

of unique cure can we find? What kind of designer medicine cure can we find to solve a problem for you, and then how do we make that scalable so that, with minor variations, we can make the same thing possible and affordable for other people as well? And where that research is done—the smart phone technology applications, the focus on the brain, the focus on designer medicines—where that is done is likely to be where many of those jobs turn out to be. So certainly health care is and will continue to be a big economic driver. The multiplication of economic impact in a positive way with what we invest in health care is pretty dramatic. So that is a big increase.

Fighting opioid abuse—this is where people take prescription medicines. The Presiding Officer is a veteran, having just retired from her long military service. Many of those who serve are the most likely to have this problem because of injuries they sustained, accidents they were part of, attacks they were a victim of which create pain. So they take heavy amounts of appropriate things to ease that pain but then get addicted to it. This is an area people weren't talking about at all long ago, but deaths from prescription opioids have quadrupled since 1999—actually, more than that because they quadrupled between 1999 and 2013.

Overdose of prescription drugs costs the economy an estimated \$20 billion in work loss and health care costs every single year. The lives of families are impacted when a successful person, a responsible person, or someone who has not achieved either of those things yet but is a loved part of your family, becomes a victim of opioid abuse. We have a commitment in this budget to \$91 million. It is not the biggest line item in the budget, but it is almost three times what we have been spending.

Many of our Members have been real leaders in talking about this. Senator AYOTTE from New Hampshire, Senator PORTMAN from Ohio, and Senator SHAHEEN from New Hampshire are all very focused on this problem.

The Individuals with Disabilities Education Act benefits here as we move toward hopefully less Federal control on education but more ability to help local schools deal with people who have individual challenges.

Rural health is a big issue in my State and a big issue in the Presiding Officer's State. It is handled here in a different way.

Job training is an important thing we do.

But what do we not do here? This is my final addition to this: What are we not doing? We would have liked to have not funded over 40 programs, which was the bill that the Appropriations Committee sent to the floor months ago that was never debated. That would have been the chance to debate all 40 of those programs. I think there were 43 programs that cost about \$2.5 billion. Debate all 43 of those programs and de-

cide if the committee is right or not—we can't do that if we don't get it here on the floor. But we still eliminate 18 programs. Those programs currently were more than a quarter of a billion dollars of spending.

The President asked for 23 new programs that were \$1.16 billion of spending that were not done in this bill.

The Independent Payment Advisory Board under ObamaCare, where there would be a board rather than you and your doctor who decided what your health care is going to look like—that is not funded, so that won't occur. And there won't be a big transfer from other accounts with some other label to insurance companies, because all of the expectations from ObamaCare have turned out not to produce the kinds of results its supporters thought it would.

Hopefully we have made a big difference in how we prioritize the spending of the people's money, of the taxpayers' money, and hopefully we have also made a renewed commitment to do this the right way. We have done it this way since, frankly, the control of the Senate changed half a dozen years ago. The new majority was totally committed to getting these bills to the floor. They were all ready—all 12 bills—for first time in 6 years, most of them ready about the end of May, the first of June, but with only a couple of exceptions were they allowed to come to the floor, and that was at the very last minute when it was too late for this process to work the way it should.

Let's hope for more transparency, more debate, and more challenges. I am chair of this one committee I have been talking about today, but certainly there have to be other ideas that other Members who aren't on this subcommittee have, who aren't on the Appropriations Committee have. They do their best to get those ideas in by talking, in this late process and during the year, about what should happen.

Let's do our best to make this happen the way the Constitution envisions and the way people have every right to expect. I hope for a better process but realize that this process does significantly change the priorities the Federal Government has been stuck with for the last 6 years and heads in a new direction.

I suggest the absence of a quorum.

The PRESIDING OFFICER (Mr. TOOMEY). The clerk will call the roll.

The senior assistant legislative clerk proceeded to call the roll.

Mr. DURBIN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### COMPETITIVE SPACE LAUNCH

Mr. DURBIN. Mr. President, the senior Senator from Arizona came to the floor this morning and raised a question about a provision in the Omnibus appropriations bill, particularly the aspect of it that related to the Depart-

ment of Defense. During the course of raising the issue, the senior Senator from Arizona used my name on the floor repeatedly. It was refreshing and I am relieved. The senior Senator from Arizona has not attacked me on the floor for 3 weeks, and I was fearful he was feeling under the weather, but clearly he is in fine form and feels good, and I welcome him back to the floor for another attack on me personally.

Let's talk about the issue he raised because it is complicated but extremely important when it comes to the defense of the United States. Here is what it boils down to: In the early 2000s, there were two companies making rockets that launched satellites. The two companies were Boeing and Lockheed, and they competed with one another, but in the early 2000s—and I don't understand why—they made an argument to the Department of Defense that the Nation would be better off if they merged the two companies into one company and then provided the rockets to launch satellites to defend the United States and collect information. They argued that if they worked together, it would cost less, and they merged. With the approval of the Department of Defense, they continued to bid on satellite launches.

What happened was a good thing and a thing that was not so good. What was good was that their product was very reliable. They launched satellites with great reliability, and that is of course what America and its national defense requires. The bad part is that the costs went through the roof. The costs went up about 65 percent over this period of time since they created United Launch Alliance, costing the Federal taxpayers about \$3 billion more for launches than it did in the past. They argued that they would eliminate competition and provide reliability, and they did, but the costs went up dramatically.

A new player arrived on the scene—SpaceX. SpaceX is associated with Elon Musk, a name that is well known in America. They decided to get into the business. They were going to build rockets and launch satellites too. Naturally, the United States of America said: Be my guest but prove you can do it in a way that we can count on you, because when we need a satellite launched to collect information, we want to make sure it is successful.

Over the years, SpaceX improved, evolved, and developed the capacity to launch satellites to the point where NASA, for example—the National Aeronautics and Space Administration—used SpaceX rockets successfully. It reached a point where the Department of Defense said to SpaceX: You are capable and will be certified to now compete for Department of Defense business. It is to the credit of SpaceX that they reached that point.

I thought this was an exciting development because, once again, we were going to have competition between the United Launch Alliance, the old Boeing-Lockheed merger, and SpaceX, the

new company. The owner of SpaceX said to me as well as publicly: We can do this for a fraction of the cost to American taxpayers. What I did was invite the CEOs of both companies to come to my subcommittee—when I then chaired the Defense Appropriations Subcommittee—in March of 2014. No one had quite seen a hearing like this before. We put the CEOs of both companies at the table at the same time, and we asked them questions about their operations, reliability, costs, and projections for the future.

At the end of this hearing, I said to the CEOs of each of these companies: I want to do something that is a little unusual. I want to offer each of you the opportunity, if you wish, to submit 10 questions to the other CEO that you think should have been asked and perhaps we didn't—and so they did. It was a complete record and a good one. For the first time, it really showed me that we were moving to a new stage in rocket science and capacity that could serve the United States by keeping us safe and keeping the costs down, and that of course should be our goal.

Then there was a complication. Vladimir Putin of Russia decided to take aggressive action by invading Georgia and Ukraine, and other actions by him that we considered confrontational tended to freeze up the relationship between the United States and Russia. Why is that important? It is important because the engine being used by United Launch Alliance to launch America's defense satellites was an engine built in Russia.

People started saying: Why in the world are we giving Russia and Vladimir Putin the opportunity to sell rocket engines to the United States? Secondly, why would we want to be dependent on Russia for rocket engines? So the debate started moving forward. How do we exclude the Russians from building engines and still have competition between these two companies? That is what brings me here today.

We were trying to find the right combination to bring competition and reliability without engaging the Russians. Everyone in Congress knows we have authorizing committees and appropriations committees. The senior Senator from Arizona is the chair of the defense authorizing committee, the Armed Services Committee, and I have been chair and am now the vice chair of the Defense Appropriations Subcommittee.

The senior Senator from Arizona started including provisions in the authorizing bill which said that ULA, United Launch Alliance, could not use Russian engines to launch satellites and compete for business using those engines in the United States. As a result, the Air Force came to see me. First, I might add, a letter was sent when this provision was added to the Defense authorization bill. The letter was sent in May of this year, signed by Ash Carter, the Secretary of Defense, and James Clapper, the Director of National Intelligence, suggesting that ex-

cluding Russian engines so quickly could cause a problem in terms of the availability of missiles to launch satellites as we need them. The limitation that was put in by the defense authorization committee as to the number of engines that could be used would be quickly depleted, and the Air Force, the Department of Defense, and our intelligence agency said that may leave us vulnerable, so they asked the Senator from Arizona to reconsider that provision. He did not. If anything, the language that came out of conference on this provision made it even more difficult for the United Launch Alliance to consider using a different type of engine. I might add, they don't have an alternative engine to the Russian engine. United Launch Alliance uses it now. We told them to develop an American engine, and I stand behind that. They told us it will take anywhere from 5 to 7 years for that to happen.

I understand this is a complex assignment, and we want them to get it right. It seems like a long time, but it points to the dilemma we face. If United Launch Alliance cannot bid for work with the Department of Defense using a Russian engine, they don't have an alternative engine to bid with. At that point, SpaceX becomes the sole bidder and the monopoly source for engines. We tried to move from ULA as a monopoly source or sole bidder to competition, and now by injecting this prohibition against Russian engines beyond a certain number, we are again getting back to the days of a sole bidder.

What we have allowed in this Omnibus appropriations bill is language which gives 1 year of flexibility to the Department of Defense when it comes to bidding for these satellite launches, and of course it means United Launch Alliance will be using Russian engines for that bidding.

The Senator from Arizona came to the floor and spent most of his time talking about the aggression of Russia and Vladimir Putin and how we need to be strong with our response. Back in the day, when our relationship was more constructive, the Senator from Arizona and I actually traveled to Ukraine. I agree with him about the aggression of Russia and Mr. Putin and why the United States needs to be strong in response, but we have to be careful that we don't cut off our nose to spite our face. If we reach a point where we don't allow ULA to use a Russian engine to compete, we could endanger and jeopardize the opportunities the United States needs to keep us safe, and that is exactly what the Secretary of Defense and Mr. Clapper said in writing to Senator McCANN.

My message is that there is nothing, incidentally, in this omnibus bill that was not discussed in the original bill as marked up. There is no airdrop of language. It is a slightly different version of the language but says the same thing—that we think there should be some flexibility as ULA moves to develop their new engine.

The Department of Defense has convinced me that it would be short-sighted of us to make it impossible for ULA to even bid on future satellite launches. God forbid something happens to SpaceX where they can't launch satellites. At that point then, we would be in a terrible situation. We wouldn't be able to keep our country safe when we should. None of us wants that to happen.

The provision in the omnibus bill gives 1 year for the Department of Defense and the Air Force to continue to work with ULA to have a launch and have competitive bidding. If SpaceX performs as promised and comes in with a lower bid for those launches, they deserve to win, and they will. In the meantime, we want to make sure we have the availability of sourcing beyond just one company—beyond SpaceX.

I am impressed with all of these companies. The Senator from Arizona raised the point that Boeing has its headquarters in my home State, and I am very proud of that. I have worked with them in the past. I think it is an excellent company and does great work. My initial premise in starting this conversation in the Appropriations subcommittee was that we should have competition, and Boeing should face competition. The insertion of the Russian engine issue has made this more complex, and it will take us some time to reach what should be our ultimate goal: quality and reliable engines in these rockets to launch satellites to keep America safe and the certainty that if one company fails to be able to meet our defense needs, there is an alternative supplier. That, to me, is the best outcome possible.

This section 8045 of the Department of Defense appropriations is critical to our national security and launching satellites into space. We have to assure the Department of Defense and our intelligence agencies that we can put critical satellites into orbit when we need it. We have to make certain that the costs of these launches is competitive so taxpayers end up getting the best outcome for the dollars they put into our national defense. We have to generate competition to drive down costs, and we have to bring to an end our reliance on Russian-manufactured rocket engines. I wish that were not the case. I wish our relationship with Russia was positive in every aspect, but it is not, and I join with virtually all of my colleagues in believing that the sooner we move away from Russian-made engines to American-made engines in competition, the better for us and the better for our Nation.

There is no doubt that our Omnibus appropriations bill recognizes the need to end our reliance on Russian engines, and we actually put our money where our mouth is. We added \$143.6 million on top of the \$84.4 million requested by the President to accelerate the development of a new rocket engine. This amount is \$43.6 million more than the

\$100 million authorized by the defense authorization committee, so we are making certain we are going to end this reliance on Russian engines. The question is how we manage the space launch through the several years of launches before we have that engine. We need to do it without jeopardizing our national security.

The general provision I referred to allows for space launch competition in 2016 without regard to the source of an engine. It will permit real competition on four missions in 2016, and it will avoid trading one monopoly for another. I think I have explained how we have reached this point.

I think there is good faith on both sides. I don't question the motives of the senior Senator from Arizona. I hope he doesn't question mine. What we need to make certain of is that we move toward a day when America is safe and that the money spent by taxpayers is well spent.

I yield the floor.

I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The senior assistant legislative clerk proceeded to call the roll.

Mr. NELSON. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### NASA'S BUDGET

Mr. NELSON. Mr. President, we are going back into space with Americans on American rockets, and we are going to Mars. We are on the cusp of the next big breakthrough in space exploration.

It is interesting that this is at the very time that in our culture here on Earth, the movie that is harkening back—"Star Wars"—is coming out again, and it is going to be such a blockbuster at the box office. What is fictional in "Star Trek" and "Star Wars" is now becoming factual.

In large part, it is what has been done in the Nation's space program since the shutdown of the space shuttle back in 2011 and in the preparation of the new vehicles—the new rockets, the new spacecraft, the new satellites, the new exploratory missions that have gone on.

Who among us, merely three decades ago, would have thought the Hubble Space Telescope would look back into the far reaches of the universe—close to the beginning of that universe—and start to unlock secrets through this telescope that is orbiting the Earth that was put up by humans in the U.S. space shuttle? Who among us would believe that we now are going to launch a telescope in 2018 that will look back in time to the very beginning of the source of light in the universe—the big bang—and understand this universe all the more and how it evolved in this magnificent creation that we earthlings observe of the heavens? Who among us, over four decades ago when

we landed on the Moon, were not impelled to escape the bounds of Earth's gravity once again to get out and explore the heavens?

That is now becoming a reality. It is becoming a reality in large part because of the budget that will be presented to the Congress, which we will pass—an appropriation that just in this present fiscal year that we find ourselves in right now will increase NASA's budget \$1.3 billion over what NASA was appropriated last year. Getting Americans and American rockets back into space, since we haven't had Americans on American rockets since we shut down the space shuttle, had to be done. That was an essentially extraordinary creative flying machine, but its design had inherent flaws that were risky for human beings. Indeed, in over 135 flights of the space shuttle, we lost two crews—14 souls—because of its design. There was a malfunction where there was no escaping for the crew. But now we have new rockets that will have the crew in a capsule on the top of the rocket so that if there is an explosion on the pad, an explosion in ascent all the way into orbit, we can still save the crew because we can separate them by the escape rockets from the main vehicle and save the crew, ultimately having them land or by parachute-powered landing or a parachute landing.

These rockets are almost ready to fly. Indeed, some of them have been flying for quite a while. Two companies, SpaceX and Boeing, will have the spacecraft. SpaceX, its capsule and spacecraft called Dragon, is sitting on top of a rocket that has flown many times called the Falcon 9. Boeing, with a spacecraft called the Starliner, will sit upon the very proven Atlas V. Which one will fly first? We do not know. But the fact is that is only 2 years away—2017. They will fly with the first crews to and from the space station so that we no longer have to rely upon a very reliable partner that indeed helped us build the International Space Station to which we go and return not only with crew but with cargo as well. We won't have to rely on the Soyuz anymore. We will be flying on American rockets. That is going to happen in a short 2 years.

The assurance of that is this. It is the Omnibus appropriations bill that is coming forth that has appropriated the amount NASA needs to keep this competition between SpaceX and Boeing going for developing, hopefully, two spacecraft that will be launching Americans on American rockets to and from our International Space Station.

By the way, we have six human beings on the space station. It is an international crew. They are doing all kinds of experiments. At another time and another day, I can tell my colleagues about some of those exciting things.

We are going to Mars. We are going to Mars because we are developing a spacecraft called *Orion* that we have al-

ready test-flown out to 3,600 miles to check its structural integrity on a ballistic reentry. That was done a year ago. Now we are building the largest, most powerful rocket ever on Earth, called the Space Launch System, or SLS. *Orion* and SLS have also been given a boost in this appropriations bill. So we are well on our way for the first test of this full-up rocket with capsule in September of 2018. That is less than 3 years away, with the first crewed vehicle after the first test in 2021.

That is the forerunner to building the spacecraft and the technologies that can take human beings and keep them alive all the way from Earth to Mars, land on Mars, stay on Mars for a while, and return safely to the Earth. "Star Wars," "Star Trek," is fiction. It is exciting, but it's fiction. This is space fact. It is happening in front of our eyes.

Now, there are other things that are happening with this appropriations bill. We think, in this solar system, if there is a chance for life besides Mars, or life that was there and we want to know what happened—there is a moon around Jupiter called Europa. Europa is so cold that it has an exterior that is ice. But the gravitational pull of Jupiter, as Europa goes around and around Jupiter, is such that it causes the friction from an inner core that already has heat and heats up from the inside. So under this crust of ice on Europa is water. In our experience as earthlings, wherever we have found water, we have found life. So is not Europa one of the best chances of there being life as we understand it in those oceans? It is a smaller body than Earth—Europa—and yet has oceans that are twice the volume of the oceans on planet Earth. That is a real possibility.

So in this appropriations bill, there is \$1.6 billion to proceed on a plan for taking us to Europa to see if there is other life in our solar system.

There is also something that is very important to us earthlings, and that is that we need to know what is happening to the planet and we need to be able to predict and we need to be able to foretell, because if a big storm is coming here, we want precise measurements to let us, bound on the face of terra firma, know what is that storm that is coming and what are the weather conditions. That accuracy is so important for us in our daily lives here on Earth, not even to speak of our national security.

You could go through the rest of the NASA budget and you can see that it indeed sets us on a course for extraordinary space exploration as well as taking care of the aeronautical research, which is the other "A" in NASA—aeronautics. That has a plus-up from the President's request—aeronautics—giving all the research on the technology to make sure that our aviation industry is at the absolute cutting edge.

We are going to Mars, and we are beginning this journey as we did with the