From the Chairman

Across the Nation, there is a growing recognition of the interconnection between energy, national security, and America's future. The emerging concept of *energy security* challenges us to take a holistic view of how we pursue and consume energy as we live and operate in an increasingly complicated world. For our military, enhancing energy security carries even greater benefit—doing so will reduce risk, improve efficiencies, and preserve freedom of action.

Of course, when I was a young naval officer in the late 1960s, energy wasn't something I spent a lot of time thinking about. In those days, serving on a destroyer on the gun line in Vietnam, "energy security" meant knowing where the next oiler was going to be. Like most of America at the time, my shipmates and I operated under a "burn it if you've got it" mentality.

We were not deliberately wasteful or reckless; we just held the conventional view that fuel was cheap, easy, and available without ever really connecting it to any broader geopolitical implications.

Clearly, that is not the world we live in anymore.

The cost, in terms of both blood and treasure, of providing energy to our forces in Afghanistan today and recent headlines of attacks on NATO fuel convoys remind us of these vulnerabilities.

Despite these challenges, there is no doubt that we are making some progress refining how we will consume energy in the future. Secretary Ray Mabus is leading the Navy on an ambitious path to cut nontactical petroleum 50 percent by 2015, and sail the Great Green Fleet by 2016. The Air Force is focusing on the three goals of reducing demand, increasing supply through renewable and alternative sources, and changing the culture. All the Services, in fact, are moving forward with many of our best innovations starting at the grassroots level.

Just recently, the Marines of India Company, Third Battalion, Fifth Marines, out of Camp Pendleton arrived in Helmand Province with a complement of solar-powered electricity-generation capabilities, insulated tents, and ultra-efficient electronics. When we consider that estimates of a fully burdened cost of diesel fuel approach $400 a gallon at some forward operating locations, these benefits can really add up.

This also translates to fewer Marines maintaining fuel distribution systems, fewer Marines dedicating their lives to protecting convoys used to deliver fuel, and more personnel following the theme conveyed at the recent Office of the Secretary of Defense Energy Security Conference: "Saving Energy Saves Lives."

And we cannot think about energy after we get there—wherever *there* may be. Energy security must be one of the first things that we think about before we deploy another soldier, before we build another ship or plane, and before we buy or fill another rucksack. When it comes to future platform design, we too often focus solely on capability while artificially ignoring the environmental and energy costs that all come with a price to pay—some financial, and some that are even more profound and generational.

And the demand for energy is not going to ease anytime soon.

My friend, columnist Tom Friedman, reminds us that this "hot, flat, and crowded" world has introduced 3 billion more people to the global marketplace, all wanting their own version of the American Dream, fueling an ever-growing need for energy to drive the goods and services they are buying to make their lives better.

U.S. Navy (Gregory N. Juday)

Sailors conduct maneuvers aboard Riverine Command Boat (Experimental) powered by alternative fuel blend of algae-based biofuel and petroleum

U.S. Navy (Ed Early)

USNS *Guadalupe* refuels USS *Bonhomme Richard* and USS *Cleveland* while under way in Pacific Ocean

In short, the world isn't what it used to be, and we can either lead change or be changed by the leadership of others.

In fact, in the National Security Strategy, President Obama writes of innovation being a foundation of American power and leadership. This concept will be critical to achieving energy security in a sustainable world, and we have seen government-led innovations such as GPS, cell phones, and the Internet dramatically benefit our nation and the world.

And this cannot be a top-down effort; true innovation does not work that way. Every one of us, every American, must play a part—changing how we live, how we work, and, perhaps most importantly, how we think about these challenges.

To start with, let's agree that our concept of energy must change.

Rather than look at energy as a commodity or as a means to an end, we need to see it as an integral part of a system that recognizes the linkages between consumption and our ability to pursue enduring interests. The National Security Strategy recognizes these interdependencies, and that strength and stability at home equate to credibility and influence abroad. More specifically, it tells us that the way our nation gains access to, develops, and consumes energy has significant security implications.

And every one of us bears responsibility. We may often think about energy efficiency relative to how we drive our ships, aircraft, and tanks—that is important, to be sure—but we can also make improvements closer to home.

In Twentynine Palms, California, for example, a new micro-grid controller promises to make the Marine Corps' largest base an even better neighbor by reducing its energy consumption, diminishing its carbon footprint, and better enabling it to be independent of California's power grid when needed.

Beyond these immediate benefits, we may even be able to help stem the tide of strategic security issues related to climate change. And regardless of what the cause of these changes is, the impacts here could be far-reaching:

Near the polar cap, waterways are opening that we could not have imagined a few years ago, rewriting the geopolitical map of the world.

Rising sea levels could lead to mass migrations similar to what we have seen in Pakistan's recent flooding.

Climate shifts could drastically reduce the arable land needed to feed a burgeoning population as we have seen in parts of Africa.

As glaciers melt and shrink at a faster rate, crucial water supplies may diminish further in parts of Asia.

This impending scarcity of resources compounded by an influx of refugees if coastal lands disappear not only could produce a humanitarian crisis, but also could generate conditions that could lead to failed states and make populations more vulnerable to radicalization. These troubling challenges highlight the systemic implications—and multiple-order effects—inherent in energy security and climate change.

Our efforts here will take planning, and they will take time. Like previous innovations, progress will not be linear—it will come with setbacks and dramatic leaps, just as we have seen in other technological revolutions in the past.

Ultimately, as we gain proficiency in generating sustainable, renewable energy sources, our nation will have the opportunity to pursue not just defense, but security; not just survival, but prosperity—in a word, *sustainability.*

Pursuing energy security, and the sustainability that it ensures, may well be the greatest challenge of our time, one that transcends conventional boundaries of government, business, and nation. We must recognize that this will not be easy and will not come without sacrifice. Yet the need is there, the right technology is emerging, and the time for change is now—our nation, our children, and yes, our grandchildren are counting on us. **JFQ**

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