study to determine the risk and possible mitigation if developed.'' GREEN BLOCKS were defined as ''those blocks, or portions of blocks, whose development would, based on available information, pose minimal to no detrimental impact to navigational safety. Traffic using these blocks can be 're-routed' around developed alternative energy sites. These blocks would require minimal, if any, mitigation.''

ACPARS stated: ''Although consensus was not reached, the majority of the ACPARS Workgroup recommended the use of a 1NM separation distance from shipping routes for determining the boundary between Yellow and Red Blocks. As stated above there was consensus for using 5NM as the minimum distance from shipping routes for Green Blocks.''

COMPARISON—NANTUCKET SOUND VERSUS THE OREI NAVIGATIONAL SAFETY MEASURES

The attached Figure 4–12 has been excerpted from the BOEM EA for Massachusetts and displays the TSS schemes for Rhode Island Sound, the Port of Boston, and the approaches to NY. It shows ''High'' density vessel tracks in a yellow to salmon color scheme. Figure 1 shows commercial vessels in Nantucket Sound, specifically its Main Channel, in heavy volumes very similar to those studied for the proposed WEAs in the Massachusetts and in the Rhode Island & Massachusetts EAs produced by BOEM.

What is not shown in these Figures is the disparity of navigation risk and of displacement of fishing activities that would be created by OREIs in the various WEAs as compared to CWA. Using the WEA area described in the RI & MA BOEM EA (RIMAWEA) as a comparison to the proposed CWA site, several factors emerge that drive starkly different navigational and operational risk environments that transiting vessels must overcome.

The RIMAWEA would be located adjacent to the high density TSS in Rhode Island Sound. The vessel one-way lanes of the TSS are each 1 nm wide with depths ranging from 60–120 ft. The Main Channel directly adjacent to the CWA site on Horseshoe Shoal can be visualized as a higher risk single-lane carrying vessel traffic in multiple directions which narrows to 3/4 nm between two dangerous shoals with 30–60 ft. of water at the junction of heavy vessel traffic crossing from east to west and north to south. There are few shoals and ledges in the direct vicinity of the RIMAWEA and the RI TSS; vessels leaving the TSS by design or in emergency have ''sea room'' to maneuver and recover in water depths ranging from 60–160 ft. Utilizing both BOEM EA and ACPARS criteria, a troubled vessel seeking to avoid a casualty with a WTG placed near the TSS or with another vessel hidden in radar interference from the facility would have a 1 nm buffer space between the RIMAWEA TSS and other vessel routes to safely react. ACPARS examined the vessel routes and traffic density for the RIMAWEA proposed for RI Sound, the region most akin to the navigation conditions found in Nantucket Sound. USCG requested that BOEM exclude 16 blocks from the RIMAWEA to safeguard navigation safety for vessels on routes or within the TSS which would pass within a safety buffer of 1 nm from the WEA.

USCG also requested BOEM include the following statement in the EA: ''UK Maritime Guidance Note MGN–71 and the expertise of waterways SME's to evaluate and/or identify individual BOEMRE RFIs/CFIs. Based on MGN–371, any areas <1 NM from existing shipping routes pose a high risk to navigational safety and are not considered acceptable for the placement OREIs. Areas >5NM from existing shipping routes are considered to pose minimal risk to navigational safety. Everything between 1NM and 5NM would require analysis to determine if mitigation factors could be applied to bring navigational safety risk to within acceptable levels. Please note that impacts to radar and ARPA still occur outside of 1 NM which will have to be evaluated along with other potential impacts. The above are only planning guidelines and a full navigational risk assessment will be required as part of the EIS prior to approving construction of any OREIs.''

In contrast, USCG accepted the design and siting of the CWA facility without challenge and without imposing any minimum separation distance between the surrounding vessel routes and channels and the facility's WTGs. The CWA facility design and placement of its WTGs would provide the crew of a passenger ferry or boat that leaves the channel a mere 60 seconds, at normal speeds, and a high speed ferry a mere 20 seconds to detect, take action and respond to avoid a collision with an adjacent WTG.

Another significant disparity lies in the treatment of the safety and operational needs of commercial fishing vessels. The 2012 BOEM EAs examined and then excluded entire blocks and sections of the proposed WEAs to prevent the displacement of those vessels and their traditional fishing activity. BOEM appears to have adopted the position that commercial fishing vessels and their operating techniques make for an unacceptable safety risk when operating within or in the vicinity of a WEA. BOEM, MMS, and USCG took the opposite tack in their review and acceptance of the CWA proposal. The repeated complaints of the fishing industry in the Sound that the CWA facility would make it unsafe for them to fish on or adjacent to the rich fishing grounds at Horseshoe Shoal were simply ignored or obfuscated.

CONCLUSION

1. The application of safe separation/buffer zones in the design of offshore WEAs and the exclusion of ocean blocks to eliminate potential conflicts with the marine navigation safety needs have been uniformly applied to all WEAs with the exception of Nantucket Sound.

2. USCG has failed to effectively apply the same marine navigation safety and environmental protection standards, guidance, and criteria it developed for OREIs in the U.S. to the CWA facility.

3. Neither a sufficient and meaningful site assessment nor an accurate and detailed vessel traffic assessment has been conducted for the CWA proposed facility.

4. A navigational risk assessment to a recognized standard has not been conducted nor have adequate and effective marine safety mitigation actions been identified for CWA.

5. The CWA facility is fatally flawed as currently designed and sited. It is incompatible with the needs of marine transportation in Nantucket Sound and is an unnecessary and unacceptable threat to the current-day and future users of Nantucket Sound's waterways.

HONORING THE DELTA SIGMA THETA CENTENNIAL

HON. JOHN CONYERS, JR.

OF MICHIGAN

IN THE HOUSE OF REPRESENTATIVES

Thursday, July 18, 2013

Mr. CONYERS. Mr. Speaker, I rise today to honor the Delta Sigma Theta Sorority for their Centennial Celebration. Founded at Howard University in 1913, this international sorority has long focused on providing young women with the strength and experience to lead.

Whether in law, science, business, or education, Delta alumnae all have one thing in common: they are dedicated to serving their communities. The five points of the Delta experience are Economic Development, Educational Development, International Awareness and Involvement, Physical and Mental Health, and Political Awareness and Involvement.

The strength they gain through focused development on these points doesn't just benefit the young women who join Delta Sigma Theta. Through projects like the Delta Towers here in Washington D.C., their work with Habitat for Humanity across our nation, or their youth outreach programs—we are all better for the generosity of the Deltas we know and love.

To all the Delta sisters out there—best wishes for the next hundred years.

PERSONAL EXPLANATION

HON. MICHAEL G. GRIMM

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Thursday, July 18, 2013

Mr. GRIMM. Mr. Speaker, on rollcall No. 361, I was unable to vote due to a recent medical procedure. Had I been present, I would have voted ''yes.''

PERSONAL EXPLANATION

HON. CAROLYN McCARTHY

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Thursday, July 18, 2013

Mrs. MCCARTHY of New York. Mr. Speaker, I was unavoidably absent during the week of June 24, 2013. If I were present, I would have voted on the following.

TUESDAY, JUNE 25, 2013:

Rollcall No. 287: Motion to Suspend the Rules and Pass H.R. 2383, ''yea.''

Rollcall No. 288: Motion to Suspend the Rules and Pass H.R. 1092, ''yea.''

WEDNESDAY, JUNE 26, 2013:

Rollcall No. 289: Motion on Ordering the Previous Question on the Rule for H.R. 1613, H.R. 2231, and H.R. 2410, ''nay.''

Rollcall No. 290: Motion on Agreeing to the Resolution on the Rule H.R. 1613, H.R. 2231, and H.R. 2410, ''nay.''

THURSDAY, JUNE 27, 2013:

Rollcall No. 291: Grayson of Florida Part A Amendment No. 1, as Modified, ''yea.''

Rollcall No. 292: Motion to Recommit with Instructions for H.R. 1613, ''yea.''