



Center for a
New American
Security

BIG ENERGY MAP

INTERVIEW WITH

ADMIRAL CONRAD LAUTENBACHER

Vice President of Polar Programs
Applied Technology Division, Computer Sciences Corporation
Former NOAA Administrator

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SHARON BURKE: Our fundamental findings were that, basically three things: you've got to have White House leadership, and that part of what's wrong is that there are so many players in these areas, and there is no effective coordination – some coordination, but that there is no leadership from the top on what U.S. energy security policy should look like. Early on with the Cheney Plan there was some leadership, but it was a status quo policy and it didn't require strong coordination. So we felt that it was very important that there be a strong office in the Executive Office of the President to be the clear lead on these issues. And then there should be federal agency coordination to have some kind of concerted policy. We also felt very strongly that what should guide that is a strategy. There needed to be a national strategy that had the president's goals laid out, and then identifies who does what. And the EOP office will keep track to make sure things are going – does that seem generally on target with your experience for how those things worked?

ADMIRAL LAUTENBACHER: I take no issues with those concepts. I think the idea of having a national strategy, having strong leadership, and having interagency cooperation in a way to make that happen from the top are extremely important. I have been a firm believer for a long time for having White House coordination and interagency actions and work from the highest levels be – well, to pick up on that point a little further, if you look around the landscape for the United States and the world, almost every major problem or challenge that we have is an interagency challenge. There is very little that is segmented into any individual department, and those are usually routine kinds of things. So you can pick any major topic you want, and it's going to be a requirement that it be coordinated across interagency activity. So I spent a lot of time working on my organization trying to influence people that that's an important thing to do in their careers, and we had a number of people who volunteered to head interagency subcommittees and working committees, and I encouraged that quite a bit. That needs to be a mode of operating for all of the government. They should encourage people to be a part of interagency groups and activities and work together across the agencies.

BURKE: How smoothly did those instruments actually function in the time that you were the head of NOAA? Did you find that they were ad hoc to some extent, or that there was a pretty smoothly functioning interagency working group structure?

ADMIRAL LAUTENBACHER: I've been through a number of transitions ever since Ford to Carter, so I've seen a lot of transitions, and every one works the same. A new group of people comes in; they are relatively unfamiliar with the government bureaucracy – from the White House down to all the agencies and the major departments, and so it takes 1 or 2 years before you get things kind of working. I'm saying this from the perspective of a career person who's been a career public servant for 40...well now 48 years if you look at the NOAA experience. But by the time you get to the third and fourth years of a presidential cycle, they're really good at what they're doing. So there is a learning curve here, and my experience is that learning curve has been about the same for every group that comes in, and, again, that's why the United States has such a great system – we elect fresh people to come in with new ideas, take a look at the way it was operated before, and then hopefully bring the kinds of changes that are needed to make it even more vibrant for the future. So I'm not against this learning cycle, but it is there and so every administration – and I consider myself bipartisan and politically agnostic in a sense because I have worked for Democratic and Republican administrations with equal vigor – that they all have that type of a learning curve, and it begins with how do we organize the White

House? How does each department and agencies organize themselves? And then finally how do we connect that together? And that takes a year or two really to get something going. And I think your research into what happened with energy policy at the beginning of the Bush administration, there were many good ideas on the table. Vice President Cheney was very interested in having this work. Unfortunately, he wanted it done in a different way than many other people did. They produced documents, they produced policies and strategies, the question is, when you get –

Let me go back to this idea of a national strategy. A national strategy, it sounds really easy, but those are two big words. Because first of all you have got to decide what strategy is, and we can debate that for a while, but when you get the word “national” in front of it, you have a huge problem, because it isn’t an issue that each administration doesn’t produce strategy and policy documents on every subject. It’s that they don’t become “national” because they are not agreed to. The press doesn’t like them or somebody in Congress doesn’t like them, or a particular segment of the population, whether it be left or right, has comments. And pretty soon what starts out to build a national collaboration ends up as nobody likes it, because it’s nibbled to death by ducks, as they say. So it’s very hard to have a national strategy and build one. It takes a great deal of effort. And I agree on the issue of the leadership. The leadership from the White House, what the President is interested in, what the Chief of Staff is interested in, those things become very important to the rest of the White House and the interagency arena. So, that leadership is necessary, but building a national strategy, that’s really hard.

BURKE: Did you have a sense when you were at NOAA of what the President wanted on these issues? Did you feel like you were part of a national strategy or a national policy?

ADMIRAL LAUTENBACHER: Yeah, I felt that I was. Now the question is that, “the national strategy,” for what? I mean there are many intersecting ideas in energy and defense and the economy and the environment and various sectors like transportation, and insurance. We can go through the various pieces of it. So, if you go and look at the various pieces, it was quite clear to me what the White House was interested in doing. Now, was it always accepted by the press or by both parties or even by people who comment, commentators? The answer is no. So, it’s been my experience that peoples’ tendency is that they’ll say: well that isn’t a strategy, and they say it because they don’t agree with it. It’s not because there isn’t some plan there, there isn’t some way of operating. There isn’t some concept of where we’re going.

I guess one of the more interesting experiences I had, I sat on an energy board that Accenture sponsored. It was sponsored actually by George Schultz – and it’s international. At one of the meetings – and they are very well-known people – people were saying, “Well it’s obvious that President Bush has changed his mind on climate change. Now, he’s really supporting doing something about it,” this was about a year ago. And I said, “Well let me talk to you about where that is. Let me read you a few statements from the President.” So I read some Bush statements from the first year in office back in 2001, I wasn’t part of the administration then. And they said, “My goodness, he really has changed his mind. Look at what he’s saying there.” I said, “Guess where those statements were made? They were made,” – or when they were made. “They were made in 2001.” So, they were lost. They were lost in the press. They were lost in the fact that for climate change he said, “I’m not signing Kyoto,” so the rest of everything that he said became irrelevant. It got very little notice and most of it was pushed aside as not useful, but I felt that,

and I think most people in government would say, they knew what the top-down direction was, and what various strategies and various pieces are.

BURKE: That's an interesting question. When you say you know what the strategy was or the policy, what was your conduit of information from the White House? Was it Jim Connaughton, or the President directly? How did you usually communicate with the White House and get that direction?

ADMIRAL LAUTENBACHER: The areas that I work in are directly under the purview of the chairman of the Council on Environmental Quality. So, I worked a great deal with Jim Connaughton, and had many, many conversations with Jim, and lots more with his deputies and parts of his CEQ organization. I had many, many conversations with Jack Marburger in the National Science and Technology Council. Again, cabinet-level bodies that are chaired by a direct presidential advisor who has access to the Oval Office. So, I am one person away from the President, basically. I work for Don Evans. Don Evans was a major part of the Bush campaign to become President and a good colleague of the President. So, I felt that I had fairly good access to what people were interested in and what they wanted to do. I did not – I talked to the President a number of times, but I wasn't in and out of the Office every day. I got my information from people who did. So I was one level removed, if you want to talk about it that way.

BURKE: We got the impression in collecting information that certainly on climate change issues that the CEQ was a very important player as far as transmitting-

LAUTENBACHER: Yes they were.

BURKE: -what the presidential priorities were, and that he was the most influential. And if you're looking at – so the White House needs to have someone who coordinates and who disseminates, we got the impression that he was the first among equals in that process. So, whether or not that's the way it will be going forward – it doesn't look like it – but, so go ahead, continue with that?

ADMIRAL LAUTENBACHER: I am going to take an exception to that. I mean you've got Carol Browner, you've got some people in the White House now that are, that come from the environmental world, and appear to be gaining some credibility within the White House organization, and time will tell. We don't know today.

BURKE: Well here's the interesting thing about that-

ADMIRAL LAUTENBACHER: And you know more about that than I do at this point.

BURKE: Well, what we recommended in our report – and we know it landed in transition team hands – what we recommended in our report was something that John Podesta had recommended, which was that there be an Energy Security Council analogous to the NSC to coordinate, since there are domestic, international, climate, energy – there really wasn't an office that pulled all those strands together. What it appears has actually happened in practice is that they did stand that up, and it's Carol Browner. But they also still have the CEQ and they also have some of these responsibilities in the NSC. Do you think that's going to be a problem – having all of these powerful players with redundant responsibilities? Because we said, “you need

to be clear who is in charge,” and that doesn’t appear to be what’s happening. I mean it was clear to you who was in charge in the White House infrastructure.

ADMIRAL LAUTENBACHER: Yeah. You bring up a very interesting question, because this is about organizational and human dynamics, and the fact is – since I am an applied mathematician, if you look at this in a mathematical sense, you can’t take an organization in Venn diagrams, and create this one big blob that says here’s the organization. And then inside of this, I’m going to have these separate bubbles, and they’re never going to intersect. <inaudible> There is no way to create a one-dimensional – what I call a one-dimensional organization – that works in these stovepipes: I don’t care how you set it up, whether you call it energy, energy security, national security, economics, environment. They are all tied together. So, you must as a human being and a manager make a choice upfront how you – what your first line structure is, and then what your coordinating, or managing the white-space structure is, which is the classic way of looking at organizations. If you make too many stovepipes, then you end up with a whole bunch of things that are smaller, and then you gotta have very strong coordination mechanisms. If you make a small number of big stovepipes, then you can put a lot of things in one place, but you end up not being able to emphasize any one of those because you now have them all sort of homogenized in this. It’s a very hard choice to make, how to set up a structure that has all the dimensions for the kind of things you are looking for. And may be energy security, I mean my preference is to call it energy and make it a little broader. Energy security is very important, but as soon as you say security, now you’re stepping on the toes of the National Security Council. You are looking at areas that are certainly – when you bring in climate change, you are bringing in environmental kinds of issues, so you end up – so how do you carve out the pieces of those empires that exist today, or cultures, and then marry them in this energy security, or even an energy stovepipe, and build an energy strategy? I don’t know what the right answer is. I think it depends on the man in charge or the woman in charge and the national issues at the time and dealing with them, and I think it has to be tailored very carefully with those considerations in mind. There isn’t any one perfect answer to this line organization structure. That’s my personal feeling on it.

BURKE: But you just have to kind of come up with something and making it work?

ADMIRAL LAUTENBACHER: You need a leader who has a vision. You need a leader who knows where he or she wants to go, and can articulate that in a way. That leader then must bring in the right kinds of people that can work together, because if you have people who can’t work together – and we’ve seen that in White Houses and other corporate structures and Congress over the years – if you don’t have people that can work together, you can never create this knitting together of the white space. You can never create effective interagency councils, and cross-department, cross-agency kinds of organizations. So it starts with the leader, it starts with the vision, and then you have to organize in accordance with the people and the direction you want to go in. If you don’t do that, you’re at odds with yourself.

BURKE: And that’s fundamentally what our study says, but one of the questions for us, the big question is: how important is structure to that process? You need the vision, you need the people. Can you actually structure things in a way to facilitate that coordination? Because that’s the big question. You said it’s what you need, it’s the 21st Century. But what do you need to do structurally to make that happen?

ADMIRAL LAUTENBACHER: (Laugh)

BURKE: Can you?

ADMIRAL LAUTENBACHER: First of all, I think that we spend probably too much time on agonizing over the bits and pieces of a structure, because, in the end, the structure doesn't work unless the people that are in the structure are really married to it, and they really understand it and know how to work in it. So you can be the greatest theoretician for organizational structures and set up everything perfectly, at least from your vision and in terms of putting it on paper, but then when you start putting people in it, if they can't operate that structure, then you're not going to get the optimum product out of it. So, I think that you need to, and I usually talk about these as these are great happy hour conversations, let's reorganize the government today. Then we go down we get a drink and we sit we and talk and say, "Eh, I'd put this guy over here, and that office is..." And I am not trying to be facetious, I am just trying to make a point about the fact that actually reorganizing the government and pieces of the government really needs to be thought-out very carefully, very very carefully, and particularly if you only have a four-year window in which to make a difference.

Now, hopefully if you make a difference in four years, you get another four years, and then you have eight years to do it. But still, our leaders don't have enough time to make a difference. Election cycles come up every two years. It's always about what has to be done now, how are you going to fund and get support for your campaign. You have to be reelected, so you're continually looking for the short-term big bang result versus how do we organize for the long-term to solve issues that you and I are interested in that are ones that are long-term, and we have to be in it for the long haul.

BURKE: And that was kind of our overall point, is that you can get away with doing some discreet remodeling without having to completely-

ADMIRAL LAUTENBACHER: Yes.

BURKE: -And that it's not practical. That if you have the vision, and that you have it expressed as "this is what I want you to do," that probably makes it easier to achieve what you're talking about. Just to move specifically into your most recent experience with NOAA, when we were looking more specifically at, if you were going to dome some judicious remodeling to improve the ability to coordinate and to implement, that one of the proposals that we were really interested in the idea of a National Climate Service. Because it seems like it is one of those cohering, coordinating mechanisms that's really missing right now, and I think that was your baby. I mean, that was something that you really-

ADMIRAL LAUTENBACHER: I've been pushing that for quite a while, yes.

BURKE: We didn't really take sides on which model we should go with. We just said it's something that should be done. Can you tell us a little bit about why you thought that was important? And if you still think it's important, and if you can, I understand you may not want - this, it's an ongoing process. If you have an opinion about the way that that's going to best work, and why it's important, it would be really helpful, because we thought that was a really good - it was one of the few things that we said you need to create something new. We tried to stay away from that, but we were convinced.

ADMIRAL LAUTENBACHER: As a prequel to that, let me say that I think your study was well-done and realistic in the kinds of ideas. You need the kinds of things that you are supporting I think are right on, and you offered some different options the way the White House can – and I support that, because it's options, you have to look at the best way for the people to work together, and depending on the vision and the goal. So, I like what you've done in the study. I think it's clearly worthwhile for people to read, and look and talk about these kinds of things.

Now, I have been very interested in climate change as a part of energy security as part of energy. So, but it's a scientific endeavor that should be done on a scientific basis, and certainly has a natural home in NOAA where we do – climate is long-term weather, climate is the average of weather. After 10 days or so you call it climate. And so it's a natural thing for NOAA to be working on, and NOAA is a strong player in it.

I have always felt, though, that the climate change and global warming issue has been overly politicized, and I believe it's been overly politicized because the U.S. federal government isn't organized correctly to deal with it. Now in the Bush administration, I think we made an improvement over what was there from the early 90s in terms of – there was a climate change program at that point, the GCRP, the Global Climate Change Program, which was just a research program. So we tried in the Bush administration to reorganize it, and bring all the agencies in with Energy having the lead, and the energy technology piece of it, and Commerce having the lead in the science and baseline information on what climate change is about. But it's time to move out of that mode into something more definitive, and I think these are progressive steps.

And what's missing is, in fact, a definitive operational spokesman for information from the federal government. What does the federal government say? And how do you evaluate climate change as it affects everything that we have in the nation? Just like weather affects everything we have in the nation. Our policy on the oceans, etc., I can go through all of the environmental issues as they affect the nation. If you want to politicize this issue, it's very easy, because in climate change, it's a research field. So you can go to one set of researchers who say one thing, and have a different model, and you come in and say, "By Golly the world is falling apart, I need to do something immediately, we're terrible." And then the other side goes and finds another group who has a different view and the stovepipes their view towards what they are talking about. Pretty soon, something that ought to be fairly simple to sort out becomes a political tennis ball. Political ping-pong ball. Back and forth, back and forth. So, there is no real issue with the weather. You don't like it and sometimes you say, "Gee, they said it was going to rain, and it's not raining. Ok." Well, we made a mistake. But you can go to one place in the federal government where you can see what the best in operational science for weather says it is today. And you got one website, and you can argue with them, and you can call up to Congress and say, "Why did you say that?" And they will then come forward and say it's this model, blah, blah, blah. So you have a group of people who are designated in the federal government to do the best they can to give you the best up-to-date scientific information on weather today. And so, it's not politicized. It becomes something, you may not like what they're doing, but eventually the best models come together in the weather system.

We need a focus like that for climate. We don't have it today. Some people want a Department of the Climate; well the climate affects everything. So that'll make it easy for the President and the Energy Security Council, to have one department head, the Department of Climate, because

everything depends on climate. Security depends on climate, the economy, commerce, everything depends on climate. What we do during the day depends on climate.

So, I go back to let's try not to do that, let's take a model where we invest the authority for operational data on climate in one agency. Research could be, could continue to be funded and done everywhere – in the universities, NSF funds it, just like we do for weather; it's funded, we have the best ideas in the world in this area. The best ones come together and become operational inside of NOAA. We do it for climate. And that becomes the baseline on which other agencies judge the effect of climate on agriculture. The Department of Agriculture looks at the climate data and says, "Okay, we can't plant cotton this year, because it takes too much water, and there is no water in the south, because Climate says we're losing it." Nowadays, if you go to the agencies and say, "Give me the effects of climate," – I even had that problem at NOAA from the fish biologists. "We have to talk about how climate affects the fishing environment off of our coasts." Well, whose data do we take? Do we go to Jim Hansen in NASA? Do we go to Fred Singer at the University of Virginia? Do we pick one of the nice guys we like in NOAA? Who do we pick?

Well, you can't make that an individual choice. You have to have that organized in a way that people can understand what you're doing, and it's in a public venue in which you can get out there and have an organization together working together. So, I don't want to presuppose how this will come out, but I think we have to do something. Until we do something, until we get an organization like that, we are bound to have political ping-pong matches on climate change, just because we don't start from the same baseline.

BURKE: It sounds eminently sensible, and totally necessary. How hard is it going to be to make it happen?

ADMIRAL LAUTENBACHER: It's going to be very hard.

BURKE: Because everybody has got their piece in this.

ADMIRAL LAUTENBACHER: Yes, they do. It's going to be hard for it to happen. It has to be a vision from the leadership that they want to do this.

BURKE: Which leadership?

ADMIRAL LAUTENBACHER: The President. Presidential leadership. This has to be an administration priority that they want to do something like this, and I don't want to presuppose how it comes out. Until you have an "operational" – and those are the correct terms – climate service, call it whatever you want – you don't have a government spokesman that's trying to synthesize everything, and provide 24 by 7 coverage and make sure the satellites are there and all the pieces, the observing systems are in place, and continuity is there. All the things you need to continue this with the clarity and the regularity in the future. Until you have that, you have no way to deal with it. So, that's...you have rice bowls that people have gotten used to, and you have to clabber the chopsticks in there a little bit now and then to move things around. And it's difficult within NOAA itself, because we have our scientists who really, the research people

really don't want to lose control of this because they think it's a research topic, and it is. It's a good research topic. But we know enough today about climate change from the good work that researchers have done for the last 30 years to take the best of that and bring it in, and say, this is the best we have. We have the IPCC report. We have people that are doing this. We just need to do it in our federal government.

BURKE: For some of the work that we've done, especially we did a climate change war game this summer where we did a negotiations game with a bunch of players. We found that it was very hard to get the kinds of information you need, especially on adaptation. Would adaptation-type challenges be part of the purview of that?

ADMIRAL LAUTENBACHER: Yes, it would. I believe that as the weather service provides products, the weather service goes and asks the clients, which are the public, "What kinds of thing do you need to make decisions?" With your shipping company, when do you sail? If you are a farmer, when do you plant crops? Is it going to rain tomorrow? If you are a household, you'd like to know if it's going rain on Sunday because you're having a picnic. So you have to have a certain set of products. You need a set of products for climate too, and those customers are other departments – Energy – there are energy companies, there are people who drill for oil, there are people who do insurance along the coast, there are people who build houses there. They need climate information, and they need it for adaptation as well as mitigation, because we are stuck with it. Whatever it is, it's upon us. Climate is changing. And therefore we have to have an organization that will build products that's sensitive to the clients, and adaptation is a big piece of this. I think it's very important. We aren't going to be able to immediately arrest and reverse the changes that we see out there.

BURKE: Do you have a preference – I sense that you don't want to take sides on it – but do you have ideas about what kind of a model that is more likely to work, given what you know about NOAA and NASA and other the organizations that you regularly collaborated with on these issues?

ADMIRAL LAUTENBACHER: I do. I am a big supporter, and this is not unexpected, that it should be an organization which is within NOAA. I believe that NOAA – It's a fabulous idea. It is one of the best ideas the world ever came up with to bring together the kinds of science that you need for the environment and put it together. I might even make it bigger if I were king for a day. But the point is that's a place where it ought to be from a scientific perspective, and it shouldn't be a place that decides energy policy. It shouldn't be a place that decides what the agricultural policy is. It should be in a place that is a science-based organization (30 MINS.) and should be kept based soundly on fundamental rigorous science which the public challenges the scientists to make sure that they are doing the best they can to give the up-to-date information and bring the best they can to those products of climate that they are going to provide the public.

BURKE: In a not unrelated question, we were a little bit harsh about the Department of Energy and its ability to act as a coherent actor. It never really overcame its origins when it was lots of different pieces stuck together.

ADMIRAL LAUTENBACHER: You have a very nice history on the Department of Energy, that was well done. I certainly agreed with the kinds of comments you made as you built that. It's a

nice summary for people to look at. They think that we're in bad shape right now, they should look at the history and then try to look at the facts is we're making progress.

BURKE: And actually may be a little instructive for DHS that this has been done before.

ADMIRAL LAUTENBACHER: Yes, it has been done before. But it might not – DHS might not – it may take them a few years too to become as functional as we'd like to see.

BURKE: We think DOE needs to be a better policy instrument, but we were really focused on the national labs, and we suggested that a BRAC process be considered for the labs. Do you think that's feasible or useful?

ADMIRAL LAUTENBACHER: I have puzzled over the National Laboratories for a long while – my days in the military, and then of course within NOAA. And I think I don't know what the right answer is for the National Laboratories. I do think it would be very hard, and you've suggested in your study to have a BRAC process, because in fact it is a very politically charged topic, and – my original thoughts were that the National Laboratories are important as National Laboratories and they ought to be national, not energy. I mean, they were designed originally to help us with our nuclear problem, for nuclear defense and for energy, for nuclear energy for that matter. And in fact that mission is not as critical as it is today or take as much – it's not that it isn't critical, it is critical, I don't want to argue that. But the fact is there is more capability within our National Laboratory structure today than people realize and understand. And my original thought was, we ought to take the National Laboratories and put them where they're needed. NOAA ought to have a National Laboratory. One of the National Laboratories should be devoted to NOAA. One of them should be devoted to NASA, and space and all that. We ought to look at – if they are going to be truly *National* Laboratories, they going to be involved with national missions. And they are today in fact, if you go and look at the things they work on. They are looking for business in many cases, and they are doing climate change studies, they are doing some weather studies, they are doing some energy studies, they are doing a number – they are not just involved in nuclear weaponry. They are involved in a lot of things.

BURKE: But not in a very coherent way is my – and in fact, I've heard some horror stories about entrepreneurial people in the Labs trying to expand the mission where they don't have the expertise.

ADMIRAL LAUTENBACHER: I don't want to defend the current structure as it is; but they have great value, because we do very in this country to encourage that kind of national excellence – putting it together in large places and actually funding it. We don't do that very well. We're very practical people. We look at technical development, we take an idea, and we fund it, and we say, "Well, that's good and the researchers can do whatever they want, they can find a few bucks here and there." But we don't create these national centers of excellence, so I'm loathe to take this system apart. I would be more interested in trying to reform, and I will tell you one idea that we have worked on in NOAA, and I'm hoping that it goes – is the idea of using a National Laboratory. We're not going shift one to NOAA, but I signed an MOU with the Department of Energy about a year before I left to use their computing facilities and their computers to help us with these large-scale climate models, because we have got to make progress. We are nowhere near the size of computational capability we need to really build climate models. To get climate change modeling beyond its – I consider it still in its infancy,

climate science. Climate science is in its infancy compared to meteorology, or physics, or oceanography. We need that kind of expertise, and it's not productive for every agency to own its own super-computing facilities. We can't put an Oak Ridge at every cabinet level department or every laboratory around the country. And I think most of NOAA's scientists now are agreeing to that concept, so we're looking at using a National Laboratory as a computational center, and a center of excellence, where they have the software, the hardware, the electrical power, the natural resources, the security, etc. Everything you need, and using that as the infrastructure on which we can base future scientific progress.

BURKE: We've actually been lucky enough to do some collaborative work with Oak Ridge National Laboratory. So we're aware of the – do you think that's working out alright? They are two very different institutions. A little bit of background: We loved working with them, learned so much from them, and I think they got something out of working with us too, but it wasn't easy. We did not speak the same language for them to understand what we needed, and for us to understand what they can give us was a hard process for the both of us. Are you finding that, as far as you know, that the two institutions developing a common approach or a common language?

ADMIRAL LAUTENBACHER: I think that will happen, and I think it is happening to a certain extent because we have much more interest in doing that. The problem that you just described is the generic one of trying to work across different disciplines and different agencies. In both senses: computer scientists versus physical scientists, or biological scientists. They speak a different language, and then you add in the cultures of the organizations that they grew up in and support. We must build into our education systems a desire to cut across those boundaries. We have to educate children, and college students, and graduate students that if we are going to solve the huge issues that we have to support seven to nine billion people on this planet, we have to have better cultural interchange across scientific disciplines and across organizational and management types of regimes than we have today, and that's a big problem. I think it's a tough problem.

[BEGIN SEGMENT TWO]

BURKE: How do we do that, like I know the National Climate Service is one way to do it, but how else do we do it? Because again, one of the things that we found looking at this was that the kinds of collaboration you're talking about, where you're trying to get different people in a room figuring out how to solve a common problem and talking across cultural and educational barriers, that that's not their jobs. And there is no place that does that. Do you have any insights from your time across several different institutions about how you actually do that?

LAUTENBACHER: I do, I have a great prejudice on this and you have – you hit the nail on the head in the report to talk about the fact, and when you went through the description of the Energy Department's issues the, fact is that you don't have - and I will call it, I'll blatantly call it overhead - you don't have the overhead there to deal with the strategies, the policies, the coordinating themes, and the ability to reach out and make the connections with other agencies. They're not built into the structure. They're not built into the structure because we have had years of, "let's combat fraud waste and abuse, let's have management by objectives, let's have better management, let's have zero base budgeting."

I've been – through every administration, pushed to make government more efficient, and what happens when you make government more efficient is you get rid of all the people that would do exactly what you need to be done. So you don't have a strategy office, you don't have a connecting – you don't have people who are in position to help lead interagency committees. You don't even have a White House structure that's capable of doing it. And so, this – we have to understand that if you want to organize, to manage across disciplines, across agencies, you have to provide an organizational structure with real people, who are being paid to do that, and who have expertise in doing it.

I tried to do that at NOAA. I tried to bring back – we have an education office, we have a strategy office, we have a systems analysis office. We have, and we've put into place, jobs in which I expect those people to be intergovernmental leaders. Not just, "I run this laboratory and I have a very narrow focus; this is what my job description says I do. I don't have time to talk to the Department of Energy. I don't have time to talk to the Department of Agriculture, because it's not in my job description." But anyway, the fact is we don't put an organization in place, with people who are paid to do the mission you are talking about. If we don't do that, we're doomed to fail.

BURKE: How did your agency react when you did put those people in? Did they deal with them and accommodate them? We heard from someone who knows Bonnie Morehouse a little bit, about what you did with her, and that it was not well received at first, but she feels like after the fact, people understood that what she was doing with the budgeting was actually good for them, but it took a while.

LAUTENBACHER: It did. It did take a while. And I realize that when you try to change something that's been there for years as it is, people are reluctant to embrace it until they can see the value of it. And it takes a while sometimes to do that, so I don't want to claim that all of the reforms and the organizational changes I made – or processes, more processes than organizational, although I did make organizational changes too – that are, they're perfect and they work great, and everybody accepted them all. That's clearly not true. But, I did have, as I got to the last two or three years my work, people come up and say, "You know, I thought that was really a lousy idea, but now, this is really good. We're actually planning. We actually know what's going to happen in the next five years. We actually have an idea of how we work with the other parts of NOAA; we actually have an idea of how we're supposed to work with Energy and Agriculture because we're part of these committees. So it takes some time, and you may have to force it a little bit. I mean, I think people, people will do things if you explain to them why they're doing it, and provide incentive, motivation, rewards, encouragement, and a vision to show them where this could lead if we get it done correctly. That, that's a – you know, that will happen, but you gotta be, you have to be very definitive about it. It can't be something you just say, "Go be a part of that interagency committee and then don't bother me." You have to make it a priority.

BURKE: I want to go to DOD, but before we do that, you do come back to vision quite a bit. Tell me as, as the leader of a large organization, how did you communicate your vision to people? How did you make sure they knew what you – so that they got that sense that what you were trying to ask them to do was part of a-

LAUTENBACHER: Well, I, I had strong feelings about how things should operate and ideas for NOAA that I, that I started talking about immediately as I came into the organization. I believe in multidimensional communication, so I town halls. I go out and talk to people, and so you hear it directly from me. I eventually got to the point – not quite fast enough – but to the point where I could get out a weekly message to people that talks about what we’re doing, why we’re doing it, and that sort of thing, and a structure that, that passes communication down from, you know, it doesn’t become just a weekly faculty club meeting when you meet with your agency, with your deputies; you meet for a purpose, and you discuss the large picture, and then you make a decision. I had 51% of the vote but it’s not something that – I’m not a – I’m not a Napoleon or a czar or whatever. I think that you have to go where people feel compelled to go and are able to go. You can’t force people to go faster than they can really go, you have to motivate it or the whole thing just collapses, so it’s a matter of bringing things along. So, communicating the vision is writing, sending out messages, it’s talking, it’s organizing and getting the word out, it’s making decisions that enforce, enforce it. It’s putting out budget guidance that says, “Here’s our priorities and this is how the leadership will look at those priorities and how it will judge them.” So it’s a full-court press to try to get new ideas across, because otherwise people just keep doing what they’ve done before because it’s very comfortable.

BURKE: So looking back, or, and looking ahead, really, just from you’re experience at NOAA if there was one thing that you could’ve changed that would’ve made your life easier, certainly in the interagency, what would, you know was there one agency that was especially hard to work with, or one conduit that didn’t really work? If there’s something you could go back and change, what – and you were king for a day and could do anything, is there anything in particular that you wish you could’ve changed?

LAUTENBACHER: <Laughs> That’s really hard to pick out any single individual thing that I would change. I think it’s a collection of things that you could change. I do think the issue of having enough people dedicated to an interagency and a large-scale vision is, is an issue. We don’t have in place enough people and enough of a cultural imperative to do that. If we had had – you know, if you had that and you could put it in place right at the beginning of a, of an administration, which is hard to do because you bring in new people, but we’re not really equipped to do that very well so we, we struggle. This learning curve that I’ve talked about for a new administration of 1-2 years to sort of figure out how you connect and how you talk to people and who you have lunch with and who you don’t have lunch with, that sort of thing.

BURKE: Well what, if you were, if Dr. Lubchenco I think is...

LAUTENBACHER: Yes

BURKE: If she were sitting here right now what advice would you give her? I’m sure you’ve had a chance to give her advice, but, you know, as far as establishing that. What do you need to do to hit the ground running? What would you tell her?

LAUTENBACHER: Well I, I think it’s presumptuous of me to tell Jane much about it. I think she’s been a leader in the science area, certainly in marine biology. She has a good feel for the major environmental issues-

BURKE: Pretty sure U.S. Government is new to her though...

LAUTENBACHER: Yes, certainly, certainly the U.S. Government, the situation is new. So I, I would – I guess if I had to say something it would be to ensure that the management, organizational structure is in accordance with the way she thinks things ought to be so she can move ahead with her vision and her ideas. So it's not a matter, it's a multidimensional kind of thing. It's the science, but it's also the organization, the structure, and the process that help make something. And NOAA is a big organization with many different issues. From satellites to mapping the continental shelf, fisheries, and lawsuits, all sorts of things.

BURKE: You know initially what we wanted to do was not just map the offices but also the connections among them. But we found on a practical that was impossible.

LAUTENBACHER: That's really hard, isn't it?

BURKE: We had an impression that of all of the cooperative links, that the one between NASA and NOAA was pretty strong. Was that a fair impression, or were we just looking at things on paper that may not be true in real life?

LAUTENBACHER: I think it is a strong connection. I would like it to be even stronger than it is. And it has come a long way. I think that, first of all, I worked with Shawn O'Keefe at the Department of Defense so, I – we had a very good relationship. I think that went a long way. Mike Griffin and I are good friends and got along very well, and he's interested in Earth observing and so he has a lot of issues, he had a lot of issues on his plate to deal with. I don't want to presuppose what the solutions to those are. But I think the collaboration between NASA as our space development, research and development agency and the operational agencies like NOAA, and USGS, and Energy, and other places that are operational, where they, that – and even Defense, to a certain extent – that collaboration needs to be even stronger, and managed at a higher level than it is today.

BURKE: And then that was my next question, was the Department of Defense, where you spent a lot of your career – and you know it's, it's where I spent part of my career too. A much smaller amount of time I'm afraid. But when we were looking at DOD, and we talked to a lot of people there, we got the impression that the department really doesn't want to weigh in on these issues, doesn't feel it's the department's place; and we can understand that. On the other hand, we felt that, first of all, as the single largest consumer in the federal government – and one of the largest consumers in the world – that the Department of Defense has a lot of power over energy and climate, and that that's not lost on the incoming administration or on Congress and it shouldn't be lost on them either. And that it was time for the Department of Defense to play a role in policy, as a consumer, if nothing else, but also as an agency that is going to play on these issues, certainly on the adaptation side. I was wondering, is that a fair analysis? What did you think about the Department of Defense and its role in these issues?

LAUTENBACHER: I think the Department of Defense has a very significant role in energy, energy security, and the subjects such as climate change, and adaptation and mitigation. Those are very important issues. They affect the way our military operates. They affect the way it's funded. And it affects our security interests around the world. It's going to make a big difference – these kind of topics – the kinds of forces that will be out there that we have to deal with in a

way that we can provide the security for the citizens of the United States. So I think it's a very important issue for the Department of Defense, and I think it behooves them to look at the structure that they have to make sure that it is properly placed. I think we're working through that; it certainly, 10 or 15 years ago was not as large an issue as it is today, but I think given the reports that have come out – the CNA report, a number of other studies that have been done where we're, we've had some very high-level military leaders looking at it saying “this is important,” – it ought to become embedded in the kinds of, in the quadrennial reviews, in the strategies, and all of the baseline policies that the Department of Defense works on and helps for the country. This is something that ought to be instrumental in the foundation for those policies.

BURKE: One of the things they've talked about doing is establishing a – it's not clear exactly what it would be because it was a legislative requirement in the defense authorizations – that there be a Director of Operational Energy. And it sounds like it would be like an ATSD thing where it's a direct report to the Secretary, and overview, and basically guide the department on how to cut its operational energy use. We thought that that position – and it, it will probably be stood up in some incarnation – was a natural place to also put climate change as a strategic concern for the department. Do you think that would make organizational sense? Right now it seems that most of the offices that are looking at climate change, it's a little bit ad hoc and it's usually the QDR shops are looking at it, but no one's really taken on that issue in the department, and I don't think anybody really wants it to be theirs, so we thought that that was kind of a natural spot for it.

LAUTENBACHER: Yeah, and I don't – again, the right answer is illusory in terms of is there a right answer? I'm not sure there is, but there's probably a better answer than we have today, that's for sure. What you'll find in the Department of Defense is that the DOD or the Office of the Secretary of Defense is very much engaged in overall policy creation and management and direction. When it comes to the operations side, it's the uniformed services and the Joint Chiefs of Staff that engage in that. So if you're going to really affect the operational use of energy and all of that you have to figure out how you're going to put that in the operational context. And so that requires more than just an office in the OSD, the Secretary of Defense Staff, but I think it's important that in their policy area that they have a connection brought together with someone in charge of this who is responsible to ensure it's in the reviews, it's their programming guides, it's in all of the front-end documents that they use to shape the size, the content, and the budget levels of their structure. So it needs to be brought in from that level and then you need to charge, they need to charge the services, and the Chairman, to work on how you do this operationally and let them come forward with ideas of how you would operationalize this. It'd be very hard to do it with one civilian with a small office – well a relatively small office – in the OSD section.

BURKE: On the Joint Staff one of the things we found that's problematic though is that responsibility for these issues is so chopped up – you know you could say it's J5, or it's J4, or it's J8, you know, everybody has a piece – J3 – everybody has a piece so how do you decide who's, you know if you're going to change the way you're doing things, who does that?

LAUTENBACHER: You divide it up in the organization the way it's set up today, just as I mentioned for climate – where I don't think we should change the Department of Agriculture, Department of Energy, Department of Commerce, or whatever. We should charge each one of them with the pieces that they need to do, and they will do them. I mean, it's well thought out, and it's put into the guidance and the front-end strategy and policy documents that guide the

leadership of those organizations; they will do it. You tell – you tell the J5 that this is part of the planning. You tell J3 it's part of operations to ensure whatever it is – you give me the tenants that they want in there. You tell J8 to make sure the resources and force structures. You tell the intelligence people in the, in the J2 that you need the following intelligence kinds of – you set that up. And the military can do this. I mean that's – this is – they can put this all the way down in their op orders. Of all the parts in the government that can, that can operationalize or actually execute something, it can be done in the Department of Defense, there's no – I mean it may be hard in the Department of Energy or Commerce, but it's not going to be hard in the Department of Defense if they want to do it.

BURKE: Once you give the orders, once you say “this is what we want you to do.”

LAUTENBACHER: And as you've said so clearly in your, in your study that you have to have a national strategy, to have to have, have it set down, so people can read it and see, see what it is. And then you have to have someone that believes in this vision saying, “Do it.”

BURKE: Last question, and then if you have any questions that you want to ask from me, is because the other agencies don't have that, they just don't have the same command and control culture.

LAUTENBACHER: They don't, they don't.

BURKE: One of the things that we suggested is that they needed to create some kind of internal mechanism for coordinating this and disseminating it. And we found – Christine was doing research on the Department of Transportation in particular – and they have created a coordinating committee. How active it really is or how effective it really is is not clear. But we thought it would be not only important for the department in terms of taking on that strategy and figuring out how to actually operationalize it, but also as a touchstone for whoever it is in the White House, whether it's, you know, General Jones or Carol Browner, that they have someone in the agencies that they can reach out and touch. Do you think that's, that would be useful, and feasible?

LAUTENBACHER: Yes. I do think it's useful to have people in the agencies that are, that are focused on these important issues, and there's a number of them. Certainly energy security is one of them and energy, and that there be people at each agency who are designated to work internally, and inter-connect internally what goes on and connect that to the White House structure based on whatever the White House wants at the time. Now, having said that – that's an easy thing to say – I will say that that, generally speaking, is done. The question is, how effective is it? And, I guarantee you that when we held an Ocean Policy council meeting we had a representative from every agency. Because they were told to have one, so they had one. Now the question is, how effective were they in terms of making the connections necessary to ensure that the entire federal government is working in concert. And that's where this, that's where we fall down, we don't do that very well. But, you know, federal, federal – I have a great deal of respect for the federal work force and the people who are career folks inside these agencies. They know quite a bit, they know how to carry things out. They're efficient. They understand policies and the issue is to make sure that you set it up so that they can do their work in the most efficient way and have an organization in which they are allowed to do the things we're talking about here, and make it effective.

It isn't that there isn't somebody in the Department of, of Defense who, who, who doesn't answer to energy security, I guarantee you there's someone who answers to that, the question is how effective are they in terms of the organizational sense of – of ownership and participation in the national picture.

BURKE: That's a good point. We do know who that person is. Well, there's a person who's decided that's what he's going to be, and then there's a person who actually has it in his job description.

LAUTENBACHER: Yes, yeah no you will find very detailed – well you know that, you've been in the, you've seen all these things – they are all, the job descriptions have lots of things, usually fifty percent of them they don't have time to do because they don't have the staff, they don't have the money, and they don't the empowerment and the leadership that's saying, "these are important, move these into the fifty percent we do, take something else and put them down in the fifty percent we don't do." I'm being a little facetious saying it's fifty percent, I don't know what the number is, but you know you can only do so many things during the day. Federal – federal officials career federal employees are generally very oversubscribed. They, they sign up for jobs that are – no human being could do them, quite frankly, at a hundred percent.

BURKE: And again, I'll turn it over to you guys if you have questions, but to me it may be just as simple as some personnel reforms so that it becomes part of peoples' jobs and not just a thing that they have to do on top of everything else that they have to do. Because all the, I found at the Pentagon, all the interagency stuff, was completely extra and voluntary to what you were actually required to do.

LAUTENBACHER: Yeah, I wrote it into the evaluations, so it's motivation, so I changed...

BURKE: When did you do that?

LAUTENBACHER: Having been a career guy for 40 years I understand what motivates people. Okay, so I changed all the – what do we call them for career – you know, the evaluation forms, the evaluation system. I'm sorry I'm having a mental block on what they are, but changed the evaluation forms to ensure that first of all their first mission is to work together, so if they don't do that, they're never going to be, they're never going to get a 5. They aren't going to get to the top level. They aren't going to get their bonuses. They aren't going to get their promotions. So you write these, you write these performance factors, and you require their performance plans to do the kinds of things that you're talking about. And that helps them, because now they have some empowerment to do it. And many, most of them want to do this, this isn't like you're trying to tell them to be good and do the right thing. But you have to, you can't just leave a part of the system out. You can't run around and dictate "You do this, you do that." You have to change the system under which they work, many of which includes the job descriptions – so you must make sure that the job descriptions are accurate, they're classified correctly, the descriptions are accurate – their performance plans and the guidance for evaluation are all in sync with, as you've said personnel actions that all make sense.

BURKE: It was, we had a wonderful lecture here a few weeks ago from a gentleman from the – from Annapolis, who was talking about Admiral Nimitz. And it seemed like part of the secret of his success is that he went all the way down, you know, and that even the smallest

personnel policy, he didn't leave anything untouched. And not that many people, I think, think about personnel policy as the thing that actually makes it possible for you to create the nuclear navy.

LAUTENBACHER: It's the whole thing, I mean it's everything. I mean that – personnel policy – it's not just "I'll let the HR people take care of that, I'll just sit up here and dictate what goes on." Not in a large organization. Now if you're running a small organization in which you control the payroll and everything else you can do that...

BURKE: Not necessarily. <Laughs>

LAUTENBACHER: It's not all that easy. But personnel policy, first of all it's not all that easy to build an effective organization. People are, you know, people are hard to work with. <Laughs> But when they work together, it's a thing of beauty, I assure you. It makes your whole day.

BURKE: That was great. Is there anything else that you would add? Anything else that you think we didn't do in the study or that we should've done? Anything we left out? There are a lot of agencies that we didn't look at, we tried to just pick the ones we thought were the most germane, so is there anything else that you think we should look at?

LAUTENBACHER: Well I didn't really, as I expressed myself on the need for a national climate service, what people don't really understand is you can't have these scientifically-based services without observation systems. So you need to have continuous observation that is at the right level of coverage, that's continuous, it's comprehensive, it meets certain standards, and it meets the standards of the science, so we today – we tend to put policy ahead of, of providing a foundation to provide the scientific information we need for the policy. And the biggest thing we need today for climate change as part of a national climate service is a climate observing system. Without a climate observing system we're not going to be able to set up cap-and-trade because we don't know where the carbon goes. If we don't know where the carbon goes, we're not going to convince the Chinese and the Indians, and some of our own energy companies that this is a good system. You have to have measurement systems, observing systems. We don't have that. We're in the infancy of doing that. We must build the satellites and the ground-based systems that allow us, like we do for weather – and not all of our weather systems are perfect either I might add, they need to be continued – this is a new thing that we must do in this country.

BURKE: Which points out a major – a place I didn't, we don't have to get into it now because it would be a whole another can of worms, but, one of the barriers in that is Congress. Right? And, you know Congress, when you mention it's a parlor game to talk about how to reorganize, Congress is always first on the hit list, and it never happens.

LAUTENBACHER: Yeah, and you know, I was going to mention when you talked about organization that you mention a lot about rearranging the deck chairs in the White House. But a lot of our problems are based on the committee structure and subcommittee structure in Congress, and that's really hard to take on. So you have to work with – whatever changes we can make over there would be worthwhile, but that's a difficult-

BURKE: I'm not optimistic-

LAUTENBACHER: Right that's a difficult problem and you have to figure out how to work with what we have over there.

BURKE: Do you have any – we are adding a section on Congress, we had hoped to have a whole separate paper but it's probably just going to be a much smaller section – do you have any recommendations there about what, certainly for, for priorities such as Earth observations, what could be done, and you know what's feasible, you know? I know there's what could be done in a perfect world, because Congress needs to update but they're probably not going to, but what can actually be done. Do you have any sort of last words on that?

LAUTENBACHER: I think it would be – and I can't tell you exactly how to do this but it's worthwhile thinking about. We, in NOAA – I say we. I still think of myself as being part of NOAA, I will always think of myself as being part of NOAA even though I'm not there – the appropriations committees work in an interesting way. They have subcommittees, and the subcommittees generally are split up in terms of agencies, so, when I need to talk about the NOAA budget in the appropriations sense, there's one subcommittee chair that I can go to. So there's a coherent body of Congressmen who are looking at the entire agency's picture, which is, which is good. It is not so well-defined on the authorizations side, where we have multiple committees that have inter – overlapping or intersecting jurisdictions. If in some way – I'm not asking that they change their committee structure but that they move pieces around to as much as practical, have a whole agency in a subcommittee structure, even if it isn't – it's the same problem you mentioned before about asking the Joint Staff to take on energy. Well it could go in J5, in J3, J4, it could go – you just have to pick one. At some point, you just have to pick one and say okay, I don't have the perfect place to put it – and I'm not suggesting this for the Joint Staff because I think you could compartment – you could do this in the Joint Staff, but you can't do it on the Hill very easily. But you could do better about trying to amalgamate agencies within authorizing committees. Congress did reform that a little bit, a little bit, I don't know, three or four years ago so, it's possible to make progress there.

BURKE: I think it's in their interest too, because one of the reasons that the appropriations committees are so much more powerful is because the authorizations are so fragmented.

LAUTENBACHER: That's right, the authorizations are fragmented so they never get them through. There's too many overlapping or concurrent jurisdictions and you don't – NOAA never gets an authorization bill, there's no – they've tried over the years but there certainly wasn't one during the period I was there.

BURKE: That's wonderful.

[END]