Oral Statement of Admiral Dennis C. Blair
Co-Chair, Commission on Energy and Geopolitics
U.S. Senate Committee on Energy and Natural Resources
Hearing on the modernization of the Strategic Petroleum Reserve and related energy security issues

October 6, 2015

Madam Chairman, Ranking Member Cantwell, and Members of the Committee, thank you for inviting me to participate in this important hearing.

I serve as Co-Chair of the Commission on Energy and Geopolitics, a group of former high-ranking U.S. military, diplomatic, and national security officials committed to improving U.S. economic and national security by reducing the country's dependence on oil. The Commission is a project of Securing America's Future Energy (SAFE).

As we approach the 40th anniversary of the creation of the Strategic Petroleum Reserve, there is no question the energy landscape has changed.

However, three things remain the same:

- The oil market remains volatile.
- American families and businesses remain vulnerable.
- The SPR is our only short-term line of defense against supply interruptions.

It would be foolhardy to draw down the single immediate weapon we have to counteract oil supply disruptions and price spikes.

Today's low oil prices make it easy to forget that little more than one year ago, unrest in key oil producing countries was pushing already high oil prices even higher.

The rapid advance of ISIL in the summer of 2014 sent oil prices to $115 per barrel on fears that more than 3 million barrels per day of Iraqi oil exports could be knocked offline. Had ISIL disrupted key southern oil infrastructure, oil prices would have soared, and a significant SPR release would have been necessary to protect the U.S. economy.

Would any responsible American leader count on continued stability and steady petroleum supplies to the world market from Venezuela, Nigeria, Russia, Iraq, Libya, Iran, and even Saudi Arabia? Civil unrest, the impact of reduced revenues from current low prices, and production manipulation possibilities are all very real possibilities. In this turbulent geopolitical landscape, why are we even considering reducing our only short-term means of offsetting supply interruptions?

Yes, the dramatic increase in U.S. oil production has reduced our dependence on oil imports and contributed to the drop in global oil prices.

But the market for oil remains global, and because 92 percent of our transportation sector runs on petroleum, a disruption anywhere affects oil prices everywhere, including at the pump for American consumers and American businesses.

While it is unclear what oil will cost next year or even tomorrow, history tells us that oil prices operate in boom-bust cycles, and it is only a matter of time until prices rise again. We cannot allow recent increases in domestic oil production to lull us into a false sense of security.

The SPR protects our economy from unpredictable, violent swings in a global oil market dominated by outside actors who do not share our values or our interests.

Policymakers should take advantage of current low oil prices to upgrade and modernize the SPR, so it will be ready to respond when disruptions inevitably occur and prices inevitably rise.

Just having the petroleum in the salt caverns is not enough. The equipment at the SPR itself needs maintenance and modernization. Moreover, the flows of both crude oil and petroleum product have changed in the 40 years since the SPR was built. Without modernization, the SPR could not fully and flexibly offset a large supply disruption. To make the SPR effective, it must be able to deliver the oil it holds to the right place in the complex petroleum refining infrastructure of this country.

To avoid the SPR's failure:

- Congress should fully fund and the Department of Energy should accelerate completion of deferred maintenance.
- The Department of Energy should construct dedicated docks and loading capacity so SPR oil can be loaded on marine vessels for delivery to the market as incremental supply without displacing privately owned oil on the market.
- Congress should update release criteria to clearly allow for release of oil from the SPR in response to a supply emergency – even if it does not affect domestic production or imports – if the interruption is likely to affect the price of oil and poses a substantial risk of severe economic consequences.
- The White House and the Department of Energy should complete a study to determine the appropriate size of the SPR given our changed energy landscape, and then establish a target size. My guess is that the appropriate size is not far from what we have today.
- *After* reaching consensus on the size and the guidelines for using the SPR, DOE should initiate a long-term program to update and upgrade infrastructure as necessary to ensure its reliable operation for the next several decades.

In today's uncertain and dangerous geopolitical environment, the SPR is our most immediate defense against oil supply disruptions and price spikes, and it needs to be preserved and modernized. However, it is only one part of a comprehensive energy security strategy to reduce America's dependence on oil. We need increased efficiency and fuel diversity in the transportation sector.

A strong energy policy is imperative to improving our national security, and I urge this committee to take a leading role in forging one.

Thank you.

Testimony of Admiral Dennis C. Blair, USN (Ret.)
Co-Chair, Commission on Energy and Geopolitics
U.S. Senate Committee on Energy and Natural Resources
October 6, 2015

THE FUTURE OF THE STRATEGIC PETROLEUM RESERVE

As we approach the 40th anniversary of the creation of the Strategic Petroleum Reserve (SPR), there is no question the energy landscape has changed since its creation. But it is equally certain that three things remain the same: The oil market remains volatile, Americans remain vulnerable, and the SPR is our only short-term line of defense. Given the current state of geopolitics around the world, it is not in the United States' best interest to draw down the most immediate protection we have in the face of potential oil supply disruptions and price shocks. It is for these reasons that I believe modernizing and fixing the SPR to continue to protect us today is a national security and economic priority.

Over the long term, the United States should implement energy policies that reduce our overall dependence on oil, especially in the transportation sector in which it powers 92 percent. By improving fuel efficiency and diversifying our fuels to take advantage of sources like electricity and natural gas, we can improve our country's economic and national security by reducing our vulnerability to an often volatile, unpredictable global oil market.

THE OIL MARKET REMANS VOLITILE

The SPR was established in 1975 in response to the 1973 -74 Arab Oil Embargo. Its purpose was to diminish U.S. vulnerability to, and offer protection against, possible future oil embargoes by absorbing some (or all) of the petroleum shortfall created by a supply interruption, and by deterring an embargo through its mere existence.

Today's low oil prices make it easy to forget that little more than one year ago, geopolitical unrest in key oil producing countries was pushing already high oil prices even higher. The rapid advance of ISIL in the summer of 2014 drove oil prices to $115 per barrel on fears that more than 3 million barrels per day of Iraqi oil exports could be knocked offline. Had ISIL disrupted key southern oil infrastructure, oil prices would have soared and a significant SPR release would have been necessary to protect the U.S. economy from harm. Without modernization, it is unlikely the SPR would be able to fully offset such a large supply disruption, with economic consequences for this country. It is no coincidence that 10 of the past 11 recessions have been preceded by a sharp increase in oil prices and the SPR remains the only tool at our disposal to combat the economic harm from supply disruptions.

The dramatic increase in U.S. oil production has reduced our dependence on oil imports and contributed to the drop in global oil prices. Because the market for oil is global, however, and because 92 percent of our transportation sector is monopolized by petroleum, disruption anywhere affects oil prices everywhere, including here at home.

Additionally, the precipitous nature of the drop in oil prices – which have fallen by more than 50 percent since last summer – carries geopolitical risks, undermining the stability of key oil producing countries.

For example, Venezuela, one of the largest exporters of oil to the United States, faces a dire economic and political situation which, while self-inflicted, is significantly exacerbated by low oil prices. In Nigeria, low oil prices are hampering the ability of the new President to fight Boko Haram and maintain stability in the oil producing Niger Delta. And in Iraq, low oil prices are complicating internal oil sharing agreements and the ability of the central government to properly fund the war against ISIL. A supply disruption in any of these countries could send prices sharply higher.

In addition to counteracting unplanned supply disruptions, the SPR continues to serve as an important deterrent to hostile states manipulating the oil market. While today's oil market makes a 1970s oil embargo unlikely, countries such as Russia, the world's largest energy exporter, continue to use energy exports as a political weapon. A large SPR with a significant distribution capacity helps protect the United States and our allies from political manipulation of the oil market.

While it is unclear what oil prices will be next year, next month, or even tomorrow, it is abundantly clear from history that oil prices operate in boom-bust cycles, and it is only a matter of time until prices rise again. The SPR is the cornerstone of American energy security and a vital asset in protecting our economy from supply disruptions that could occur any time without warning. Congress should take advantage of the current period of low oil prices to fix the SPR now, so it will be ready to respond when disruptions inevitably occur and prices inevitably rise.

AMERICANS REMAIN VULNERABLE TO FOREIGN SUPPLY DISRUPTIONS

At the time of the 1973 oil embargo, the absence of an oil market and price controls in the United States contributed to a physical oil shortage that caused long lines at gasoline stations throughout the United States.

Today, we still experience that scarcity, but due to the availability of a market, it is expressed in the form of higher prices. When supply is disrupted, market participants will bid up the price of a commodity until someone is priced out of the market. In the process, consumers are forced to deal with the strain of rising prices.

In the global oil market, an oil supply disruption anywhere in the world raises prices everywhere, including for American consumers. This is true even if the U.S. does not import oil from the disrupted source, and it is true even with falling imports. U.S. oil imports fell from 13.7 million barrels per day in 2005 to 9.2 million barrels per day in 2014, yet threats to supply around the world last summer pushed U.S. gasoline prices higher. Lower oil imports today may mean that the U.S. economy as a whole is less vulnerable to oil shocks than it has been in the

past. When foreign disruptions raise oil prices, a portion of the price impact benefits producers, and, economy-wide, that may offset some of the damage from high oil prices. However, that is little comfort to American consumers that suffer at the pump, and as a whole, we remain an oil-importing country that is on average hurt by oil market disruptions and price spikes.

That prices are low today should serve as a reminder, not that oil risks are in the past, but rather that oil prices are volatile, and it is difficult to predict what will happen.

THE SPR IS OUR ONLY SHORT-TERM RESPONSE TO OIL SUPPLY DISRUPTIONS

Bringing new oil production online takes months or years. The SPR can deliver crude to market in less than two weeks, and just the knowledge that it is on the way can immediately calm market jitters. Its existence alone serves as a deterrent to those that might seek to threaten global oil supply for geopolitical gain. In the event of a significant interruption in the supply of crude oil to the global market, especially in periods with low spare production capacity, the SPR, and other nations' strategic reserves, are the only tools available to respond in the short-term.

MODERNIZING THE SPR

Given the role that the SPR plays in protecting our energy and national security, it is critical that it be available and reliable at all times. Recent changes in U.S. oil production, however, have affected the operation of the SPR. The SPR is located in the Gulf Coast, which is also home to U.S. refining and the primary point from which much of the crude oil refined in the United States is distributed—whether the oil is produced domestically or imported. Because of changing domestic production patterns, however, the Gulf Coast region is now a destination for substantial volumes of crude oil coming from different directions. Shifting production patterns are now likely to leave full oil pipelines, which would have been left with spare capacity in the past in the event of disruptions, and through which oil from the SPR would have been delivered. This evolving use of infrastructure requires a careful assessment to ensure not only that SPR oil can be delivered to market in the event of supply disruptions, but that its delivery is incremental and that it does not displace private oil.

The age of SPR facilities, some of which are approaching the end of their design life, also dictates that the Department of Energy will need to physically upgrade SPR infrastructure in the near future. Changes in the world oil market require that we reassess the purpose and size of the SPR. As explained below, the Department of Energy and Congress should address these issues quickly to ensure the SPR's availability in the event of future oil supply emergencies.

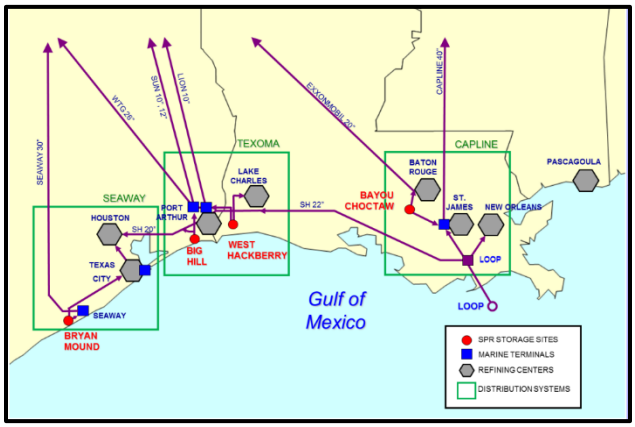
1) On-Site Maintenance: A 2014 test sale revealed the importance of maintaining critical infrastructure for use in an emergency drawdown. For example, during the test sale, the flow meter that measures the volume of oil being shipped at the Big Hill site failed, leaving the site inoperable for several days until it could be repaired. Moreover, even when it was operable, the availability of only one meter limited distribution flexibility. While there is a reluctance to

overinvest in infrastructure that is rarely, if ever, used, it remains critical that when the reserve is called on, it can function as designed.

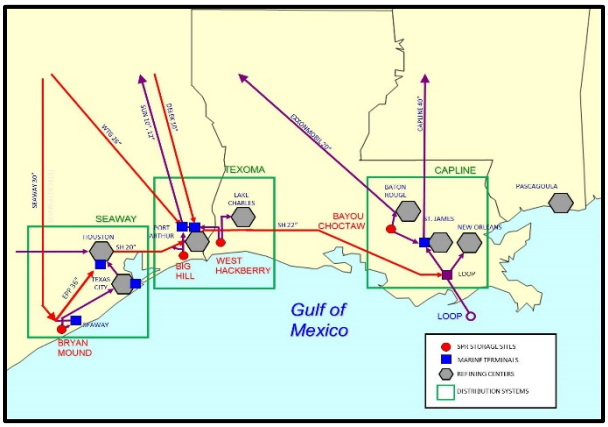
The president's FY 2016 budget included additional funding to address the backlog of deferred maintenance at the SPR. Congress should fully fund the request and the Department should accelerate completion of deferred maintenance to the extent possible.

2) Distribution in the Event of Supply Disruption: Growth in U.S. crude oil production has resulted in greater volumes of domestic crude moving into U.S. pipelines and marine terminals than in the past, often moving in different directions. As our energy landscape has changed, the Gulf Coast region has transformed from the source of much of the oil consumed in the nation to the destination of much of the oil produced in the nation. Because of these shifting patterns, a foreign supply disruption may not result in substantially less oil being delivered to the United States, and may not free up distribution capacity to move incremental barrels of SPR oil from the SPR facilities to the market. This raises the possibility that it may be difficult to use oil from the SPR to replace shortages by putting incremental barrels of crude oil on the global market in the event of a supply interruption, obviating the value of the reserve. If the SPR cannot deliver incremental barrels of oil to the market in the event of a supply emergency, it cannot mitigate the effects of a supply interruption.

SPR Distribution Systems and Major Pipelines (2011)



SPR Distribution Systems and Major Pipelines (2014)



Source: U.S. Department of Energy

It is critical that this distribution problem be addressed. Being unable to add incremental barrels of crude oil to the market in the event of a supply disruption would be akin to owing an insurance policy that does not provide any benefits. If we cannot ensure that the SPR will be able to deliver incremental barrels of oil to the market in the event of a supply emergency, there is no point in having such a reserve.

The most reliable means to assure that SPR oil can be delivered with the greatest flexibility is to build docks and loading facilities that would allow oil from the SPR to be loaded onto marine vessels in the event of a supply disruption. Marine transportation is inherently more flexible

than transport by pipeline, rail, or truck, and offers the nation the greatest assurance that SPR oil can get to market quickly when needed. In building such capacity, it is important that DOE not allow routine non-emergency use of the docks and loading infrastructure with, perhaps, contractual rights to displace private use in the event of an emergency. While using otherwise idle infrastructure to generate revenue is appealing, it could reduce the effectiveness of an SPR emergency release. Simply displacing commercial supplies with SPR supplies would not add incremental oil to the market in the event of an emergency, and for SPR oil to effectively respond to a shortage, the oil must not only be available, it must be incremental.

No matter how we address the issues of the size and use of the SPR, we cannot afford to have an emergency supply that in inaccessible when we need it the most.

3) Purpose, Size, and Life Extension: As U.S. oil imports decline, it is important that we reexamine the appropriate size of the SPR, remembering that in a global oil market, the SPR will always remain relevant. In addition to its ability to physically replace displaced oil, the mere existence of the SPR and the possibility of its use provides important value to the nation in that it deters market participants from manipulating supply in order to affect the price of oil. It is easy to imagine that without the SPR, producers might seek to use their oil as a geopolitical weapon, aware that in a world with little spare capacity and no strategic reserves, the global economy could be easily susceptible to price shocks caused by supply interruptions.

Purpose: It is important to first examine and reach agreement regarding the intended purpose of the SPR. Though the government has never clearly articulated a policy regarding its use, our past use of the SPR suggests that our policy is generally to use it when prices rise sharply in response to significant supply disruptions that affect global supply and prices, including, but not limited to physical supply interruptions that affect actual supplies of oil delivered to the United States. Two of the three emergency releases (Kuwait 1991 and Libya 2011) were in response to major international supply interruptions, while the third (Katrina 2005) was in response to a supply interruption to the United States. At the same time, the government has declined to release SPR oil at least three times in the past 15 years when supply disruptions exceeded the 1.6 million barrels per day that were taken off the market during the Libyan Civil War in 2011. Moreover, although there was already more than 3 million barrels of production off-line in 2014, when oil prices were near $115 per barrel, and there was ongoing concern about the security of Iraqi oil supplies, there was no serious discussion of using the SPR to moderate prices. The government should confirm that its policy is generally to use the SPR when prices rise sharply in response to significant supply disruptions that affect global supply and prices.

To ensure that the SPR is available to mitigate economic harm as risks arise, the government should reexamine the release criteria. In the past, we have been reluctant to use the SPR quickly because of concern that using the reserve could moderate price increases too much and undermine the price incentives to increase production elsewhere, a concern that led the first Bush administration not to release oil from the reserve in the immediate aftermath of the 1990 Iraqi invasion of Kuwait. In most instances, however, using strategic reserves promptly while reducing a release over time would give producers an opportunity to try to increase their

production in response to higher prices, while mitigating immediate economic harm from higher prices. The current criteria for a drawdown of the SPR state that the supply shortage must result in a severe increase in the price of petroleum products. Rather than waiting for the economic consequences of a price spike, the criteria should be adjusted to allow for the release of crude oil in response to supply interruptions that are likely to cause a price spike that will result in severe economic consequences.

Finally, in today's oil market, it is clear that even the disruption of supplies not affecting the physical delivery of oil to the United States can threaten our economy, because all users of crude oil are placed at risk by global price spikes, no matter the source of the interruption. This also suggests that we need to clarify the criteria for release. The governing statute currently defines a supply emergency as "a national energy supply shortage" which "is, or is likely to be, of significant scope and duration, and of an emergency nature," which "may cause major adverse impact on national safety or the national economy," and "results, or is likely to result, from (i) an interruption in the supply of imported petroleum products, (ii) an interruption in the supply of domestic petroleum products, or (iii) sabotage or an act of God." While this definition requires the interruption of either domestic supplies or imports to the United States, we should not limit the SPR's use to responding to supply disruptions that affect the delivery of oil to the United States, because our economy can be placed at risk by price spikes resulting from supply interruptions that do not affect crude oil deliveries to the United States at all. Even though language elsewhere in the statute allows a release from the SPR if "an emergency situation exists and there is a significant reduction in supply which is of significant scope and duration," the SPR should be available for use in response to any supply interruption that could cause major adverse impact on national safety or the national economy, whether it affected delivery of oil to the United States or not.

Size: The SPR was established in response to concerns about the interruption of U.S. imports in the aftermath of the 1973 embargo. The SPR also is used to meet the U.S. obligation under the International Energy Agency to maintain a petroleum stocks equal to 90 days of net petroleum imports, an obligation that other IEA members have chosen to meet by mandating the holding of private inventories in place of or in addition to public stocks. As our crude oil imports rose, SPR import cover declined below 90 days from 1993 until 2012. With the recent decline in U.S. net crude oil imports, however, the SPR is back over 90 days cover and is set to increase above that if current domestic production and efficiency trends continue.

Increased domestic production and declining U.S. imports raise questions about the optimal level of strategic reserves and the relevance of the 90 days cover requirement, a question of increased urgency given the growing pressure to sell millions of barrels of oil from the SPR to fund transportation and other priorities. As explained earlier, however, even if U.S. net imports drop to zero, the SPR would retain its utility as a national security tool to protect against global supply disruptions that could affect prices or otherwise harm our national interest or our allies. Moreover, just as domestic production has rebounded over the last few years, this positive trend could abate or even reverse in the future, pushing the United States back on a course of greater import dependence.

The White House and the Department of Energy need to quickly complete a rigorous size study to determine the appropriate size of the SPR given our changed energy landscape. Any decision to sell crude oil from the SPR for any purpose other than to fix the SPR itself in the absence of appropriated funds would be irresponsible.

Life Extension: The SPR caverns are located in salt domes that naturally shrink over time. Though they were designed with excess capacity to accommodate the "cabin creep," the shrinkage that has occurred thus far has eliminated the excess capacity initially designed into the system. Moreover, due to the age of the SPR, other infrastructure will need to be evaluated and upgraded to ensure reliability over the next several decades. Once policymakers have determined the appropriate size and configuration of the SPR, they should initiate a life-extension program for the infrastructure that will remain in use over the foreseeable future. Moreover, if there are sites or caverns that will clearly remain in use even if the SPR were to be reduced in size significantly, DOE can begin evaluating their long-term infrastructure needs immediately.

RECOMMENDATIONS

The SPR is a critical part of ensuring that there is an adequate supply of crude oil available to the U.S. economy in the event of a severe supply interruption. As it ages, and as the energy landscape changes, it is critical to ensure that the physical infrastructure and the policies that govern the use of the SPR are updated so that it can provide reliable assurance against supply interruptions. To ensure the SPR's continued reliable availability:

- Congress should fully fund and the Department of Energy should accelerate completion of deferred maintenance.
- The Department of Energy should construct dedicated docks and loading capacity to allow for the delivery of SPR oil to marine vessels in the event of a supply emergency.
- The government should clarify that it will use the SPR when prices rise sharply (or are likely to rise sharply) in response to significant supply disruptions that affect global supply and prices in the global market.
- Congress should update the release criteria to clearly allow for release of oil from the SPR in response to a supply emergency, even if it does not affect domestic production or imports into the United States, if the interruption may affect the price of oil and poses a substantial risk of severe economic consequences.
- The White House and the Department of Energy should complete a study to determine the appropriate size of the SPR given our changed energy landscape and, based on the results of the study, establish a target size for the SPR.
- *After* reaching consensus on the size of the SPR, DOE should initiate a program to update and upgrade the infrastructure as necessary to ensure its reliable operation for the next several decades.

CONCLUSION

In today's uncertain geopolitical environment, the SPR is our most immediate defense against oil supply disruptions and price spikes, and it is worthy of our protection. However, it is only one part of a comprehensive energy security strategy to reduce America's dependence on oil, including through increased efficiency and fuel diversity. A strong energy policy is imperative to improving our national security, and I urge this committee to take a strong role in forging one.