In conversations just today with Dr. Lowell Wood from Lawrence Livermore Laboratory, I learned more of the details of the results of that test. They had not anticipated the magnitude of the effects at the ground under the blast; many of their instruments simply perished. They were not able to get a clear indication of the effects. I might note that the Soviets had extensive testing experience with EMP over their own territory. They had a much larger territory than we and the Soviets in this test, they were able to instrument more extensively and had a lot more experience than we have had. This was our first and only experience with a superatmospheric detonation of a nuclear weapon.

The effects over Hawaii, which was about 800 miles away, included several totally unexpected things; so there was no instrumentation on Hawaii to record the effects.

So all they can divine from the effects is what happened. Some street lights went out, and analysis after the fact indicated that these were the street lights that were oriented so that there was a very long line effect. In other words, the wires feeding the street lights had very long lengths of wire that fed the antenna which received the signals from the detonation in space such that there was arcing and some of the street lights went out. This was investigated, and some of the failures were retained evidence that I think that I will talk about in a few minutes. Mr. Speaker, that spent 2 years studying these effects and the risk to our military and to our country.

There were other effects in communications and so forth. As I said, none of this was expected; so there was no instrumentation. We have since tried to determine the effects of what is called electromagnetic pulse produced by a nuclear detonation. We have done that with laboratory devices, some of them quite large that could expose a whole airplane, but none of them obviously large enough to include miles and miles of long-line effect.

The EMP pulse at that distance was estimated to be about five kilovolts per meter. We will have occasion in a little bit to talk about that in light of present capabilities. Because there was intense activity above the atmosphere, the Van Allen belts were pumped up; so some of the effects that we observed were due to the Van Allen belts. We observed some satellites that decayed very rapidly as they passed through the Van Allen belts.

Mr. Speaker, I want to kind of put what we are going to say in context. So I want to indicate here some of the seriousness of EMP and its implications. In 1999, I sat in a hotel room in Vienna, Austria. I was there with 10 other Members of Congress and several staff members. We had there three members of the Russian Duma and a representative of the Kremlin. This was just prior to the resolution of the Kosovo conflict. We developed with them a framework agreement that was adopted about 5 days later by the G-8, which the Members may remember ended the Kosovo conflict.

One of the members of the Russian Duma was Vladimir Lukin, who was well known to this country because he met with the President of the United States and of Bush I and the beginning of the Clinton administration. At that time he was a very senior member of the Russian Duma. He was very angry and sat for 2 days in that hotel room with his arms crossed and saying that he had not early asked the Russians for help and they felt offended about that, and the statement he made expressing that sentiment was that “you spit on us. Now why should we help you?” And then he made a statement that stunned us. The leader of that delegation was the gentleman from Pennsylvania (Mr. Weldon), who speaks and understands some Russian. And when Vladimir Lukin was speaking, he turned to me and he said, “Did you hear what he said?”

Of course I heard what he said, but I did not understand it because I do not understand Russian.

But then it was translated, and this is what he said: “If we really wanted to hurt you with no fear of retaliation, we would launch an SLBM,” which if it was launched in a submarine at sea, we really would not know for certain where it came from. “We would launch an SLBM, we would detonate a nuclear weapon, and we would say, and we would shut down your power grid and your communications for 6 months or so.”

The third-ranking communist was there in the country. His name is Alexander Shurbanov, and he smiled and said, “And if one weapon would not do it, we have some spares.” I think the number of those spares now is something like 6,000 weapons.

This likely consequence of a high-altitude nuclear burst was corroborated by Dr. Lowell Wood, who in a field hearing at the Johns Hopkins University applied physics laboratory, made the observation that a burst like this above our atmosphere creating this electromagnetic pulse would be like a giant continental time machine turning us back to the technology of 100 years ago. It is very obvious that the population of today in its distribution could not be supported by the technology of 100 years ago. I asked Dr. Wood, I said, “Dr. Wood, clearly the technology of 100 years ago could not support our present population in its distribution,” and his unemotional response was, “Yes, I know. The population will shrink until it can be supported by the technology of 100 years ago.”

Just a word, Mr. Speaker, about what this EMP is. It is very much like a really giant solar storm. All of us are familiar with solar storms and with the disruption of our communication systems. And this is like a really giant solar storm. It is kind of like really intense static electricity everywhere all at once, all over the whole country. It
is sort of like a lightning strike that is not just isolated to one spot. Different than a lightning strike in terms of the intensities and so forth and the spectrum, but it would be everywhere all at once over a very large area.

I had not read the report, and I will have occasion to refer to that again a little later, the report of the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack. This is the executive summary. The report itself is very thick and there is the classified addendum to the big report. And I just want to turn to one page here, and this is page 4, and it says: "What is significant about an EMP attack is that one or a few high-altitude nuclear detonations can produce EMP effects that can potentially disrupt or damage electronic and electrical systems over much of the United States virtually simultaneously at a time determined by an adversary."

I talk a lot about what EMP is. It produces a large number of Compton electrons above our atmosphere which are trapped by the magnetic fields around the Earth. They move at the speed of light. The prompt effects are sort of like a very, very, very fast blast wave. If you have enough, all electronic equipment within line of sight is damaged or destroyed. These are called prompt effects. And, of course, satellites are very soft because it costs about $10,000 a pound to get them up. So they do not launch a lot of hardening on the satellite if they do not need to.

So all of the satellites within line of sight would be taken out by prompt effects. It would not go so high, by the way, as the satellites that are 22,500 miles above the Earth. And it would pump up the Van Allen belts so that satellites that were not in line of sight would die very quickly and one could not reconstitute the satellite network by laser or anything because they also would die quickly.

Let me show a chart here that shows the effects of this bomb exploding over the United States, and this shows a single weapon. This shows a single weapon detonated at the northwest corner of Iowa, and it shows it at about 600 kilometers high, and this would blanket all of the United States. And the concentric circles here, not true circles because there is a little distortion of the electric and magnetic waves around the Earth, but these represent the intensity of the field that is produced by this. At the center we can see it is 100 percent. But even out at the margins of our country, it is down to 50 percent.

Now, a little later I will show a statement from some Russian generals that were reviewed by the people who put together this report, and they said that the Russians had developed weapons that produced 200 kilovolts per meter. Remember, the effects in Hawaii were judged to be the result of five kilovolts per meter. So this is a force about 200 times higher. The Russian generals said that they believed that to be several times higher than the hardening that we had provided for our military platforms that they could resist EMP. Others know about EMP. I did not want anybody to believe that we were telling the government the whole truth and others did not know about that. I mentioned earlier the statement by Vladimir Lukin, the Russian member of their Duma, and this is the statement that I referred to here, and that was in May 2, 1999: "Chinese military writings describe EMP as a victory weapon and described scenarios where EMP is used against U.S. aircraft carriers in the conflict over Taiwan." So it is not like our potential enemies do not know that this exists. The Soviets had very wide experience with this, and there is a lot of information in the public domain relative to this.

A survey of worldwide military and scientific literature sponsored by the commission, that is the commission that I am a member of, found wide spread knowledge about EMP and its potential military utility including in Taiwan, Israel, Egypt, India, Pakistan, Iran, and North Korea.

Terrorist information warfare includes using the technology of directed energy weapons, magnetic pulse." I referred to that earlier.

Iran has conducted tests with its Shahab-3 missile that have been described as failures by the Western media because the missiles did not complete their ballistic trajectories, but were deliberately exploded at high altitude. This, of course, would be excellent news of an EMP attack, if Iran's intent was practiced for an EMP attack.

Today we are very much concerned, Mr. Speaker, about asymmetric weapons. We are a big, powerful country. Nobody can contend with us shoulder-to-shoulder, face-to-face. So all of our potential adversaries are looking for what we refer to as asymmetric weapons. That is a weapon that overcomes our superior capabilities. There is no asymmetric weapon that has anywhere near the potential to do this.

Iran described these tests as successful. We said they were a failure because they blew up in flight. They described them as successful. Of course, they would be, if Iran's intent was practicing for an EMP attack.

Iran's Shahab-3 is a medium-range mobile missile that could be driven on to a freighter and transported to a point near the United States for an EMP attack. I might state that an early use of EMP is a common occurrence in Russia and Chinese war games. I just would like to spend a moment or two talking about kind of the history of how we got here and why the big concern about EMP and the risk that it poses to us. I mentioned Operation Starfish in 1962.

Then we really had a scary event which we did not know about for quite some time that happened in 1995 when there was a Norwegian weather rocket which we did not know about for quite some time. The Norwegians had told the Russians that they were going to fire this weapon, but that did not get to the proper level. When the weapon was fired, it was interpreted by the Russians as a potential first strike of the United States against them and they had alerted their nuclear missile response. They came very close to launching that, and we did not know about that until some time after.

In 1997 I had a very interesting experience. I am on the Commission on Critical Infrastructure. General Marsh, retired, was
chairing that Commission on Critical Infrastructure. This was infrastructure that was so critical that if an enemy could take it out, we would be very much disadvantaged by it. I asked him about EMP, had they looked at that?

His answer was, yes, they looked at it.

Well?

He said, well, we did not think there was a high probability that would happen, so we did not continue to look at it anymore.

I told him, gee, with that attitude, if you have not already, I am sure when you go home tonight you are going to cancel the fire insurance on your home.

What one needs when there is the potential for a very high-impact, low-probability event, is what we call insurance. I think that every American citizen has the right to ask their government, have you made the proper insurance investment to protect me, to protect my family, in the event that we might be hit by our potential enemies, which we hope is not a high probability, in the event that there is an EMP attack against our country?

Your home burning, by the way, is not a high probability event. You may have a $200,000 home and it may cost you $300,000 of fire insurance for that year. So you can do the simple arithmetic that tells you the insurance company does not expect very many homes to burn that year.

Then the next event in this little timeline was my trip to Vienna, Austria, when I met there in that hotel room with Members of the Russian Duma. In 2001 we had some tests at Aberdeen with a device that was made using only the equipment that a terrorist might buy from Radio Shack or a place like that to see if you could put together a directed energy weapon, a weapon, by the way, that if sophisticated enough one might drive down Wall Street and take out all the computers in the financial market. It would not go further than that, but if it did that, that would, of course, be an enormous blow.

In 2001, the Commission was set up and then in 2004, last year, we have the report of the Commission.

I just would like to show you a chart now of the commissioners. We will not have time to talk about the capabilities of all of these commissioners, but I will assure you that these are all giants and they were selected from among the foremost scientists, experts and military officers in the United States to achieve a mix of talent on scientific aspects of EMP, nuclear weapon design, military implications of EMP and the effects of EMP on civilian and military infrastructure.

Dr. William Graham, the Commission chairman, was science advisor to President Reagan. He ran NASA and was one of the first scientists to study the EMP phenomenon when it was first discovered by the United States in 1962.

Commissioner John Foster, Johnny Foster, who designed most of the nuclear weapons in the inventory the United States today, was a director of the Lawrence Livermore National Laboratory, and for decades has been a close adviser to the Department of Defense on nuclear matters.

Dr. Lowell Wood is a member of the director’s staff at Lawrence Livermore National Laboratory where he inherited the scientific mantle of Dr. Edward Teller, the inventor of the hydrogen bomb.

I had a very interesting personal experience with Dr. Woodard.

When I became interested a number of years ago in EMP and the potential implications, I knew that Tom Clancy, who lives in Maryland and he has come to do several events for me, I knew that he had a novel in which EMP was one of the sequences in his novel. I know that Tom Clancy does very good research. So I called to ask him about EMP and its implications.

He said that if I had read his book, I probably knew as much about EMP as he knew. He was going to refer me to what he said was in his view was the smartest person hired by the U.S. Government, and that was Dr. Lowell Wood. So Dr. Lowell Wood comes with great recommendations.

Commissioner Richard Lawson was a USAF general, served on the Joint Chiefs of Staff and was Deputy Commander-in-Chief of the U.S.-European Command.

Dr. Joan Woodard, I had a very interesting experience with Dr. Woodard. I was visiting my son and daughter and children out in Albuquerque, he works at the Sandia Labs, and he brought home a little note talking about a seminar they were having which was exploring some issues that I thought would be relevant to the work that the Commission was doing. I did not know at that time that she was a member of the Commission.

So I asked for a briefing, and I spent 5 hours in a very detailed briefing at Sandia Labs. And it was not just Dr. Joan Woodard, it was a large number of people at the labs there that were focusing primarily on the national infrastructure consequences of this.

What I would like to do now is go through some of the statements and recommendations of the report. The next chart shows the threat and the nature and magnitude of EMP threats within the next 15 years.

On the chart, the coverage that is produced by weapons detonated at various altitudes. I mentioned 600 kilometers. Actually 500 kilometers pretty much covers the margins of our country and, of course, the lower the altitude you detonate it, the less area it covers, but the higher will be the intensity of the pulse that is produced.

This is a direct quote from the EMP Commission report: “EMP is one of a small number of threats that may hold the greatest threat to the continued existence of today’s U.S. civil society.”

Now, that is couched in the careful kind of scientific terms, but what that really means is that a really robust EMP laydown, which, as Vladimir Lukin in that hotel room in Vienna, Austria said, would shut down our power grid and communications for 6 months or so. And if one weapon would not do it, as Alexander Shaponov said, for that would be particularly with the power of the weapons that the Russian generals say that they have developed.

What this would do is to produce a society in which the only person you could talk to was the person sitting right next to you, unless you happened to be a ham operator with a vacuum tube set, which, by the way, is 1 million times less susceptible to EMP than your present equipment that the hams use. And the only way you could get anywhere was to walk, because, you see, if the pulse is intense enough, it turns off all the computers in your car. There will be no electricity, so even if the car ran, you could not get gas.

By the way, if you have a car that still has a coil and distributor, you are probably okay, because those are pretty robust structures compared to today’s cars with so much microelectronics in them.

It would disrupt our military forces and our ability to project military power. For the last decade, Mr. Speaker, we have been waiving hardening on essentially all of our military platforms because it costs maybe as little as 1 percent, maybe like 5 percent more to do it. It can be done. That is the good news story. If you do not harden, you can get 5 percent more weapons systems. And since we have had so little money during those years, the Pentagon opted to run this risk. With terrorists about, I think that is probably a risk we do not want to continue to run.

The number of U.S. adversaries capable of EMP attack is greater than during the Cold War. We may look back with wistfulness on the fondness of that era. We then had only one potential adversary. We knew him quite well.

Now we have who knows how many potential adversaries, and they come from very different cultures than we, and we have a great deal of difficulty in understanding them and communicating with them.

Potential adversaries are aware of the EMP’s strategic attack option. I started, Mr. Speaker, with talking about the fact that I was not letting the genie out of the bottle. Ninety-nine percent of Americans may not know very much about EMP, but I will assure you, Mr. Speaker, that 100 percent of our potential enemies know all about EMP. I think that the American people need to know about EMP because they need to demand that their government do the prudent thing so that we are less susceptible, less and less at risk to an EMP attack year by year. The threat is not adequately addressed in U.S. national

1700
and homeland security programs. Not only is it not adequately addressed; it is usually ignored, not even mentioned, and it certainly needs to be considered.

I might note that Senator John Kyl, with whom I served in the House on the Committee on Armed Services, wrote just a couple of weeks ago a very nice editorial in the Washington Post, and we will have his quote a little later, on EMP effects and how we need to be about preparing ourselves for that.

Terrorists could steal, purchase, or be provided a nuclear weapon and perform an EMP attack against the United States simply by launching a primitive Scud missile off a freighter near our shores. We do not need to be thinking about missiles coming over the Pole. There are thousands of ships out there, particularly in the North Atlantic shipping lanes, and any one of them could have a Scud missile on board. If you put a canvas over it, we cannot see through the thinnest canvas. We would not know whether it was bailed hay or bananas or a Scud launcher. You cannot see through any cover on ship. The Commission on the Emerging Ballistic Missile Threat chaired by Secretary Rumsfeld before he went to the Senatorial indulgences, wrote that the chairman of this commission was his vice-chair, found that ships had been modified so that they had missile-launching tubes in ordinary freighters. You can read that in their report.

Scud missiles can be purchased on the world market today for less than $100,000. Al Qaeda is estimated to own about 80 freighters, so all they need, Mr. Speaker, is $100,000, which I am sure they can get, for the missile and a crude nuclear weapon.

Certain types of low-yield nuclear weapons can generate potentially catastrophic EMP effects. These certain types of weapons are weapons that have been designed for enhanced EMP effects. They may have little explosive effect, but very high EMP effects over wide geographic areas, and designs for various such weapons may have been illicitly trafficked for a quarter of a century. We are certain that the Chinese have them. Of course the Russians have them; they developed probably better or at least as good designs as we developed them. But what the EMP Commission reported last year, the chairman of this commission was his vice-chair, found that ships had been modified so that they had missile-launching tubes in ordinary freighters. You can read that in their report.

Scud missiles can be purchased on the world market today for less than $100,000. Al Qaeda is estimated to own about 80 freighters, so all they need, Mr. Speaker, is $100,000, which I am sure they can get, for the missile and a crude nuclear weapon.

One or two examples of the kind of consequences that we face. The next chart shows some other comments in the EMP report. One or a few high-altitude nuclear detonations can produce EMP simultaneously over wide geographical areas. As the chart showed earlier, the whole country could use a nuclear weapon and it really will not matter. Anything that is high enough with the right kind of weapon will blanket the whole country with an EMP force that could knock out all of our electronic equipment.

The thing they were really concerned about, because we have a very sophisticated infrastructure with lots of interdependencies, they were really concerned about the cascading failures and the unprecedented cascading failure of our electronics-based infrastructures, which could result in power, energy, transport, telecom, and financial systems and are particularly vulnerable and interdependent. And if one of them comes down, if you bring down the power grid, Mr. Speaker, you have brought down all of these other parts of our national infrastructure. EMP disruption of these sectors could cause large-scale infrastructure failures for all aspects of the Nation’s life.

Now, these are not my words; these are taken from the EMP Commission report. This commission was set up as a part of public law, and that is noted here on this chart. Both civilian and military capabilities depend on these infrastructures. Without adequate protection, recovery could be prolonged months to years for recovery. And here on the right is a little depiction showing some, and there are more than 100 of them showing the cascading interrelationships. For instance, electric power is not shown as important for water or for banking and finance, and so forth.
for government services; and of course it is. So if you do not have electric power, for instance, you do not have any of these other things.

There was a number of years ago a scientist by the name of Harrison Scott Brown who worked at CalTech, and he offered a series of seminars called the “Next 100 Years.” This was during the Cold War. And one of the questions that it was appropriate to ask during the Cold War was, What would you do after the nuclear attack? You may remember, Mr. Speaker, your parents talking about the backyard shelters that were built during the 1960s. Sometime after that I went to work for IBM and they were still talking about the fact that IBM had loaned its employees money interest-free to build a backyard shelter. There was a real concern that there could be a bolt out of the blue and that we could have a nuclear attack. We had a big civil defense organization with lots of shelters. They were stocked, and you were given pamphlets and you were told where to go.

I think, Mr. Speaker, that today, with the potential for a terrorist attack, we need to turn back a few pages and learn from our experience during the Cold War when we recognized that the more prepared an individual and a family was to be self-sufficient during that attack, the stronger we would be as a whole; and I think that we could profit, at least have a more intense focus on civil defense in our homeland security efforts.

Harrison Scott Brown was concerned about what you would do after you came out of the fallout shelter and how you would reconstitute your society to reestablish the kind of an infrastructure that you had before the attack. His concern was that in the United States a number of years ago, his concern would be even greater were he alive today, his concern then was that we had developed such a sophisticated, interrelated infrastructure, that if it came down like a house of cards it might be very difficult, maybe, he thought, and I will explain in a moment why, maybe impossible to reestablish that infrastructure. Because, he noted, that this infrastructure was built up gradually from very simple to very complex, when there was available to us a rich resource of raw materials, high-quality iron ore. That is all gone. Our best ores now, I raw materials, high-quality iron ore. was available to us a rich resource of simple to very complex, when there that infrastructure. Be- in a moment why, maybe impossible to reestablish that infrastructure. Be-

His concern was that if our infrastructure collapsed as a result of a nu-

clear attack, today we are talking about an EMP attack, which does not blow up buildings, but it shuts down the infrastructure because it would de-

stroy, disrupt all of the electronic equipment if the pulse was high enough; and a determined, sophisti-
cated enemy could make sure that it was high enough.

So he was concerned that maybe it would not be possible now without that high-quality, readily available resource of raw materials that might be very difficult for us to come from other parts of the world that we could reconstitute our society.

I think, Mr. Speaker, that we need to be looking at that threat to our coun-

try today. I am sure it is no less a threat now than it was when Harrison Scott Brown was holding those seminars.

In 2004, the EMP Commission met with very senior Russian officers, and we were amazed that on the sign. They warned that there was new tech-

nology to develop what they called super EMP weapons had been trans-

ferred to North Korea and that North Korea could probably develop these weapons in the near future, within a few years.

The Russian officers said that the threat that would be posed to global se-

curity by a North Korean armed with super EMP weapons was, in their view, and I am sure, Mr. Speaker, in your view and mine, non-negotiable. You know, why use EMP, as we noted in a previous chart? A terrorist or rogue state might be so inaccurate that they could not even use a nuclear weapon to take out New York City. They might hit the countryside some-

where near. But it would not really matter with that low accuracy if they were doing an EMP laydown. Because anywhere over New England would be quite good enough, and there is no way that they could damage to our country by a ground burst, even if it hit the city, than if they could do a high altitude burst, which produced EMP and took down, if it was intense enough, all of our infrastructure.

EMP has such a wide area of effect that if the weapon is large enough or several are used, covering potentially an entire continent, that even a highly inaccurate missile could not miss its target in an EMP effect. EMP attack involves large area destruction, meaning that attack, this is really in-

teresting, Mr. Speaker, this attack would occur before the weapon ever reentered the atmosphere. So even if we were really good at taking out weapons before they hit us, it really would not matter, because this is detonated be-

fore it starts to reenter. So any weapon that would take out a missile on its final descent would be useless, because it has already detonated and the dam-

age is done at altitude. Increased dependence on advanced electronic systems results in the poten-

tial for an increased EMP vulnerability. And what this does is to make that attack more attractive to our assai-

nants. The fact that we are ever more sophisticated and therefore more vulnerable makes it ever more attractive to our adversaries, because this really becomes the ultimate asymmetric weapon.

This is why it threatens the ability of the United States and western nations to project influence and military power, because a third-world country with a crude missile and a crude nuclear weapon could, in effect, hold us hos-

pital. One of the things that is so important that we stop the spread of nuclear weapons.

EMP can cause catastrophic damage to the Nation by destroying the elec-

tric power infrastructure, because cas-

cading failures in the infrastructure for everything: telecommunications, energy, transportation, finance, food, and water.

I live on a farm. I cannot even get a drink of water without electricity, be-

cause it takes electricity to pump water. Supplies my water has to have electricity. So we are all really dependent on this infrastructure.

Degradation, and this is really mini-
mized, degradation of the infrastruc-
ture could have tremendous effects on the country’s ability to support its population, and then millions could die. That is true.

In the final analysis, Mr. Speaker, the EMP Commission report is really a three-fer. We have been talking about does not really sound like good news, does it? It sounds like the worst of all news that you could get. But there really is good news here, and the good news is that we do not have to be this vulnerable. It is really not all that expensive to pro-

tect our systems against EMP. You just have to do it.

But we have a problem, and that is the cheapest way to do it is when you design it in. Then it may cost as little as 1 percent more. For really sophisticated elec-

tronic stuff, probably not more than 10 percent more. But if you are trying to add it after it is built, then it can cost you as much as the device itself, which means that we need to start, you can only do what you can do, and we need to start in our national infrastructure by deciding what is most essential to protect and then expeditiously pro-

tecting that as fast as we can.

Every new water system we put in, every new sewage system we put in, every new power line we run, every new distribution system we put in needs to be hardened. It is not all that expen-

sive to do. You just need to do it.

Now we have hardened the mili-
tary our command and control. We are pretty sure that we can talk to each other after an EMP laydown. But that does not give me much solace, Mr. Speaker, because that is the equivalent of only having my brain and spinal cord work, but my arms and my hands will not work. I am not sure just having the capability of my brain communicating.

□ 1715

When oil essentially oozed out of the ground, when the water washed the dirt away, you could scavenge coal exposed in some of the hills of Pennsylvania. The oil now is deep and hard to get or off-

shore or in the Arctic. All the good coal has been burned. Now, to get oil and to get coal, we have to have the in-

frastructure. You have to have diesel fuel shipped to you. You have to have large excavators.

His concern was that if our infra-

structure collapsed as a result of a nu-

1715
with my spinal cord does me much good if my arms and my legs will not respond to those signals.

The EMP Commission has proposed a 5-year plan that, if implemented, would protect the United States from the catastrophic consequences of EMP attack and could be done at a surprisingly modest cost. I would like now to turn to a statement that was made by Dr. John Kyl. I mentioned his name earlier. Last week, the Senate Judiciary Committee Subcommittee on Terrorism, Technology and Homeland Security, which I chair, his words in his op-ed piece, held a hearing on a major threat to the United States not only from terrorists but from rogue nations like North Korea.

An EMP attack is one of only a few ways that America could be essentially defeated by our enemies, terrorists or otherwise. Few if any people would die right away, but the long-term loss of electricity is essentially bringing our society to a halt. Few can conceive of the possibility that terrorists could bring American society to its knees by knocking out our power supply from several miles in the atmosphere. But this time the genie has been warned, time is better be prepared to respond. We really do need to respond.

Here is another statement from Major Franz Gayl.

The impact that EMP is asymmetric in relation to our adversaries, now these are all in the public domain. I want to be very careful, Mr. Speaker, that I do not leave the impression that I am letting the genie out of the bottle. Ninety-nine percent of Americans may not know about EMP, but I will guarantee you 100 percent of our adversaries know about EMP. And we need to know about EMP, because to be forewarned is to be forearmed, and we need to do something about that.

The danger that EMP is asymmetric in relation to our adversaries, the less developed societies in North Korea, Iran and other potential EMP attack perpetrators are less electronically dependent and less specialized, while more capable of continued functionality in the absence of modern conveniences. I do not know that outside of Pyongyang that many people in North Korea would even know if electricity went out. Am sure they depend much on electricity.

Conversely, the United States would be subject to widespread paralysis and doubtful recovery following a surprise EMP attack. Therefore, terrorists and their coincidentally allied state sponsors may determine that, given just a few nuclear weapons and delivery vehicles, that subjecting the United States to a potentially non- attributable EMP attack, we would not even know where it came from if it came from the ocean, is not nearly as defenseable as the destruction of selected cities. Delayed mass lethality is assured over time through the cascade of EMPs’ indirect effects that would bring our highly specialized and urbanized society to a disorderly halt.

The vulnerability of the United States to EMP attack serves as the latest revelation that societal protections associated with our national security cannot longer be assumed by traditional nuclear deterrence and battlefield preparations on their own.

Mr. LEVIN. The 2006 Defense Authorization Bill contains a provision extending the EMP Commission to ensure that their recommendations will be implemented. We need to have them around to make sure that we are following through on their recommendations. Terrorists are looking for vulnerabilities to attack, and our civilian infrastructure is particularly susceptible to this kind of attack. We need to be hardened. We need to respond. We need to prepare so that we are following through on their recommendations. Terrorists are looking for vulnerabilities to attack, and our civilian infrastructure is particularly susceptible to this kind of attack. We need to be hardened. We need to respond. We need to have them around to make sure that we are following through on their recommendations. Terrorists are looking for vulnerabilities to attack, and our civilian infrastructure is particularly susceptible to this kind of attack. We need to be hardened. We need to respond. We need to have them around to make sure that we are following through on their recommendations. Terrorists are looking for vulnerabilities to attack, and our civilian infrastructure is particularly susceptible to this kind of attack. We need to be hardened.

The Department of Homeland Security needs to identify critical infrastructures. What do we need to protect first?

Then we need to have a plan for what would we do if we had the EMP attack tomorrow, the day after tomorrow, the day after that? How far along would we be in protecting ourselves? But we need to have a plan for what we would do in the event that that happens. The Department of Homeland Security also needs to develop a plan. I really want to emphasize this, Mr. Speaker, to help citizens deal with such an attack should it ever occur. Each of us as individuals, each of us as families, each of us as a church group, each of us as a family, each of us as an employer, each of us as an employer, each of us as a community, is prepared so that we will be less susceptible to the loss of these infrastructure supports.

Mr. Speaker, this is really a good news story. We know the problem. It has not happened yet. We have a great study with great detailed recommendations of what we need to be doing. The good news is that if we do these things we will have reduced our vulnerability and we will have now taken from the enemy an enormous strategic capability that they now have because we are such a sophisticated society, depend so much on our infrastructure, and if they can bring down our infrastructure they can bring us down.

We have a mighty Army. It will not be much good if the folks back home do not have anything to eat. Mr. Speaker, to be forewarned is to be forearmed. I am sure Americans will respond to this challenge. And challenges are really exhilarating. You feel really good at night if you have met a challenge and you have had some successes in meeting that challenge.

Mr. Speaker, I think we have a bright future ahead, and it is going to be even brighter if we respond appropriately to the warnings that are here.

PROBLEMS WITH CAFTA

The SPEAKER pro tempore (Mr. MACK). Under the Speaker’s announced policy of January 4, 2005, the gentleman from Michigan (Mr. LEVIN) is recognized for 60 minutes as the designee of the minority party.

Mr. LEVIN. The Dominican Republic-Central America Free Trade Agreement presents an important crossroads for trade policy. It involves issues broader than those, for example, relating to the minorities from, and indeed, as President Bush said recently, it involves issues beyond trade, including ramifications for the future path of democracy.

It is an important test for globalization. What has been unfolding in Latin America, including Central America, is that substantial portions of the citizenry are not benefiting from globalization. They have increasingly responded with votes at the ballot box or in the street. Doing so they have raised sharply an underlying issue and that is whether the terms of expanded trade need to be shaped to spread the benefits or simply to assume the trade expansion by itself will adequately work that out.

It is for these reasons, not more narrow interests, why the issue of core labor standards in CAFTA is important for the United States of America. The way it is handled in CAFTA undermines the chance that the benefits of expanded trade will be broadly shared. The goal of globalization must be to expand markets and raise living standards, not promote a race to the bottom.

An essential part of this leveling up is the ability of workers in developing nations to have the freedom to join together, to have a real voice at work, so they can move up the economic ladder. The goal of CAFTA is to let the Central American where recent State Department and International Labor Organization reports confirm that the basic legal