## Dr. Ronald Filadelfo

In my opening remarks at last year's symposium, I pointed out that climate and energy and their relationship to national security and our nation's naval forces were becoming front-burner issues for the Department of the Navy. I think it is pretty clear that over the past year that is exactly what has happened. We in the naval community—Navy, Marines, and Coast Guard—can take pride in what we have accomplished. Since we met last year, Navy Task Force Climate Change has published its Arctic Roadmap and its Climate Change Roadmap. [1, 2] At the request of Chief of Naval Operations Admiral Gary Roughead, the National Academy of Sciences Naval Studies Board examined the national security implications of climate change for naval forces; I was on that panel, as was Dr. Ronald Luman from JHU/APL and Dr. Catherine Kelleher from the University of Maryland, who will be on our wrap-up panel.

The Naval Studies Board report, which was released on March 10, states that it is absolutely imperative that the Navy deal with climate change; it is something that could have profound implications for the types of platforms we use, missions we conduct, and locations in which we operate. [3] In fact, climate change is going to present challenges for all of our naval services—our Navy, our Marines, and our Coast Guard. The study's recommendations are very broad based; they touch on all aspects of naval planning including command structure, research priorities, training and platform needs, and the United Nations Convention on the Law of the Sea. Another of the important findings that came out of that panel was a ringing endorsement of the work being done by Rear Admiral David Titley and Navy Task Force Climate Change to make the Navy a national leader among federal agencies in identifying ways to adapt to climate change.

A number of equally positive things have happened on the energy side. As if to reinforce the importance of these advances, we are once again seeing a big spike in gas prices. I, undoubtedly like many other Americans, am wondering if this time our nation is going to get it right and come up with a sustainable energy policy. I am not optimistic, but we will see. At the DoD level, I am sure you are aware that Ms. Sharon Burke has been confirmed as the Assistant Secretary of Defense for Operational Energy Plans and Programs and that Mr. Thomas Morehouse, a long-time expert on defense energy issues and a key author of the influential 2008 Defense Science Board report on energy, has been named as her principal deputy. [4] At this symposium we have received a timely update on the work being done by Navy Task Force Energy's director, Rear Admiral Philip Cullom, who has emerged as a national leader in energy transformation. In case you have not seen it, a couple of months ago, Thomas Friedman wrote a nice op-ed piece commenting on the leadership that Secretary Ray Mabus and Rear Admiral Cullom have shown toward making the Navy a leader in transforming our nation into one with a smart energy future.

The Marine Corps has also accomplished some impressive work. In particular, the Marine Corps Expeditionary Energy Office has done amazing things at the Corps' typical lightning-fast pace that reduce the energy burden on our forward forces by pioneering the applications of small-scale solar systems. Thanks to the Marines, these technologies have been shown to make our forces lighter and more maneuverable. And, they are garnering great national recognition for the Department of the Navy. Colonel Robert Charette, Jr., the head of the Marine Corps Expeditionary Energy Office, will describe his efforts at this symposium.

Shoreside facilities also face great energy challenges, both from the energy perspective and, as was noted by our panel, from the climate perspective. In some ways these are tougher than the challenges faced by the operational community; our shoreside facilities must be able to provide reliable, affordable, and sustainable energy as well as comply with Congressional and Executive Order mandates regarding water, energy use, and greenhouse gases.

So, with that as introduction, I am pleased to turn the discussion over to Rear Admiral David Boone, who will lead our roundtable on Adapting Maritime Facilities and Infrastructure to Energy Challenges.

## REFERENCES

1. Intergovernmental Panel on Climate Change, *Fourth Assessment Report: Climate Change 2007*, IPCC, 2007.
2. Department of the Navy, *Navy Arctic Roadmap*, 10 Nov 2009, **http://www.navy.mil/navydata/documents/USN_artic_roadmap.pdf**.
3. Naval Studies Board, *National Security Implications of Climate Change on U.S. Naval Forces*, National Academies Press, 2011.
4. Defense Science Board, *Report of the Defense Science Board Task Force on DoD Energy Strategy, "More Fight—Less Fuel,"* 2008, **http://www.acq.osd.mil/dsb/reports/ADA477619.pdf**.