

Introductory Remarks  
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Thanks Mr. Holland, Andrew, and General Cheney. Thanks for having me here today, and thanks for having Air Force Energy back to talk to you.

So as many know, I'll be leaving this particular position in about two weeks, and this is a great opportunity for me to look back at the accomplishments we've had during the three and a half years I've been a part of Air Force Energy. But certainly, what the Air Force has been doing in addressing energy goes beyond, earlier than when I arrived. But certainly the last few years we've made a lot of great strides.

And then also talk a little bit about some of the challenges ahead.

I have some prepared remarks, and the reason I did that was to keep me to 10 minutes. And then we can have an open discussion. But I did want to make sure I hit a few key items that we will probably want to follow up on as we continue.

So the first thing is that as was mentioned, as I've said it before, the Air Force doesn't care about energy for energy's sake. We care about energy and what it does to support the Air Force mission. And, the Air Force mission is to fly, fight and win. So we want a sustained and assured energy advantage to enable that Air Force mission.

And we realize that vision through the priorities that we have in the strategic plan. And that's to improve our resiliency, to assure supply, reduce demand and foster an energy aware culture.

So I'll review some of the accomplishments that we've had and then talk about some of the issues that will be facing my successor when he shows up in June.

In the aviation space.

At the close of 2013, the Air Force achieved a 23 percent reduction in aviation fuel consumption compared to 2006. That was far in excess of a goal we had set for ourselves of achieving a 10 percent reduction by 2015. And this reduction avoided 2.4 billion dollars in costs to the Air Force for fiscal year 13. But what is more informative: not just the reduction but how much of the mission we were actually able to accomplish with greater efficiency.

So we look at the amount of cargo that we hauled, in tons, that we were able to transport compared to the amount of fuel that was used to haul that cargo. And in 13, FY13, we increased the cargo tons moved on a gallon of fuel by 9.5 percent while at the same time we reduced the associated costs by 8.6 percent.

So, we often have this discussion about doing more with less or the goal for reduction in fuels or the costs that cause us to not be able to complete the mission. Well we've shown is that if we become more efficient, we can actually get more mission done per gallon of fuel.

So we know that cost savings are not just about flying less, which occurred some last year with sequestration, but as a result of our efforts have become more efficient in every flying mission that they carry out.

A number of the initiatives that we have online helped us to accomplish this. Through the development of more efficient aircraft, like the C-5M, upgrade of the C-5A and B models, which has increased engine efficiency and increased range.

As well as the Energy Analysis Task Force, which is a group of Air Force reservists that work with me and my office, leveraging their private sector experience and helping to identify best practices that we can then move into the Air Force. And some of their efforts have included more efficient aircraft descent profiles, which can save about 1 percent of fuel consumption for every sortie flown. As well as increasing the landing weight restrictions for certain large aircraft, which has us avoid having to dump fuel unnecessarily.

Now from the standpoint of assuring energy supplies, I always get questions about biofuels. And, I want to make it clear that we're not interested in biofuels simply because we want to be green. For us, it's about global mobility options – that wherever we operate around the world, we can take advantage of the fuel that's available.

We do amazing things with our aircraft. We fly at supersonic speeds at high altitudes, sometimes in difficult conditions in carrying out our missions. And we want to make sure that we're involved in the early stages of potential fuel development so that we can ensure that the technical specifications of the fuels that we need for the kind of operations that we carry out are appropriate.

However, before we are going to use alternate fuels regularly, they have to meet a few requirements. They must be cost-competitive. They must meet our environmental requirements. And conform to the technical specifications of the fuels for the aircraft we use.

So along the line of that philosophy, what we've done is we've certified the entire Air Force fleet on two different fuels, two different alternate fuel blends. One of them is the Fischer Trophe synthetic fuel, the second one is a biofuel of Hydroprocessed Renewable Jet, or HRJ.

And with those tasks that we completed in 2013, we have certified our entire fleet on two different alternate fuel types.

Currently the office that performed those tests has stood down after completing those certifications. And we don't have any active efforts, right now, so I guess one challenge would be if new fuels are potentially viable and come on the market, then we would have to look at the kind of certification program we would have to do. And that would not be a program we would engage in independently from the other services. The Army, the Navy, the Air Force, and the Department of Defense have all

gotten together and talked about how we would address potential additional alternate fuels in the future.

And it's important to remember that the office of the Secretary of Defense owns all the fuel policy for the department. So no service can go out on their own and pursue additional fuel supplies.

Talking about our installations for a moment, from that stand point, energy conservation on our bases, we have reduced our energy intensity 22 percent, compared to a 2003 baseline. And we're well on our way to achieving a 30 percent improvement by 2015.

On the renewable energy generation side, we have 286 projects either generating power or under construction at 96 installations, for a total current capacity of 92 megawatts. These projects have helped us achieve 8 percent electric capacity rate for renewable sources, as of today. And, we're on our way to the 25 percent by 2025 goal.

For instance, just this past January at Davis-Monthan in Arizona we cut the ribbon on a new solar array that produces – or has a capacity of 16.4 megawatts. That power can provide 35 percent of the total need for Davis-Monthan, and actually reduces their utility costs by the amount of five hundred thousand dollars, annually.

The primary challenge that we have on the installation side, and somewhat on the aviation side, is how do we fund additional initiatives to continue improvements? And in many cases what we've seen is a lot of the low-hanging fruit has been gobbled up. Those things that have the quickest return, the highest savings to investment ratio, that's where we put those initial, incremental dollars, was to get at that, now we face a greater challenge.

And, we've also moved away from having Focus Funds in the Air Force. All initiatives or operations and maintenance or irradiation at some installations has to compete with everything else – keeping our barracks and our dorms in good working order and all those things we have to do with the sustainment of modernization accounts.

So we need to look both inside and outside of the Air Force, and in particular our industry partnerships that can provide third party financing, are probably going to be a significant tool for us to pursue.

And we need to continue to place the value on energy security and other benefits from initiatives that capture their impact and tip the scales in addition to energy safety.

And then on vehicles, we have seen a 6 percent decrease in our non-tactical vehicle petroleum use compared to a 2008 baseline. At Los Angeles Air Force Base, we're working on a project to bring the entire non-general purpose fleet to be 100 percent electric. And that's a partnership that we have engaged in with: Lawrence Berkeley National Lab, MIT's Lincoln Lab, California Public Utility Commission, numerous California state and federal agencies and and many private partners.

This will be the first time an initiative such as this would have been tried in a federal government, or at a federal government location. And going forward we believe it will be the model for other services and

federal agencies. We're also working on alternative fuels for our vehicles, and in FY13 our alternate fuel use was up 75 percent compared to 2008, which saved 1.9 million gallons of petroleum fuel for our ground vehicles in this fiscal year.

All these goals and initiatives that I've talked about speak to three of the four priorities – to the improving of resiliency, reducing our demand, assuring supply. But the final piece, that's equally important – that is fostering an energy aware culture.

Our Airmen are our greatest change agents, and we're increasing their awareness of the critical role of energy to the mission and providing them with specific guidance of how they can be more energy efficient.

One key education tool is federal Energy Action Month, which happens every October. And last year, despite the government shutdown, which happened during October – or Energy Action Month – we had 74 bases that participated. They took actions that included 30 energy competitions, 48 commander's calls discussing energy, 15 energy days and 125 internal and external news stories.

Now these efforts are paying off as we see increases in awareness in our internal research, and we're seeing more and more airmen receive energy awards.

In the past 4 years, Air Force military and civilian personnel have won 21 Federal Energy Management Program – or FEMP – awards. In two of the past three years, the Air Force won more than any other federal agency or military service.

This is a tremendous validation of progress we've made in our Air Force and for the American taxpayers.

And the efforts that earn these awards have real impacts. For instance in 2012, the 5 FEMP awards that were received, those winners saved the Air Force 18.6 million dollars for the efforts that they were recognized for.

And this culture change also needs to extend to our Requirements and Acquisition process. We need to factor operational energy's system effect earlier in the life cycle, perhaps prior to the Analysis of Alternatives, to be more effective.

Concepts of Operations & employment are significant factors in setting Operational Energy requirements. And we need to get involved earlier to address, since once an asset is developed and deployed, opportunities for efficiencies are limited.

So finally, looking forward, there are a few big picture issues that I see. Chief of them, are fiscal constraints, and I mentioned the tight funding and the resulting impacts to our efforts. So more partnerships with private industry are needed, and identifying additional benefits of energy initiatives and incorporating them into cost benefit analyses is a must.

And I'll just make a comment here: I mentioned the C-5. Yes, we get benefit on the energy side of a more efficient platform. But the reason we upgraded the C-5 was to improve readiness rates, and

improve mission capability. There was an attendant benefit of being more energy efficient. But the reason we made that modification was because we believe it improved our ability as Air Force to do the missions. So part of our challenge from the energy space is to look around at the improvements the Air Force is considering and identify those that have attendant benefits with energy and partner with them to help push those initiatives forward.

We're also undergoing reorganization in the Air Force. We have new staff at many levels. My replacement, Mr. Bert Guerrero, will be on board at the beginning of June. We have a nominee for Assistant Secretary for Installations, Environment and Logistics – Ms. Miranda Ballentine – and we look forward to her pending nomination.

And while there are many unknowns and challenges, the Air Force is still spending 9 billion dollars a year on energy, and that's always going to be a priority. That's why they stood up this office that I was pleased to lead for the first time. And then, after I'm gone, I believe my office will continue to be an effective champion for energy across the Air Force.

So thank you for the opportunity to be here with you today. I look forward to your questions and a robust discussion.