

ATOMS FOR PEACE + 50

Nuclear Energy & Science

for the 21st Century

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The Watergate Hotel
Washington, DC

The Honorable Spencer Abraham, Secretary of Energy

Enrico Fermi Presidential Award Dinner - Keynote Speaker

DR. RAYMOND L. ORBACH: It is now my honor and great pleasure to introduce the Secretary of Energy, the Honorable Spencer Abraham. He has been a champion of science and technology for years, first in the U.S. Senate and now as a member of President Bush's Cabinet. This past July he became first Secretary of Energy ever to testify at a Congressional hearing devoted to the oversight of the Office of Science. He said, at Brookhaven, earlier, "A serious commitment to national security demands a serious commitment to science." He is a great activist and advocate on behalf of our entire scientific community.

On a personal note, let me say how much I appreciate and enjoy the opportunity to work for Secretary Abraham in this administration. He is enormously supportive of basic research in the United States. He cares about the future of science. He's the best friend science could hope for. Secretary Abraham.

ABRAHAM: Ray, thank you. When that introduction seemed a tad bit short at the beginning, I was reminded of the way I was once introduced in the days when I was running for public office. And I have to tell you that in the first campaign I waged in the United States Senate, at the outset, I was a very unknown guy, hadn't run for office before and, frankly, my resume wasn't thick enough to impress people quite as much as we wanted and so the folks on my campaign staff put together about a 12 page single spaced biographical thing that was sent out trying to puff up what were, frankly, scant accomplishments.

And to give you a sense of how much puffing went on, it took three pages just to get to my kindergarten graduation. So, in any event, the thing that particularly disturbing was to actually show up at an event and have the MC of a service club or something, who had never met me before and therefore didn't quite know what to say, read the entire 12-page, single spaced document before introducing me. And it was so self-serving and over the top that it was humiliating.

So, after a few of these experiences, I went back to the office and said to our campaign workers, I said, "Look, when you send this thing out, why don't you call these people, if they don't really know me and indicate that, instead of reading the whole thing, which can be painful, maybe they might just pick a few things out and highlight them." And that very night I went out and was introduced by, again, somebody who had never heard of me, and he said, "I was planning tonight to introduce Mr. Abraham by reading a 12-page document that had been sent me but his staff called this afternoon and said, "The less said about him the better."

But now things have changed. I only arrive in rooms when trumpets play ahead of my appearances. We had several people from the horse training industry staying in this hotel. They got a little bit confused when that noise went off for us. We knew it was for this event and we're very happy that everybody is here.

And I just want to pay-- First of all, acknowledge on behalf of a number of the other senior officials of the Department of Energy, our appreciation. We have Deputy Secretary Kyle McSlarrow here and our two Under Secretaries, Bob Card and Linton Brooks, a number of our other senior officials I've seen in and out of the reception earlier. And on behalf of all of use, we want to just say thank you to all of you and the contributions you make.

And, in particular, I want to pay tribute to our great lab directors, a number of whom are here tonight, for the work that continues to go on in the Department of Energy's complex and also want to echo Ray's comment in paying tribute to past recipients of the Fermi Awards. All of you are people we hold in highest regard at the Department of Energy. And it's because of your contributions and the ones, which tonight we will celebrate for our new recipients, that this Department's reputation is the in the forefront of America's and the world's science research, has been built.

I also want to thank Rob Pfaltzgraff and Susan Eisenhower, everyone who has been part of putting this event together. We, obviously, appreciate very much the leadership and support that you bring to this effort. And it humbles us to have the chance to work with people who appreciate this as you do, the foreign policy analysis and the Eisenhower Library's work in organizing this event, which we sponsor.

And, again, I want to thank our lab directors as well as those who are representing labs here on behalf of their directors for the contribution tonight, the exhibits to the conference that are outside here. And I hope that everybody will have a chance to tour the exhibit area. We're obviously very proud of the legacy that we, in the Department, have inherited from President Eisenhower's extraordinary initiatives. Now, almost exactly 50 years from the date of the President's historic speech at the United Nations, it seems the right time to examine that legacy, both where we have been and where we are headed. The proceedings of this conference will serve, I think, as a critical reference point as well as a guide for the future and I look forward to reviewing them.

And let me also take this opportunity to thank the organizers of the 2003 Fermi Awards. I'm grateful for the work you've done and the time and the effort, which goes into putting this program together. It is really now my chance, my pleasure, really, to offer personal

congratulations to the winners of this year's Fermi Award and thank past winners, as I have already done, for joining us this evening. We will hear a lot more about our recipients tonight.

But let me just say that I believe John Bacall, Raymond Davis, Jr, and Seymour Sack represent what is best about the Department of Energy's science. They were willing to take risks in the research and to stand by it, even if others might have had doubts. Dr. Davis' exquisite experiments, Dr. Bacall's magnificent theoretical insights illustrate just how perfectly theory and experiment can be joined. And Dr. Sack was instrumental in seeing that America had a credible deterrence when it needed it most. Each is dedicated to the critical importance of basic research.

Tonight I am here, of course, representing the Department of Energy, but more importantly, also representing President Bush who, in fact, gives this award for a lifetime of achievement in energy-related science. As the home of basic research in physical sciences, particularly the science of nuclear energy, the Department of Energy is the right place to administer this award for the President, for tonight, we honor not only individual achievement in energy-related science, but the very idea of long-term basic research, the kind of investment that is at the same time most difficult to understand and yet most critical to our success as a nation.

From deterrence of nuclear conflict to MRIs to PET scans and other medical miracles to 20% of the electricity, which powers our homes and businesses, fundamental scientific research is the unsung hero of the modern age. So this evening we recognize and we celebrate these three scientists as well as the nature of the science, which they do. And we could not have found a better forum in which to honor the achievements of basic research in energy in my judgment than at a conference on President Eisenhower's "Atoms for Peace" speech.

Today you finished a full day of discussion on the speech and its implications for nonproliferation, nuclear energy, and nuclear science. As far as I can see, the best minds in the business have all taken a crack at those topics here today. And so now, at the end of the day, I'm here in the unenviable position of trying to add something to what has already been discussed. Rather than trying that, I would prefer, I think, to just make a personal observation.

Specific initiatives offered by President Eisenhower in his "Atoms for Peace" speech, while extremely important, are of less significance today than the actual vision he offered of how to think differently about atomic power. His foresight and willingness to be bold at a time of considerable international tension set the stage for a host of global efforts to apply the power of the atom for peaceful purposes.

President Eisenhower's address also sounded the major themes that became the core of our responsibilities at the Department of Energy, nuclear energy, nonproliferation, and a variety of areas surrounding nuclear science. And while his proposals in each of these areas were historic, it is clear that President Eisenhower was equally concerned with shifting the conversation about atomic power away from questions of war and toward the issue of peace. In fact, what he was really doing was taking the discussion of atomic power back to where it began when Enrico Fermi and others first started looking at the energy that could be released from the atom.

In the process, President Eisenhower sketched an agenda for the peaceful use of atomic power that is alive and well today at the Department of Energy. In Eisenhower's time however, the arguments for peaceful use of nuclear energy were very different. Then the idea was to move from the destructive to the constructive power of nuclear fission. Eisenhower cited agriculture, medicine, and the generation of electricity as possible applications.

But the very success of Atoms for Peace, just as I suspect President Eisenhower hoped has changed the way we talk about nuclear power. Today one of our first imperatives reflects our commitment to a clean environment. Nuclear power plants emit none of the pollutants associated with the burning of fossil fuels. Since the mid-1970s, nuclear energy has enabled the United States to avoid emitting over 80 million tons of sulfur dioxide and about 40 million tons of nitrogen oxide.

Another imperative is to supply energy that is both abundant and affordable. As many of you know, our administration has identified hydrogen as being a potential source of unlimited and clean energy in the future. We envision a day when hydrogen will empower light trucks, cars, 18-wheelers, factories and shopping malls. But this is a vision that will take decades to implement and one of the challenges will be to produce hydrogen cleanly and efficiently. What's exciting about nuclear energy is that it promises to do exactly that.

Our work with the international community to develop Generation Four nuclear technologies, points the way to realize this vision perhaps even sooner than some might suspect. Finally, there is the policy to debate today surrounding the issue of climate change. It's obvious to me that an energy source, capable of supplying a significant proportion of the world's power with no greenhouse gas emissions, should be at the center of this debate. That's why in February of last year we announced our Nuclear Power 2010 initiative, which today is working with the private sector to pave the way for the construction of new nuclear power plants to begin in America in the next few years.

Again, I'd like to think that President Eisenhower would be delighted with the way this debate has changed over the years. On the nonproliferation front he would probably be astonished and I'm sure very pleased with the vocabulary now employed between two former adversaries.

Inspired by the close, new relationship in our nations forged by Presidents Bush and Putin, Russian Minister of Atomic Energy Alexander Rumyantsev and I have worked very closely over the past two years on a host of nonproliferation issues. We meet regularly to discuss and to put into place greater cooperation, improve steps for protection of dangerous materials, enhance international physical protection of fissile material, and to identify ways to boost safety and security in the peaceful use of atomic energy.

Most importantly, Minister Rumyantsev and I have been able to expand and accelerate U.S.-Russian efforts to strengthen the protection of nuclear material. And we're now on schedule to complete our efforts to secure Russia's nuclear material, literally, years ahead of previous timetables. Indeed, the Minister and I are personally engaged in supervising this effort on a day-to-day basis to ensure that no bureaucratic obstacles hinder its success.

The new relationship between our two countries is one of the reasons our joint operation to secure highly enriched uranium at the Vinca reactor in Belgrade was a success not too long ago. And the return to Russia just last month of 14 kilograms of highly enriched uranium from Rumania is yet another example of the strength of the U.S.-Russian partnership to reduce the spread of weapons of mass destruction.

Participation in both these operations by the IAEA, an organization that exists today because of President Eisenhower's "Atoms for Peace" speech, was crucial and all of us should be proud of it.

But, ultimately, it could not have been accomplished without the close working relationship of two nations, which once viewed as adversaries, today enjoy. Could those sitting in the General Assembly of the United Nations, on December 8, 1953, listening to President Eisenhower's vision have foreseen such cooperation? One wonders if they could have foreseen the progress in nuclear science, generally, that has been brought to us by generations of particle accelerators at Fermi and Stanford, Berkeley, Thomas Jefferson, Argonne, Los Alamos, Brookhaven and the Oak Ridge National Labs.

And that's not to mention the singular accomplishments of individual scientists like those we've honored over the years with the Fermi Award. Like E. O. Lawrence's machine, built in the 1930's, today's accelerators are helping us understand huge questions, what makes up the universe and why? Why does it behave the way it does? Researchers probably never anticipated when they started smashing atoms and protons in our large accelerators that their science, their very basic research on matter would eventually give us remarkable life saving technologies.

One of every three hospital patients in the United States benefits from nuclear medicine. About ten thousand cancer patients are treated everyday with radiation therapy from linear accelerators. In one way or the other, the research that we do is all about energy, the energy inside the atom or finding new sources of energy to power the world's economy. One of those new sources may be fusion power. We're working hard on this potentially inexhaustible and totally clean new source of energy and, perhaps, one day a future Secretary of Energy will have the chance to award the Fermi Prize to a scientist for helping us reach the goal of a self-sustaining fusion power plant.

The legacy of President Eisenhower's vision in "Atoms for Peace" and the legacy of the scientific wizardry of Enrico Fermi now rest with the Department of Energy. I am very proud to join all of you tonight to celebrate that vision, pay tribute to the heritage of the discovery given us by Fermi and to honor three scientists who are truly worthy heirs to Fermi's genius. Ladies and gentlemen, thank you very much for being here and for your contributions.

[applause]