

**THE OBAMA ADMINISTRATION'S
CEQ RECENTLY REVISED
DRAFT GUIDANCE FOR GHG
EMISSIONS AND THE EFFECTS
OF CLIMATE CHANGE**

OVERSIGHT HEARING

BEFORE THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

Wednesday, May 13, 2015

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**OVERSIGHT HEARING ON THE OBAMA
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CHANGE**

**Wednesday, May 13, 2015
U.S. House of Representatives
Committee on Natural Resources
Washington, DC**

The committee met, pursuant to notice, at 10:04 a.m., in room 1324, Longworth House Office Building, Hon. Rob Bishop [Chairman of the Committee] presiding.

Present: Representatives Bishop, Young, Gohmert, Lamborn, Wittman, Fleming, Thompson, Lummis, Benishek, Gosar, Labrador, Cook, Westerman, Graves, Zinke, Hice, MacArthur, Hardy; Grijalva, Bordallo, Costa, Tsongas, Huffman, Lowenthal, Cartwright, Beyer, Torres, and Polis.

The CHAIRMAN. The committee will come to order. The committee is meeting today to hear testimony on the Obama administration's CEQ recently revised draft guidance for greenhouse gas emissions and the effects of climate change. So, under the Committee Rule 4(f), oral opening statements in hearings are limited to the Chairman and the Ranking Minority Member—it is better with my glasses—and the Vice Chair and the designee of the Ranking Member. This will allow us to hear from our witnesses sooner, and help Members keep their schedules.

Therefore, I ask unanimous consent that all other Members' opening statements be made part of the hearing record, if they are submitted to the clerk by 5:00 p.m. today.

[No response.]

The CHAIRMAN. And, hearing no objections, so ordered.

Before we begin, though, I have one of our staffers who has worked so long for us on the Minority side—it is, I think, her last day here. So if I could turn to the Ranking Member, just to say goodbye.

Mr. GRIJALVA. Thank you very much. And I appreciate that very much, Mr. Chairman, to have a moment. This is her last week. And she will be sorely missed, and an institutional memory, and a drive for the issues, and a passion for the issues that we have jurisdiction over in this committee. It is a loss, but she leaves with a legacy of accomplishment, hard work, and, more importantly, having trained many Members of Congress that sit in this dais. Some of her class are doing well. And we are going to miss her deeply, sorely, and my colleagues and the staff that she has worked with, present and past, are all going to join in not only acknowledging her, but thanking her profoundly for the contributions she

has made to this committee and to the issues we confront here. Thank you so much.

[Applause.]

The CHAIRMAN. We wish you well in your further endeavors because, let's face it, anything has to be better than this.

[Laughter.]

The CHAIRMAN. I am now going to recognize myself for an opening statement, and then we will go to the Ranking Member, then to the Vice Chair and the designee of the Ranking Member.

**STATEMENT OF THE HON. ROB BISHOP, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF UTAH**

The CHAIRMAN. This is the first in what I plan to have as a series of oversight hearings this committee will undertake on policies involving the National Environmental Policy Act, a law that was enacted 45 years ago, before many here were born, and hasn't been revised since that time.

The focus of today's hearing is the White House Council on Environmental Quality's sweeping draft guidance on greenhouse gas emissions. On its face, the draft guidance acknowledges that it is not legally enforceable. Some may say that means it is unlawful. Despite not being legally enforceable, curiously, CEQ claims that the guidance will facilitate compliance and improve efficiency and consistency of existing NEPA reviews—literally, thousands of reviews annually.

Based upon the Federal Government's track record on NEPA, I am highly dubious, but will listen closely to the testimony today for evidence on whether or not that is, indeed, the case.

This draft guidance set the stage for potential sweeping Federal overreach, by pushing agencies to examine greenhouse gas emissions that are beyond their ability to control or regulate the impacts, including the vast array of all upstream and downstream impacts. The draft guidance is overly broad, expansive, it goes outside the scope of NEPA. Otherwise, it is OK. For NEPA to work correctly, Federal agencies must be able to affect the outcome of the proposed projects.

But the draft guidance goes far beyond what an agency can control. The results will force more delays, more costs onto economic and energy-related activities nationwide, and uncertainty for those who want to balance the needs important to all Americans with protecting the environment. The draft guidance would even frustrate the Administration's other goals, such as modernizing the Nation's electric grid, to improve energy reliability and resiliency.

The trend for this Administration seems to be that the end justifies the means, regardless of whether the law allows it. This draft guidance is the latest case in point. CEQ states as a fact that "Many agency NEPA analyses have concluded that greenhouse gas emissions from an individual agency action will have small, if any, potential climate change effects. Government action occurs incrementally, program by program and step by step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government."

Even though they say that, CEQ then concludes that being a small impact is not a good-enough reason not to consider everything that could possibly impact any climate change in any NEPA analysis. Federal agencies have jurisdictional limits. They cannot possibly consider the entire range of climate impacts of things outside their jurisdiction under existing NEPA guidelines.

CEQ acknowledges the limits of the guidance when it says, “This guidance is not a rule or regulation, it does not change or substitute for any law, regulation, or other legally binding requirement. It is not legally enforceable, and does not establish legally binding requirements in and of itself.” Which begs the question, “Then why do it?”

Clearly, for an administration that advocates climate change policies as more pressing than national security threats, the answer is, regardless of its enforceability, the end justifies the means. They could not get the cap and trade passed by Congress, so now they address climate change by forcing it through the NEPA process by unlawful guidance.

CEQ is bound by the statutes. Therefore, any environmental review conducted by an agency is bound by the statutorily prescribed mission and jurisdiction limits of the permitting agency. In the absence of congressional action to expand the scope of the environmental review for Federal agencies by expanding their jurisdiction, agencies, including CEQ, are stuck with the recognition that greenhouse gas emissions from an individual Federal agency action will have small, if any, potential climate change effects.

Numerous and exhaustive NEPA analyses agree, and imposing hugely costly and lengthy new analyses will not change that. With that, I kind of look forward to hearing from our witnesses today, and hope that the Obama administration will recognize this guidance should be withdrawn.

[The prepared statement of Mr. Bishop follows:]

PREPARED STATEMENT OF THE HON. ROB BISHOP, CHAIRMAN, COMMITTEE ON
NATURAL RESOURCES

This is the first of a series of oversight hearings this committee will undertake on policies involving the National Environmental Policy Act, a law enacted 45 years ago. The focus of today’s hearing is the White House Council on Environmental Quality’s sweeping draft guidance on greenhouse gas emissions.

On its face, the draft guidance acknowledges it is “not legally enforceable.” In other words, it is unlawful. Despite not being “legally enforceable,” curiously, CEQ claims the guidance “will facilitate compliance” and “improve efficiency and consistency” of existing NEPA legal requirements and reviews impacting literally thousands of actions annually with a Federal nexus.

CEQ states: “Overall, this guidance is designed to provide for better and more informed Federal decisions regarding greenhouse gas emissions and effects of climate change consistent with existing NEPA principles.” Based upon the Federal Government’s track record on NEPA, I am highly dubious, and will listen closely to the testimony today for evidence whether or not that is the case.

This draft guidance sets the stage for potentially sweeping Federal overreach by pushing agencies to examine greenhouse gas emissions that are beyond their ability to control or regulate the impacts, including the vast array of all upstream and downstream impacts.

The draft guidance is overly broad and expansive, and goes outside the scope of NEPA. For NEPA to work correctly, Federal agencies must be able to affect the outcome of the proposed project. But, the draft guidance on its face goes far beyond what an agency can control. The result will force more delays, more costs onto economic and energy-related activities nationwide, and uncertainty for those that want to balance needs important to all Americans with protecting the environment. The

draft guidance would even frustrate the Administration's other goals, such as modernizing the Nation's electric grid to improve energy reliability and resiliency.

The trend for this Administration seems to be that the end justifies the means, regardless of whether the law allows it. This draft guidance is the latest case in point.

CEQ states as fact that "many agency NEPA analyses have concluded that greenhouse gas emissions from an individual agency action will have small, if any, potential climate change effects. Government action occurs incrementally, program-by-program and step-by-step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government."

Yet, CEQ concludes that being a small impact is not a good enough reason not to consider *everything* that could possibly impact climate change in a NEPA analysis. But, Federal agencies have jurisdictional limits, and cannot possibly consider the entire range of climate impacts of things outside their jurisdiction under NEPA.

CEQ itself acknowledges the limits of the guidance when it says: "This guidance is not a rule or regulation . . . [it] does not change or substitute for any law, regulation, or other legally binding requirement, and is not legally enforceable, and does not establish legally binding requirements in and of itself."

Which begs the question, "Why do it?" Clearly, for an administration that advocates climate change polices as more pressing than national security threats, the answer is that, regardless of its enforceability, the end justifies the means. They could not get cap and trade passed by the Congress, so now they will address climate change by forcing it through the NEPA process by an unlawful guidance.

CEQ is bound by the statute, its own regulations, and case law precedent. Therefore, any environmental review conducted by an agency is bound to the statutorily prescribed mission and jurisdictional limits of the permitting agency set by Congress and the statutory and regulatory interpretations of the courts.

In the absence of congressional action to expand the scope of the environmental reviews for Federal agencies by expanding their substantive jurisdiction, agencies, including CEQ, are stuck with the recognition that greenhouse gas emissions from an individual Federal agency action will have small, if any, potential climate change effects. Numerous and exhaustive NEPA analyses agree, and imposing hugely costly and lengthy new analyses will not change that.

With that, I look forward to hearing from our witnesses today and with any hope, a recognition from the Obama administration, that this guidance should be withdrawn.

The CHAIRMAN. With that, I recognize the Ranking Member, Mr. Grijalva, for his statement.

STATEMENT OF THE HON. RAÚL M. GRIJALVA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARIZONA

Mr. GRIJALVA. Thank you, Mr. Chairman, for recognizing me. And I want to thank our witnesses for being here today. I would like to extend a special welcome to the Managing Director of CEQ, Christy Goldfuss, who is making her first appearance before the committee in her new role. I know she will find this appearance memorable for its pleasant tone, civility, and the thoughtful discourse that will occur.

[Laughter.]

Mr. GRIJALVA. I want the Managing Director—who used to be a member of the Democratic staff on this committee when I chaired the National Parks and Public Lands Subcommittee. I know she will do an excellent job, and keep our country on the right course in responding to climate change and other pressing environmental challenges that we face.

Mr. Chairman, I hope this hearing is not intended to undermine and mischaracterize the National Environmental Policy Act, which remains one of our Nation's bedrock environmental laws. I also

hope that the misguided task forces and investigation we have seen before, aimed at proving that NEPA and other laws somehow stifle our economy and limit our freedoms, are a thing of the past.

Mr. Chairman, in your chairmanship, and the recognition by the committee in our first meeting in January that climate change does exist, I hope with that we have entered a new era with respect to understanding NEPA's value to our communities, our environment, and our economy.

NEPA shines a light on proposed government actions and helps local citizens provide new information and ideas, improve projects, and ensure sustainable decisionmaking. It helps Federal authorities consider a range of alternatives, often resulting in lower cost to the public. NEPA provides for environmental justice, helping communities that cannot afford expensive lobbyists to protect their lands and their values. This is especially important when agencies consider the effects of greenhouse gas emissions and climate change.

Climate change is hitting poor communities, communities of color, our rural communities, and our most disenfranchised people the hardest. America is living in vulnerable areas, and those with fewest resources to help them adapt or recover quickly are already bearing the brunt: one of the various social costs of climate change that is not being adequately analyzed and addressed.

I congratulate the Administration and the Council on Environmental Quality on issuing this very appropriate revised guidance. In my opinion, it is long overdue. I urge CEQ to review the many comments it has received, and issue a final draft as soon as possible.

This guidance will provide for better, more informed and more efficient Federal decisions. It will produce consistent Federal decisions on evaluating climate change impacts, while accommodating each agency's unique processes. The guidance makes clear that Federal agencies must factor greenhouse gas emissions and climate change into their decisions. This is just common sense. Arguing that they fall outside the scope of NEPA analyses is like denying the existence of climate change itself; it is dangerous for our health, for our economy, and for our national security. Campaigns to convince the American people we have nothing to do with climate change will not slow the pace of actual climate change at all.

Climate change will only be slowed by efforts to reduce carbon pollution, to accelerate the inevitable transition to a clean energy economy, to create millions of good-paying jobs for those who need them the most in the green economy, and to put our faith in the American track record of innovation.

Insurance companies, the Department of Defense, FEMA, states, cities, towns, and counties are all assessing the risk of climate change and emissions as part of their business and the function of delivering public services. I don't think it is wrong for our agencies to do the same.

Again, I thank the witnesses for being here today, and I yield back my time, Mr. Chairman.

[The prepared statement of Mr. Grijalva follows:]

PREPARED STATEMENT OF THE HON. RAÚL M. GRIJALVA, RANKING MEMBER,
COMMITTEE ON NATURAL RESOURCES

Thank you, Mr. Chairman, for recognizing me, and I thank our witnesses for being here today. I would like to extend a special welcome to the Managing Director of CEQ, Christy Goldfuss, who is making her first appearance before this committee in her new role. Ms. Goldfuss used to be a member of the Democratic staff of this committee when I chaired the National Parks and Public Lands Subcommittee. I know she will do an excellent job and keep our country on a progressive course in responding to climate change and the other pressing environmental challenges we face.

Mr. Chairman, I hope this hearing is not intended to undermine and mischaracterize the National Environmental Policy Act, which remains one of our Nation's bedrock environmental laws. I also hope the misguided task forces and investigations we've seen before—aimed at proving that NEPA and other laws somehow stifle our economy and limit our freedoms—are a thing of the past.

With your new chairmanship, and the recognition by this committee in our first meeting in January that climate change does exist, I hope we have entered a new era with respect to understanding NEPA's value to our communities, our environment and our economy.

NEPA shines a light on proposed government actions and helps local citizens provide new information and ideas, improve projects, and ensure sustainable decision-making. It helps Federal authorities consider a range of alternatives, often resulting in lower costs to the public—something I am sure everyone here supports.

NEPA provides for environmental justice, helping communities that cannot afford expensive lobbyists to protect their lands and their values. This is especially important when agencies consider the effects of greenhouse gas emissions and climate change. Climate change is hitting low income communities, communities of color, and our most disenfranchised people the hardest. Americans living in vulnerable areas and those with the fewest resources to help them adapt or recover quickly are already bearing the brunt.

I congratulate the Administration and the Council on Environmental Quality on issuing this very appropriate revised guidance. In my opinion, it is long overdue. I urge CEQ to review the many comments it has received and issue a final draft as soon as possible.

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Campaigns to convince the American people we have nothing to do with climate change will not slow the pace of actual climate change at all. Climate change will only be slowed by efforts to reduce carbon pollution, to accelerate the inevitable transition to a clean energy economy, to create millions of good-paying green jobs for those who need them most, and to put our faith in the American track record of innovation.

Again, I thank the witnesses for being here today, and I yield back my time.

The CHAIRMAN. Thank you.

I will now recognize the Vice Chair, Mrs. Lummis, for her statement.

STATEMENT OF THE HON. CYNTHIA M. LUMMIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WYOMING

Mrs. LUMMIS. Good morning, Mr. Chairman, and thank you for holding this hearing.

Look, major Federal decisions should be informed by an understanding of how they impact our environment. That is the simple idea behind NEPA. NEPA requires the Federal Government to take a hard look at the environmental impacts of Federal actions and

projects. There has to be a causal relationship between a project and the alleged impacts.

But CEQ's revised draft guidance on greenhouse gas emissions turns this upside down. The new guidance assumes that any greenhouse gas emissions contribute to global climate change, and so they are environmental impacts.

Now, indulge me this indelicate statement, Mr. Chairman. I emit greenhouse gases. You emit greenhouse gases. The Ranking Member, our panelists, we all emit greenhouse gases. You can measure our emissions with a high degree of accuracy. What is difficult, but not—in fact, what is difficult, but perhaps impossible to measure is how much our emissions actually contribute to global warming, or global cooling, or other global climate changes that impact our environment.

As our experts will reveal today, this connection is difficult enough to make, even if you analyze the greenhouse gas emissions of the entire United States. Yet CEQ is now telling agencies that if a project emits greenhouse gases, it is a de facto environmental impact. That will lead to project delays, project modifications, added costs, mitigation costs, and, in some cases, even project denials. From public lands permits, to energy production, to roads and pipelines, there isn't a corner of the United States that isn't touched by this new guidance, and the costs could be enormous.

This so-called guidance didn't even go through rulemaking, which is astounding when you consider its economic impacts.

I look forward to the hearing. I look forward to listening to our panelists today. Some will question the science and legal basis for this draft guidance.

I have with me here somewhere a copy of NEPA. I brought it with me. Six pages. Well, it barely goes over to the seventh page. Six pages, the National Environmental Policy Act. It is supposed to inform Federal decisions, not dictate them. But, after 45 years of agencies and courts reading more and more requirements into NEPA, this six-page bill has generated reams of paperwork that created lots of greenhouse gases—so many greenhouse gases that it could fill the halls of Congress and then some.

Some of this paperwork has likely produced environmental benefits, but much of it is duplicative and unnecessary. CEQ's draft guidance is a prime example. This guidance will create far more paperwork and greenhouse gases than environmental benefits, regardless of one's position on global warming.

We need to recognize, Mr. Chairman, that NEPA procedure has become so time-consuming, so costly, and so fraught with litigation that, in many cases, the process alone dictates outcomes. Only then can we have a reasonable conversation about how the 45-year-old NEPA could better serve our environmental needs in the 21st century.

Thank you, Mr. Chairman. I yield back.

[The prepared statement of Mrs. Lummis follows:]

PREPARED STATEMENT OF THE HON. CYNTHIA M. LUMMIS, VICE CHAIRMAN,
COMMITTEE ON NATURAL RESOURCES

Thank you Mr. Chairman, and thank you for holding this hearing.

Most would agree that major Federal decisions should be informed by an understanding of how they impact our environment. That's the simple idea behind the National Environmental Policy Act of 1969, or NEPA.

But the Council on Environmental Quality's revised draft guidance on greenhouse gas emissions turns NEPA on its head. NEPA requires the Federal Government to take a hard look at the environmental impacts of Federal actions and projects. There has to be a causal relationship between a project and the alleged impacts.

The new greenhouse gas guidance assumes that any greenhouse gas emissions contribute to global climate change, and are hence environmental impacts.

Now, I emit greenhouse gases. The Chairman and Ranking Member and our panelists emit greenhouse gases. You can measure our emissions with a high degree of accuracy. What's more difficult, if not impossible, is measuring how much our emissions are actually contributing to global warming, or global cooling, or other global climate changes that impact the environment.

As expert testimony will reveal today, this connection is difficult enough to make even if you analyze the greenhouse gas emissions of the entire United States. Yet CEQ is now telling agencies that if a project emits greenhouse gases, it is a de facto environmental impact. That will lead to project delays, project modifications, added project costs, mitigation costs, or even project denials. From public lands permits to energy production to roads and pipelines, there isn't a corner of the United States that isn't touched by this new guidance, and the costs could be enormous.

This so-called guidance didn't even go through a rulemaking, which is astounding considering its sweeping impacts.

I look forward to hearing from panelists today who will question both the scientific and legal basis of this draft guidance.

I want to end by reminding everyone that NEPA, the statute, is six pages long, barely reaching the seventh page. This law is supposed to inform Federal decisions, not dictate them. But after 45 years of agencies and courts reading more and more requirements into NEPA, this six-page bill has generated reams of paperwork that could literally fill the halls of Congress and then some.

Some of this paperwork has likely produced environmental benefits, but much of it is duplicative or unnecessary. The CEQ's draft guidance is a prime example. Testimony today will demonstrate that it creates far more paperwork and costs than it will environmental benefits, regardless of one's position on global warming.

We need to recognize that NEPA procedure has become so time consuming, so costly, and so fraught with litigation that in many cases the process alone dictates outcomes. Only then can we have a reasonable conversation about how the 45-year-old NEPA could better serve our environmental needs in the 21st century.

Thank you Mr. Chairman. I yield back.

The CHAIRMAN. Thank you. At the request of the Ranking Member, I now recognize Ms. Bordallo to give an opening statement.

You made it back from the White House, I see.

Ms. BORDALLO. Thank you very much, Mr. Chairman. Before I begin my statement, I do want to recognize a committee staff member here, Jean, who is going to be retiring. When we were in the Majority, some time ago, I was the Chair of the Subcommittee on Fisheries, Wildlife, Oceans and Insular Affairs, and Jean, here, provided all the guidance I needed. I was new, and she certainly was very professional in her ways. And not only was she a professional committee staffer, but she was my friend. So we are going to miss her.

**STATEMENT OF THE HON. MADELEINE Z. BORDALLO, A
DELEGATE IN CONGRESS FROM THE TERRITORY OF GUAM**

Ms. BORDALLO. Mr. Chairman, I thank you for holding this important hearing on the CEQ's draft guidance that would provide

Federal agencies more guidance on considering the effects of greenhouse gases and climate change, with regards to the NEPA process.

I think we all understand, and can agree, that the NEPA process is not perfect. But it has been an important tool for many of our communities to weigh in and voice concerns about Federal agencies' actions that would have potential environmental impacts. I also appreciate the efforts of the CEQ and the Obama administration in drafting guidance for considering the impacts of greenhouse gases and climate change within the NEPA process.

Guam, Guam as an island territory faces very real threats of sea-level rise, ocean acidification, periods of low-quality air, intensifying storm seasons, and invasive species, as a result of harmful gases and climate change. But don't let that change your mind; still come to Guam to visit.

[Laughter.]

Ms. BORDALLO. Moreover, I think it is wise that we encourage, not force, Federal agencies and departments to consider the potential impacts of climate change.

For example, I would hope that the U.S. Navy would take potential sea-level rise when developing military construction projects in Apra Harbor, so they are making long-term and wise investments in critical infrastructure. I think it is important to highlight how the NEPA process was extremely critical in shaping Federal actions regarding the military buildup on Guam. The NEPA process allowed local stakeholders to voice their concerns about the impact of the relocation of the Marines from Okinawa to Guam.

The process helped to clarify that one of the main concerns on Guam was the initial need to acquire additional private or Government of Guam land. The Department of Defense had to respond to these concerns, and took additional time to re-analyze their needs and place more of the relocation functions on existing DoD land. This is a great example of how local collaboration and input through NEPA helped to shape a better outcome of a critical Federal action.

Because of the NEPA process, the people of Guam were able to influence agency decisions regarding the volume of military personnel, the placement and construction of facilities, the impact of invasive species, and the preservation of historically and culturally important lands and artifacts. So I appreciate and support the efforts of the Administration to further improve and refine the NEPA process with this draft guidance of the GHGs and climate change, and look forward to working with the Administration and Congress to ensure that local communities, such as mine on Guam, have access to a NEPA process that better addresses the challenges and opportunities of this changing world.

I yield back, Mr. Chairman.

[The prepared statement of Ms. Bordallo follows:]

PREPARED STATEMENT OF THE HON. MADELEINE Z. BORDALLO, A DELEGATE IN
CONGRESS FROM THE TERRITORY OF GUAM

Mr. Chairman, thank you for holding this important hearing on the CEQ's draft guidance that would provide Federal agencies more guidance on considering the effects of greenhouse gases and climate change with regards to the NEPA process.

I think we all understand and can agree that the NEPA process is not perfect, but it has been an important tool for many of our communities to weigh in and voice

concerns about Federal agencies' actions that would have potential environmental impacts.

I also appreciate the efforts of CEQ and the Obama administration in drafting guidance for considering the impacts of greenhouse gases and climate change within the NEPA process. Guam as an island territory faces very real threats of sea level rise, ocean acidification, periods of low quality air, intensifying storm seasons, and invasive species, as a result of harmful gases and climate change.

Moreover, I think it is wise that we encourage, not force, Federal agencies and departments to consider the potential impacts of climate change. For example, I would hope that the U.S. Navy would take potential sea level rise when developing military construction projects in Apra Harbor so they are making long-term and wise investments in critical infrastructure.

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I appreciate and support the efforts of the Administration to further improve and refine the NEPA process with this draft guidance on GHGs and climate change, and look forward to working with the Administration and Congress to ensure that local communities such as mine on Guam have access to a NEPA process that better addresses the challenges and opportunities of a changing world.

The CHAIRMAN. Thank you very much.

OK, I now will turn to our panel of witnesses. We appreciate them coming at great distance to be here, many of you from great distances to be here.

On my left, going to right, we have Ms. Christy Goldfuss, who is the Managing Director for the Council of Environmental Quality. We are happy to have you. As has been mentioned, you used to be a staffer here. It is good to have you back.

Mr. Roger Martella, Jr. is a partner in the Sidley Austin LLP; Dr. John Christy, a Professor of Atmospheric Science and State Climatologist at the National Space Science and Technology Center at the University of Alabama; and Mr. Ray Clark, who is the President of Rivercrossing Strategies, LLC. We appreciate all of you being here.

Before we ask you for your testimony, we remind you that your written testimony is included in the record. Your oral comments should be limited to 5 minutes. And, for those of you who have not been here before, the light system in front of you should indicate—if it is green, you are good to go. When it hits the yellow light, that means you have a minute left. And at red, I will be gaveling you down. So, hopefully, you will respect that, as well.

So, with that, Director, we recognize you for 5 minutes for your oral testimony. And, once again, we appreciate having you here.

**STATEMENT OF CHRISTY GOLDFUSS, MANAGING DIRECTOR,
COUNCIL ON ENVIRONMENTAL QUALITY, WASHINGTON, DC**

Ms. GOLDFUSS. Good morning, Chairman Bishop, Ranking Member Grijalva. And just a quick note to Jean, thank you for all of your work. You are a true environmental champion, and we are so sad, so sad that you are leaving this committee. Thank you for the opportunity to appear before you today to discuss CEQ's efforts to modernize NEPA through proposed guidance on the consideration of greenhouse gas emissions and the effects of climate change in NEPA reviews. We at CEQ are proud of this guidance, and we welcome the opportunity to speak to you about it today.

As you know, and has been mentioned, NEPA calls on agencies to consider the potential environmental impacts of their actions when making decisions to quote the statute which, really, was before its time. The law was established to declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere, and stimulate the health and welfare of man, and to enrich the understanding of the ecological systems and natural resources important to the Nation.

In short, NEPA asks agencies, and requires agencies, to look before they leap. It allows agencies the flexibility to consider environmental impacts in a reasonable and measured manner. It allows them to focus on issues that are important, hear from all stakeholders, and exercise their professional judgment in projecting environmental impacts.

CEQ's draft GHG guidance will add further predictability to the NEPA process by clarifying for agencies and project sponsors how to account for climate change as part of environmental reviews. It provides a reasoned and transparent approach that will enable them to make more informed decisions. This guidance reflects our latest effort to help agencies complete environmental reviews consistently, efficiently, and openly under the existing NEPA framework.

We know that a changing climate is a reality, and carbon pollution is the biggest driver of climate change. We also know that Federal actions can contribute to emissions, and that climate change affects agencies and their actions. And we know that consideration of climate change falls squarely within the scope of NEPA. And Federal courts across multiple circuits have considered various approaches to this analysis.

Where the courts differ, and what agencies have been wrestling with for years, however, is how climate change should be considered in NEPA reviews. Our guidance offers a consistent approach that increases certainty and preserves agency discretion. This makes it easier and faster for agencies to prepare reviews and will reduce the threat of litigation, which can be costly and cause further delay.

I want to be clear about something, as I think it often gets lost when we talk about NEPA generally or specifically with relation to the greenhouse gas guidance. NEPA's requirements focus on the process by which agencies consider the impacts of their actions, not on the outcomes. It does not require agencies to make an environ-

mentally preferred decision, or to reject certain projects. The guidance is simply about transparency and informed decisionmaking. I like to think of it like the calorie count on a box of cereal. Just like nothing prevents a consumer from selecting the most calorie-intensive alternative, nothing about our guidance requires an agency to select the least greenhouse gas-intensive alternative.

The guidance does not regulate emissions, direct agencies to prohibit emissions-intensive projects, or mandate that agencies select the alternative with the least emissions. What the guidance does do is put an end to delays caused by hand-wringing over whether climate change should be addressed, or how to address it. Our guidance provides a consistent framework for how agencies can consider climate impacts.

Specifically in the guidance we encourage agencies to focus their analysis on those actions involving large levels of emissions which are most likely to raise climate issues. We encourage agencies to use existing GHG estimation tools, rather than attempting to build their own. We advise agencies to consider the potential effects of climate change, such as flooding or drought, early in the project planning process. And we emphasize that agencies should rely on existing assessments and reports on climate change, rather than conducting their own research.

As always under NEPA, agencies must focus their analysis on reasonably foreseeable direct, indirect, and cumulative impacts, as a project; limit their analysis on what is necessary, given the scope of the project; and avoid speculation. We remain confident that this guidance will bring greater clarity on when, why, and how the NEPA process should apply to climate change issues.

Mr. Chairman and Ranking Member Grijalva, and members of the committee, I am proud of what CEQ has accomplished over the past 5 years to modernize and reinvigorate NEPA and the NEPA process. I appreciate the opportunity to present to you today, and I look forward to your questions. Thank you.

[The prepared statement of Ms. Goldfuss follows:]

PREPARED STATEMENT OF CHRISTINA W. GOLDFUSS, COUNCIL ON
ENVIRONMENTAL QUALITY

Chairman Bishop, Ranking Member Grijalva, and members of the committee, thank you for the opportunity to appear before you today to discuss efforts by the Council on Environmental Quality (CEQ) to modernize National Environmental Policy Act (NEPA) implementation and the recent release of the Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas (GHG) Emissions and the Effects of Climate Change in NEPA Reviews. We at CEQ are proud of this guidance and welcome the opportunity to speak with you about it.

As you know, NEPA calls upon agencies to inform decisionmakers and the public of potential environmental effects of agency actions and consider comments on the proposed action. In short, it requires agencies to “look before they leap” when making decisions. Embodied in NEPA is the flexibility for agencies to consider environmental effects in a reasonable and measured manner. It allows agencies to focus on issues that are important, hear from all stakeholders and consider their input, and exercise their professional judgment in projecting the potential environmental impacts. These potential impacts of a proposal, and any reasonable alternatives, include all elements of the human environment and include ecological, social, and economic effects.

CEQ'S CLIMATE GUIDANCE

Consistent with efforts throughout the Administration to modernize and increase the efficiency of the NEPA process, CEQ's draft guidance will add further predictability to the NEPA process by clarifying for Federal agencies and project sponsors how to account for climate change as part of considering environmental effects of proposed actions. It provides a reasoned, consistent, and transparent approach for considering the effects of GHGs and climate change that will enable agencies to make better decisions that achieve NEPA's goal of creating and maintaining conditions under which our citizens and our environment "can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."¹

We are here today, primarily, to focus on the NEPA climate guidance, so I would like to share with you a few thoughts about the guidance and how we got to this point. CEQ's issuance of the GHG guidance reflects its latest effort to provide Federal agencies with how they can complete environmental reviews consistently, expeditiously, and openly under the existing NEPA framework.

We know that a changing climate is a reality, and carbon pollution is the biggest driver of climate change.² We also know that emissions associated with Federal actions contribute to climate change and that climate change affects Federal agencies and their actions. Further, we know that consideration of climate change falls squarely within the scope of NEPA, and Federal courts across multiple circuits and districts have been considering various approaches to the analysis. Where courts differ and what agencies have been wrestling with for years, however, is how the effects of climate change and GHGs should be considered in NEPA reviews.³

Previously, agencies were inconsistent in whether and how they addressed GHGs and climate impacts, adding a measure of uncertainty to the NEPA process. For example: some agencies have not addressed GHGs and climate impacts; some have modeled various emissions and considered them in different contexts (e.g., state and nationwide or regional); some have used existing tables of average emissions; and others have calculated the percentage of their emissions in comparison to worldwide emissions (which invariably leads to a miniscule percentage) or used strictly qualitative analyses.

Our guidance simplifies the consideration of climate change in NEPA reviews by offering a consistent approach to analysis, increasing certainty while preserving agency discretion. Added clarity will make it easier and faster to prepare analyses, and will also reduce the threat of litigation, which can be costly and cause further delay.

We have learned a great deal about GHGs and climate change since the release of CEQ's draft guidances on the subject in 1997 and 2010. Not only has the science surrounding climate change improved significantly since then, we also have a better understanding of how to analyze it within the NEPA context. This is a result of our continual efforts to solicit input and receive feedback from Federal agencies, business and industry leaders, environmental groups, academia, legal scholars, and the public. Our latest GHG guidance reflects years of effort in determining how to tackle the challenges posed by analyzing GHGs and climate change effects in NEPA documents. Specifically, it responds to agency and stakeholder requests for guidance in this area, and increases the predictability and timeliness of decisions that our citizens deserve.⁴

I want to be clear about something, as I think it often gets lost when we talk about NEPA generally and our GHG guidance specifically. NEPA's requirements focus on the process by which agencies consider the impacts of their actions, not on substantive outcomes. Put another way, NEPA informs the Federal agency decision-making process. It does not require agencies to make an environmentally preferred decision or prevent proposed projects from occurring. Think of it like a calorie count

¹ 42 U.S.C. § 4331(a).

² <http://nca2014.globalchange.gov/report>.

³ A. Litigation in the 8th, 9th, and DC Circuits, as well as District Courts in states including Washington, Alaska, South Dakota, Montana, Utah, Virginia, Colorado, Texas, Vermont, Iowa, Oregon, Idaho, Minnesota, Kentucky, and Nevada have delayed projects and the Courts have increasingly found that agencies should consider climate in their NEPA reviews. See the compendium of Climate Change Litigation in the U.S. available at <http://www.arnoldporter.com/resources/documents/ClimateChangeLitigationChart.pdf>.

⁴ One example is the Task Force on Climate Preparedness and Resilience which included 26 governors, mayors, county officials, and Tribal leaders from across the country, who recommended that the Administration "Finalize guidance for considering climate impacts and greenhouse gas emissions in National Environmental Policy Act evaluations of proposed Federal actions." See the Task Force recommendations at p20, available at: https://www.whitehouse.gov/sites/default/files/docs/task_force_report_0.pdf.

on a restaurant menu or on a box of cereal. The guidance is about disclosure and informed decisionmaking. There is nothing about it that requires an agency—or consumer, continuing with my analogy—from selecting the most or least GHG—or calorie-intensive alternative. As such, the guidance does not:

- Regulate emissions;
- Direct agencies to prohibit emissions-intensive projects; or
- Mandate that agencies select the alternative with the least emissions.

What the guidance does do is put an end to delays for hand wringing over whether climate should be addressed or how to address it. Our guidance provides a consistent framework for how agencies can consider the climate to inform decisionmakers and the public, and point to tools and techniques designed to ensure the NEPA review is efficient and timely. In the guidance, we:

- Encourage agencies to focus their analysis of GHGs on actions involving potentially large levels of emissions most likely to raise climate issues. For example, the climate analysis for new CAFE standards, which will cut greenhouse gas emissions by more than 2 billion metric tons, merits much more attention than adding a handful of vehicles to an agency motor-pool.
- Recommend agencies use a proposed action's projected emissions for analyzing its climate change effects. This recognizes that climate is different from other resources—like clean water or critical habitat—yet, it still adheres to standard NEPA principles and practices, and reduces debate and delay over which methodologies to employ, while providing an understandable indicator that has meaning for decisionmakers and the public.
- Highlight when calculating GHGs is appropriate for purposes of disclosure in a NEPA review. The guidance recommends using a reference point of 25,000 metric tons of CO₂ per year to focus efforts to quantify emissions on actions that are not minor.⁵ To provide some context of this reference point, purchasing 5,000 passenger vehicles, driving over 59 million miles a year, using 2.5 million gallons of gasoline, burning 26 million pounds of coal, or converting 190 acres of forest to cropland would not exceed the reference point.
- Counsel agencies to use existing GHG estimation tools—rather than attempting to create their own—when the data necessary to use a tool are available.⁶
- Advise that agencies consider the potential effects of climate change, such as flooding or drought, early in the project planning process, as part of their routine assessment of the status of the environment that will be affected by the proposed project, so that they develop alternatives that retain operational and financial viability over the long term. For example, agencies should consider whether a proposed pipeline or highway may be affected by subsidence or rising sea levels over the reasonably foreseeable life of the project, to ensure there are no unintended—and potentially costly—consequences for siting it in an area or using inadequate materials that may put the project at risk.
- Emphasize that agencies rely on and incorporate by reference existing assessments and reports on climate change rather than conducting their own research into the potential impacts of climate change on an individual project.
- Recommend that an agency select the appropriate level of action for NEPA review—programmatic or site/project-specific—at which to assess the effects of GHG emissions, and that agencies should consider the utility of a programmatic review.

As with CEQ guidance in the past, key NEPA principles will assist agencies as they develop their GHG and climate change analyses. As previously referenced, Agencies must use a rule of reason in conducting their analyses on the reasonably foreseeable direct, indirect, and cumulative impacts of a project, limiting the analysis to what is necessary given the scope of the project and avoiding speculation.

Let's spend a moment looking at what this means for an infrastructure project. The guidance in its draft form recommends an agency could consider the emissions from the reasonably foreseeable amounts of construction materials, construction equipment used in constructing the facility, and operations over the facility's projected life. The disposition of the facility after that point would typically be speculative and therefore should not be included in the analysis. The agency would

⁵ See the results when entering 25,000 metric ton CO₂ equivalents in the calculator at <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>.

⁶ One example is the compendium of tools available at https://ceq.doe.gov/current_developments/GHG_accounting_methods_7Jan2015.html.

typically not analyze the emissions associated with the widgets produced (for example: vehicles, solar panels, tons of coal, gallons of gas, board feet of timber) unless there are reasonably foreseeable quantities—any attempt at speculation could be mistaken as valid and lead to misinformed decisions.

We remain confident that agency implementation of our recommended approach to GHG and climate change effects in NEPA reviews—just like the guidance we have provided on the use of categorical exclusions or programmatic reviews—will bring greater clarity to when, why, and how the NEPA process should address climate issues. With this clarity comes efficient and transparent agency decision-making that will lead to better, more predictable, and timelier decisions for projects and agency actions that benefit our economy, communities, and the environment.

CEQ AND THE IMPORTANCE OF NEPA

To provide context for our discussion today, I would like to address CEQ's important role under NEPA, followed by a review of our efforts over the last 5 years to expedite environmental reviews and promote informed decisionmaking.

Signed into law by President Nixon on January 1, 1970, NEPA is the cornerstone of our country's commitment to responsive government and decisionmaking. It is important to remember that the House of Representatives adopted NEPA by a vote of 372 to 15 and that the Senate passed NEPA by voice vote without any recorded dissent.

Today, we take for granted that the public has a right to participate in Federal decisions regarding the environment, energy, and natural resources, but in fact it was in NEPA that Congress and the President clearly established this right. It wasn't that long ago that the public had little voice in the Federal decisionmaking process regarding all aspects of the human environment, which include the social and economic aspects of Federal decisions, for projects that affected them. Prior to the passage of NEPA, there were limited opportunities for preventing the Federal Government from ignoring the concerns of affected communities.

NEPA democratized the Federal decisionmaking process by formally including environmental considerations and requiring public input into Federal decisions. Today, NEPA facilitates the public, communities, tribes, state and local governments and industry having a seat at the table when Federal agencies analyze decisions that potentially impact our communities and the environment.

As eight prior CEQ leaders from both Republican and Democratic administrations noted to Congress a few years ago:

“Consideration of the impacts of proposed government actions on the quality of the human environment is essential to responsible government decisionmaking. Government projects and programs have effects on the environment with important consequences for every American, and those impacts should be carefully weighed by public officials before taking action. Environmental impact analysis is thus not an impediment to responsible government action; it is a prerequisite for it.”⁷

At its heart, NEPA recognizes that citizens and communities, local and state governments, Indian tribes, and businesses all have a vital interest in government actions—and more often than not, their unique knowledge of risks, consequences, and possible alternatives can produce better decisions. Better decisions result from better integrated planning and reduce the risk of litigation and delay.

Importantly, NEPA includes three different levels of review, making it possible to evaluate simpler projects commensurate with their level of complexity. More than 90 percent of all Federal actions are quickly handled through categorical exclusions, the least intensive form of NEPA review. Agencies used categorical exclusions for 96 percent of all Recovery Act projects.⁸ Only a very small fraction of projects or decisions require an environmental impact statement, the most intensive NEPA review. In the case of the 275,000 projects funded under the Recovery Act, only 841 projects (or 0.44 percent) required an environmental impact statement.

Each year, Federal agencies conduct hundreds of thousands of actions, yet between 2001 and 2013, no more than 175 NEPA cases were filed each year—with fewer than 100 cases filed during several of those years including 2010 and 2011,

⁷Letter to Rep. Cathy McMorris, Chair of the Task Force on Improving the National Environmental Policy Act. September 19, 2005. Signed by former Chairs and General Counsels of CEQ.

⁸CEQ Report to Congress, “The Eleventh and Final Report on the National Environmental Policy Act Status of Progress for American Recovery and Reinvestment Act of 2009 Activities and Projects” November 2, 2011, available at https://ceq.doe.gov/ceq_reports/recovery_act_reports.html.

2012, and 2013.⁹ This relatively small percentage of actions challenged in no way diminishes the importance of addressing the underlying reasons NEPA reviews are challenged, and in recognizing that big projects that result in jobs, environmental effects, and economic growth merit our continued attention. While agencies vary in their tracking of NEPA implementation, I think the Department of Transportation (DOT) and the Department of Energy (DOE) provide some valuable data about the scope and scale of NEPA in the permitting process.

- In 2011 and 2012,¹⁰ the Congressional Research Service (CRS) found in its analysis of transportation project delivery that, “The overwhelming majority of highway projects are deemed to have no significant impact on the environment and require no or limited environmental review or documentation under NEPA.”¹¹
- In 2012, the Federal Highway Administration (FHWA) estimated that, annually, about 9,700 projects are covered by categorical exclusions, which involve no significant environmental impacts and, hence, require limited documentation, analysis, or review under NEPA. Approximately 130 environmental assessments are processed by FHWA in a year, which can take just a couple of months to complete, and 30 projects require an environmental impact statement. Of the NEPA reviews completed each year, it is estimated that 98 percent are categorical exclusions, 1.7 percent are environmental assessments and only 0.3 percent are environmental impact statements.
- For the Federal Transit Administration (FTA), the majority of FTA projects fall within categorical exclusions. Of the NEPA reviews completed per year (2010–2012), FTA estimates that on average approximately 3,000 projects (99 percent) were classified as CEs, 20 were (0.6 percent) were processed as environmental assessments, and 5 (0.2 percent) were processed as environmental impact statements.
- The Department of Energy reviewed 10 years of NEPA (2003–2012) and found 98 percent of activities were categorical exclusions, 2 percent were environmental assessments, and less than .5 percent were environmental impact statements with a median completion time of 29 months.¹²

Frequently, delays in project implementation are inaccurately attributed to the NEPA process when other factors are relevant to the time needed for decisions on all environmental reviews, permits, and approvals needed for a project to proceed. NEPA becomes the “target” because NEPA is the “commonality”—it is a part of the planning process that always applies regardless of the availability of funds or the applicability of another specific statutory or regulatory regime. Challenges securing project funding, local opposition to a project, project complexity, or changes in project scope or priorities can and often do result in delays. However, because these issues are frequently identified during the NEPA process, NEPA itself is often targeted as the culprit.

It’s also important to bear in mind that some state, tribal and local jurisdictions have their own permitting and approval processes, which can add time to the review of federally funded projects, in some cases at the request of state, tribal, or local officials. And states, tribes, and local communities often vary in their available resources, both in staffing and funding, and expertise for permitting or reviewing challenging projects. We are continuing our efforts to share their and our best practices and lessons learned.

CEQ’S NEPA MODERNIZATION ACCOMPLISHMENTS TO DATE

Five years ago, in conjunction with NEPA’s 40th anniversary, President Obama and CEQ embarked upon an historic effort to modernize and reinvigorate NEPA to improve the transparency and efficiency of environmental reviews. Since then, CEQ has taken a number of steps to assist Federal agencies to meet the goals and requirements of NEPA, while making it easier for agencies to implement them. A fact sheet outlining our NEPA modernization efforts is attached with my written testimony and I ask that it be included in the record. These steps reflect our continued

⁹CEQ annual litigation surveys are available at https://ceq.doe.gov/legal_corner/litigation.html.

¹⁰CRS Report R42479, “The Role of the Environmental Review Process in Federally Funded Highway Projects.” April 11, 2012.

¹¹CRS Report R41947, “Accelerating Highway and Transit Project Delivery: Issues and Options for Congress.” August 3, 2011.

¹²DOE Lessons Learned Quarterly Report, September 2013, available at <http://energy.gov/nepa/downloads/lessons-learned-quarterly-report-september-2013>.

commitment to giving Federal agencies the tools to advance predictable, timely outcomes in NEPA reviews that ultimately enhance our economy while protecting our environment.

In exercising its authority under NEPA, CEQ issued several guidance documents to Federal agencies that have enabled them to expedite completion of their environmental review analyses while remaining true to NEPA's mandate to ensure an informed decisionmaking process that is open to the public. These guidance documents explain how Federal agencies can:

- Establish and use categorical exclusions for activities—such as routine facility maintenance or construction on existing sites—that, absent extraordinary circumstances, do not need to undergo intensive NEPA review because the activities do not normally, individually, or cumulatively have significant environmental impacts;
- Conduct programmatic reviews to assess landscape-scale (e.g., Federal land management plans) or broad-scale (e.g., transportation corridor) activities, or address common potential effects and how they will be addressed (e.g., addressing effects of fire at a facility¹³) that can expedite future agency decisions, including individual permit approvals; and
- Improve the efficiency of the NEPA process overall by integrating planning and environmental reviews, avoiding duplication in multi-agency or multi-governmental reviews and approvals, engaging early with stakeholders to head off possible future delays, and setting clear timelines for the completion of reviews.

CEQ's role in issuing guidance on different aspects of NEPA implementation is to clarify existing requirements, to ensure the consistent application of NEPA by Federal agencies and to focus those efforts on the issues or concerns on areas most likely to delay the review process. To be clear, and apropos of the committee's focus on our draft GHG guidance, CEQ guidance does not change or substitute for any law, regulation, or other legally binding requirement on agencies. Rather, it provides CEQ's interpretation of existing regulations in the context of an emerging issue or context. Finally, CEQ guidance, as is the case with our draft GHG guidance, is often developed in response to agency inquiries about how to apply NEPA to their actions.

Let's take a closer look at CEQ's efforts over the last 5 years that have allowed Federal agencies to accelerate the environmental review process and make better decisions without compromising NEPA's fundamental objectives.

Categorical Exclusions

In 2010, CEQ issued final guidance on “Establishing, Applying and Revising Categorical Exclusions under the National Environmental Policy Act” to support timely Federal agency decisionmaking. The guidance provided agencies with a set of best practices to ensure that they establish and then use categorical exclusions appropriately and transparently. As noted, categorical exclusions have become the most frequently employed method of complying with NEPA, covering over 90 percent of agency NEPA reviews. A categorical exclusion is a category of actions that a Federal agency determines does not normally result in individually or cumulatively significant environmental effects, and therefore, does not require further analysis in an environmental assessment or environmental impact statement. The categorical exclusion reflects the least intensive form of NEPA review and ensures the use in a particular place and time does not give rise to concerns that merit additional review.

Example—Categorical Exclusions and Tribal Housing

We have seen the benefit of this guidance in the assistance it provided to the Bureau of Indian Affairs in its development of a categorical exclusion for housing on tribal lands.¹⁴ We can all agree that housing serves a basic and fundamental

¹³In 1998 DOE, in response to public comment, included an analysis of wildfire as a plausible risk in its site-wide environmental impact statement. The DOE was subsequently able to take immediate actions to mitigate the effects of the 2000 Cerro Grande Fire as those steps were addressed in the site-wide environmental impact statement. See Environmental Law Institute, “NEPA Success Stories: Celebrating 40 Years of Transparency and Open Government”, at 14, available at https://ceq.doe.gov/nepa_information/NEPA_Success_Stories.pdf.

¹⁴See Notice of Proposed National Environmental Policy Act: Implementing Procedures; Addition to Categorical Exclusions for Bureau of Indian Affairs (516 DM 10), 77 FR 26314 (May 3,

need in society, and when housing comes under the auspices of a Federal agency action subject to NEPA, expeditious and thoughtful decisions should be a priority. The Bureau of Indian Affairs provides funding and approves leases and rights-of-way for proposed housing, and these decisions are subject to NEPA. Instead of conducting environmental assessments for scattered home sites, which it historically had done, the Bureau of Indian Affairs developed a category of actions, in consultation with and the approval of CEQ, to enable it to carry out its mission and objectives, comply with NEPA, and expedite decisions for home-building on Indian reservations. This is just one success that has emerged from this guidance.

Example—Categorical Exclusions and Broadband Infrastructure Deployment

CEQ is also using the categorical exclusion guidance to expedite the deployment of broadband infrastructure nationwide. CEQ is working with multiple agencies that have decisionmaking authority over broadband infrastructure to expedite the NEPA review process through the use of categorical exclusions. In 2009, the National Telecommunications and Information Administration¹⁵ developed categorical exclusions based in large part on the expertise and experience Rural Utilities Service had with its categorical exclusions. Currently, CEQ is assisting Federal agency members of the Broadband Infrastructure Deployment Working Group to revise their agency implementing procedures to include categorical exclusions for broadband projects. This revision will facilitate and expedite the development of critical 21st century infrastructure projects in a way that is environmentally sound and consistent across agencies.

Programmatic NEPA Reviews

Last December, CEQ issued its programmatic environmental review guidance. The use of programmatic NEPA reviews has increased as agencies undertake more broad, landscape-scale analyses for proposals that affect the resources they manage. This guidance was requested by agencies to explain NEPA requirements and CEQ regulations when programmatic reviews are prepared. It identifies opportunities for incorporating greater efficiency and transparency in agency reviews as well as better defined and more expeditious paths toward informed decisionmaking. Through the use of programmatic reviews, agencies can more quickly complete the review process, while maintaining the ability for the public, businesses, and other stakeholders to engage in project-specific reviews that fall within a broader, landscape scale environmental review. This guidance also made it clear that the efficiencies for programmatic environmental impact statements also apply to programmatic environmental assessments to overcome challenges to the use of programmatic environmental assessments when not explicitly addressed in agency NEPA implementing procedures.

Example—Black Hills National Forest Pine Bark Beetle Environmental Impact Statement

Another example of how programmatic reviews can serve as an efficient and expeditious tool in NEPA implementation is the environmental impact statement prepared by the Black Hills National Forest (BHNF).¹⁶ The Forest Supervisor made decisions about the expanding bark beetle epidemic in an environmental impact statement that covered over 200,000 acres. As the result of warmer weather, bark beetles are ravaging public and private lands across the West, creating vast areas that are vulnerable to wildfire, which risks the health and safety of countless communities across the West. This land area was three to six times larger than typically analyzed in environmental impact statements for the BHNF. In addition to site-specific treatments to be taken immediately, the decision also included an anticipatory component, allowing the Forest Service to treat additional areas beyond the current infestation without the need for new NEPA analyses. The process to develop this environmental impact statement took less than 14 months and included extensive collaboration with local stakeholders, resulting in a decision that was widely supported and allowed the Forest Service to move expeditiously in treating bark

2012). See also, Notice of Final National Environmental Policy Act Implementing Procedures, 77 FR 47862 (August 8, 2012).

¹⁵See “Notice and Request for Comments, National Environmental Policy Act-Categorical Exclusions covering the Broadband Technology Opportunity Program (BTOP)”, 74 FR 32876 (July 9, 2009). See also “Notice, National Environmental Policy Act-Categorical Exclusions covering the Broadband Technology Opportunities Program (BTOP)”, 74 FR 52456 (October 13, 2009).

¹⁶See “Notice of Intent to Prepare An Environmental Impact Statement, Black Hills National Forest, Custer, South Dakota-Mountain Pine Beetle Response Project,” 76 FR 48120 (August 8, 2011). See also “Mountain Pine Beetle Response Project Record of Decision” (December 2012).

beetle infected areas. We believe the USFS's use of programmatic environmental reviews in the BHNH is a model or other agencies and forest supervisors to follow.

NEPA Efficiencies

In 2012, CEQ issued Final Guidance on "Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act." The guidance emphasized and clarified existing techniques established under NEPA and the CEQ Regulations to expedite NEPA processes, while ensuring the completion of a thorough and meaningful environmental review. At its core, NEPA encourages simple, straightforward, and concise reviews and documentation. The guidance provided basic recommendations, designed to overcome gold-plating or bullet-proofing NEPA reviews, which amplified and built upon the CEQ Regulations. For example:

- NEPA should be integrated into project planning rather than be an after-the-fact add-on that can delay project reviews;
- NEPA reviews should coordinate and take appropriate advantage of existing documents and studies to avoid duplication and reduce the time and effort required to conduct analyses;
- Early, well-defined project scoping should be used to focus environmental reviews on appropriate issues that would be meaningful to a decision and avoid spending unnecessary time and effort on issues that are of less or no importance;
- Agencies should develop meaningful and expeditious schedules (milestones and timelines) for environmental reviews; and
- Agencies should respond to comments in proportion to the scope and scale of the environmental issues raised.

The guidance was developed to encourage efficiencies in the preparation of environmental impact statements, as well as the more commonly used environmental assessments. When followed, these recommendations will expedite reviews and decisions, ensure the public and key stakeholders are involved in the process, and minimize the risk of challenges.

Example—Efficiencies and Infrastructure

Efforts to improve efficiencies do not stop at issuing guidance. Building a 21st century infrastructure that also safeguards our communities and environment is an Administration priority. Safe, reliable, and resilient infrastructure will bring immediate and long-term economic benefits across the country, such as new jobs, energy independence, and a competitive edge in the global economy. CEQ has focused on improving the overall efficiency and effectiveness of Federal environmental review and permitting processes. These efforts have concentrated on expediting Federal decisionmaking, sharing best practices, supporting job creation, and facilitating interagency collaboration pertaining to NEPA.

For major projects, the NEPA process can provide a vehicle for coordinating other permitting and planning requirements at the Federal, state, local, and tribal levels, and avoiding duplicative and unnecessary sequential reviews. Through interagency coordination and oversight of Federal NEPA implementation, CEQ is leading or participating in several efforts to achieve these objectives, either by accelerating decisions on particular priority projects, or advancing broad reforms to the overall process. Examples include the Transmission Rapid Response Team, the Transportation Rapid Response Team, the Interagency Infrastructure Permitting Improvement Team, the Unified Federal Review process for recovery projects following Presidentially declared disasters,¹⁷ and the Broadband Infrastructure Deployment Working Group. These groups consist of senior staff representatives from the relevant action and resource agencies working together to expedite environmental reviews and permitting decisions on critical infrastructure that serves the foundation for sustainable economic and community development.

CEQ NEPA Pilot Program

Another effort CEQ has undertaken to modernize NEPA implementation is the CEQ NEPA Pilot Program, which was launched in 2011. CEQ worked with practitioners and other parties with an interest in NEPA reviews to identify innovative time- and cost-saving approaches to NEPA implementation. In January 2015, CEQ

¹⁷ <http://www.fema.gov/unified-federal-environmental-and-historic-preservation-review-presidentially-declared-disasters>.

issued its CEQ NEPA Pilot Projects Report and Recommendations¹⁸ based on the five selected pilot projects. These projects were selected because of their focus on bringing NEPA practice into the 21st century by integrating IT and web-based tools into the review process as well as identifying best practices for conducting environmental assessments, evaluating high-speed rail infrastructure, and developing forest restoration projects. More specifically, the NEPA Pilots included:

- An ongoing initiative advanced the National Park Service's Planning, Environment, and Public Comment System (PEPC) and the Forest Service's electronic management of NEPA system (MNEPA), two online tools that improve management of the review process, collaboration among agency personnel, and processing of public comments;
- A survey and assessment used by the National Association of Environmental Professionals to develop best practice principles for environmental assessments based on lessons learned by NEPA practitioners;
- A public access component established for the Environmental Protection Agency's online GIS-mapping program, *NEPAssist*, which provides Federal agencies, applicants and project developers, and the public with geographic information for use in NEPA reviews and decisionmaking;
- A process for improving early engagement and an expeditious alternative to formal Memoranda of Understanding/Agreement developed during the initiation of a programmatic environmental impact statement by the Department of Transportation's Federal Railroad Administration for intercity passenger rail service from Washington, DC, to Boston, Massachusetts; and
- The development of best practices by the Forest Service to foster early collaboration with stakeholders for forest restoration projects to reduce costs and enhance efficiencies for planning and NEPA reviews, as well as for post-decision on-the-ground restoration.

These pilots focused on cooperative efforts aimed at expediting environmental reviews and soliciting public input to inform decisions that will ensure sustainable development of our resources. In addition to focusing on the procedural aspects of NEPA implementation, two of the pilot projects looked at how Federal agencies can expedite projects that (1) improve the sustainable management of our public lands for multiple uses and (2) support critical infrastructure that will enable us to compete in the global marketplace in the coming decades.

CONCLUSION

After 45 years, NEPA endures as the cornerstone of our Nation's environmental protections, and CEQ remains steadfast in promoting and ensuring that its ideals of open government and informed decisionmaking are attained by all Federal departments and agencies. Recognizing that the health of our environment and our economy are inexorably linked, CEQ is dedicated to engaging with Federal agency, industry, environmental, legal, and public stakeholders to learn how best to guide NEPA's implementation such that it benefits our natural and cultural resources, human health and the environment, and American communities and commerce.

Mr. Chairman, Ranking Member Grijalva, and members of the committee, I am proud of what CEQ has accomplished over the past 5 years with respect to modernizing and reinvigorating the NEPA process to provide for better Federal agency decisions that benefit our Nation both environmentally and economically. I appreciate the opportunity to testify before you today and look forward to answering your questions.

Attachment: NEPA Modernization Efforts—The Last Five Years

[This document has been submitted for the record and is being retained in the Committee's official files.]

¹⁸https://www.whitehouse.gov/sites/default/files/docs/ceq_nepa_pilots_conclusion_recommendations_jan_2015.pdf.

QUESTIONS SUBMITTED FOR THE RECORD BY REP. GRACE F. NAPOLITANO TO
MS. CHRISTY GOLDFUSS

Ms. Goldfuss did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Question 1. As you are aware, in 2008, several court decisions had found the consideration of greenhouse gas emissions during the NEPA review process as appropriate. Over the years, how much time and resources has the Council on Environmental Quality spent fighting litigation in court? How many cases? How many resulted in reward?

Question 2. When developing the draft guidance on greenhouse gases and climate change, what outreach did the Council of Environmental Quality do to key stakeholders? Since the comment period is still open and the final guidance has not been published, have any departments or agencies voluntarily considered the impact of greenhouse gases and climate change in their reviews?

Question 3. Instead of the Department of Transportation having to re-build a highway in 25 years due to rising sea levels, wouldn't the draft guidance take these effects into consideration and only save taxpayers money? Wouldn't this prevent the U.S. Government from having to go back and re-build or change multiple projects?

Question 4. Are you aware of any projects in which the proposed greenhouse gases and climate change guidance could have saved taxpayers money?

The CHAIRMAN. Thank you very much.

The Chair now recognizes Mr. Martella to testify. Same 5 minutes. You are on.

**STATEMENT OF ROGER R. MARTELLA, JR., PARTNER, SIDLEY
AUSTIN LLP, WASHINGTON, DC**

Mr. MARTELLA. Thank you, Chairman Bishop, Ranking Member Grijalva, and for the whole committee, for the honor to appear before you at this important hearing.

For 45 years, NEPA has served as the broadest, most diverse shield of environmental protection in the United States.

Ranking Member, I agree with your statement that it really is the bedrock of environmental law. And it has probably realized more benefits per word of statutory text in the six pages than any other statute.

But while it was enacted as a shield, it has also been transformed by some into a secondary purpose that was unintended by Congress, which is as a sword intended to block projects, delay projects, and cancel projects. So, what we want to talk about today is this balance, focusing on NEPA being a shield to protect the environment, to assess greenhouse gases, assess climate change and environmental impacts, but not furthering this secondary purpose that some have adopted, to make it a sword that will block projects that are critically important to our energy independence, modern energy infrastructure, and the various goals that the Obama administration is pursuing to address climate change.

And, as NEPA is entering middle age—and there has been some discussion about how old NEPA is; I was born the same year NEPA was enacted, so I can fairly say it is middle-aged—it is struggling to keep up with applying these older tools to address modern problems. And no example of that is better than climate change.

As the Chairman pointed out, NEPA has not been amended since 1970, but we are asking it now to address greenhouse gases and climate change, like we are asking several other statutes to do.

NEPA was designed to address specific projects in specific areas, and look at the local and regional impacts of those projects. As we know, climate change is a global issue. It is an issue where you have almost an infinite amount of sources around the world contributing to a single concern. That is not something that syncs up very well with NEPA. So, the question today is how do we go about reconciling these two things.

I want to say at the outset I am in agreement with, I think, the two fundamental principles that the Director has shared, and that the guidance does. I do agree that an analysis of greenhouse gases is appropriate under NEPA for certain projects that do impact greenhouse gases. I don't dispute that; that is what the courts have—that is where the courts have been going, and what they have been saying.

I also do recognize the importance of guidance. I think it can be helpful to the decisionmakers, to the courts, to the stakeholders, to get guidance from CEQ, appropriate guidance on how to look at this kind of 1970s tool and how it should be addressing the modern concerns associated with climate change. So I am in agreement on those two issues.

But, as I say in my written testimony, I do think there are five ways that the guidance gets it wrong, and should be doing it better. And I am not going to go through all five in the brief time here, but I do want to focus on the first three. And the first one, importantly, is how the guidance goes beyond CEQ's own regulations. CEQ's regulations require an analysis of direct, indirect, and cumulative impacts.

But the guidance goes much further than that, and it says, beyond those, you have to consider all the upstream impacts of a decision, and all the downstream impacts of the decision. And it gives an example of a mine, and says you not only have to look at the impacts of a mine—I agree, we should look at the greenhouse gas impacts of that mine—but you have to go all the way downstream, to look at the transportation of the resources, the refining of the resources, the ultimate combustion or utilization of the resources. And that goes far beyond the CEQ regulations, and you can't amend a regulation with the guidance.

I was interested to read the Director's testimony, where, on page four, there is more that I agree with there than I did in the actual guidance. And maybe there is some refinement going on, which would be welcomed.

The second fundamental issue I want to raise has to do with the CEQ's applying a one-size-fits-all guidance to all types of decisions: land decisions, resource decisions. Encompassed in this guidance are forestry decisions, grazing decisions, oil and gas permits, export terminals, railroad spurs, highways, and bridges, and things like that. And, for something like climate change, we simply can't have a one-size-fits-all guidance that applies to all those actions. That is just going to lead to confusion, unnecessary interpretation, litigation risk, delays, and, again, the potential to frustrate these very important projects that are key to our energy independence and a modern energy infrastructure.

I think what CEQ should do—and with respect—would be to develop guidance that is specific for these sectors, as opposed to a one-size-fits-all approach, which is misleading.

Then, the third thing I wanted to emphasize is the reliance on the social cost of carbon. At the outset, I am not sure why the social cost of carbon is even relevant under the law to this. But even if you were to engage in some social cost of carbon analysis, by no means should they be relying on the OMB social cost of carbon. The OMB social cost of carbon metrics, I think, are probably the single least transparent decisionmaking in the environmental area in this administration. It is the antithesis of NEPA, that a bunch of agencies, kind of behind closed doors in a black box, developed these figures without any public participation and input, and it goes against everything NEPA stands for, when it comes to public participation. So the social cost of carbon should not be referred to in the NEPA analysis.

The other arguments are—the other positions are in the written testimony. But with respect, in just 10 seconds, I do want to repeat Chairman Bishop's statement that I do believe, in the interim, that the guidance should be withdrawn while these concerns are addressed. Even though it is a draft guidance, other Federal agencies—even the courts look to anything CEQ says with significant deference. It is having an impact in the short term. So, I would recommend and request that the guidance be withdrawn while these issues are addressed, and these other guidances are developed. Thank you very much.

[The prepared statement of Mr. Martella follows:]

PREPARED STATEMENT OF ROGER R. MARTELLA, JR., SIDLEY AUSTIN LLP¹

A Hard Look at the Administration's Revised Guidance for Greenhouse Gas Emissions and Climate Change under NEPA Law and Practice: Five Key Things to Fix

Chairman Bishop, Ranking Member Grijalva, and members of the committee, thank you for providing me the opportunity and the honor to appear before you today.

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970 as the first official act of the environmental decade that quickly ushered in the comprehensive laws that since have set the standard for the world in protecting human health and the environment. As it enters middle age 45 years later, NEPA remains the first statute that students learn in their environmental law classes and that other nations replicate as they enact their own environmental regimes. Unlike every other environmental statute, it is a short, simple and straightforward law that may be responsible for more environmental benefits per word of statutory text than any other.

But like most other environmental statutes, NEPA is struggling to apply its 1970s era tools to the emerging environmental challenges of modern times. I believe that NEPA is being stretched to the proverbial breaking point, because it is, like other environmental statutes, being asked to perform functions its authors never intended. And, like most other environmental laws, this challenge is most prevalent when approaching greenhouse gases (GHGs) and climate change impacts.

The subject and timing of today's hearing could not be more important. There is a pressing need to reconcile how Federal agencies should assess GHGs in a way that fulfills NEPA's overarching purpose of requiring a hard look at a full range of environmental impacts but also upholds limits against uninformative analysis that risks significant delays, litigation, and cancellation of important projects. No statute is

¹The views expressed here are that of the author and are not intended to represent the views of Sidley Austin LLP or its clients.

more important to informing decisionmakers and the public of the environmental consequences of a proposed project. At the same time, NEPA, if pushed outside established limits, can obstruct projects needed to transition the Nation to energy independence, realizing a more diverse energy portfolio and infrastructure, and achieving a true manufacturing and economic renaissance associated with affordable and reliable energy.

The question presented here is how to ensure NEPA functions foremost as a shield that ensures sound environmental decisionmaking and not as an obstructionist's sword against energy and infrastructure projects and resource management plans. The answer increasingly hinges on the extent to which GHGs are appropriately addressed in Environmental Impact Statements (EISs) and other NEPA documents. While there is no debate that GHG analysis is relevant to certain projects that have an impact on GHG emissions, the key question is, "What should be the scope and limits of such analysis when there are almost limitless contributors to climate change itself?"

As explained below, properly established guidance from the Council for Environmental Quality (CEQ) can serve a key role in providing the appropriate direction to resolve this question in a way that provides vigorous environmental analysis while preventing unintended consequences of delay and litigation risk. At the same time, for the reasons explained below, the current draft CEQ Guidance suffers from five significant flaws that warrant the draft Guidance being withdrawn pending revision.

Time is of the essence. Although the Guidance is labeled "draft" in form, in function any direction from CEQ can create a *de facto* binding impact on agencies that implement NEPA, and may be cited by opponents before courts as the position of the Federal Government. The mere existence of such a draft is itself significant enough to cause uncertainty and delays for both Federal decisionmakers and project developers who are impacted by NEPA. Ideally, CEQ should reconsider and withdraw the draft Guidance for the reasons described below, and issue further guidance, following public notice and comment, that address and respond to the issues below in a way that is better reconciled with NEPA case law and past practice.

Background

By way of background, I am both a lifelong environmentalist and a career environmental lawyer. I am very proud to have spent the majority of my career in public service, as a trial attorney in the Justice Department's Environment Division, as the General Counsel of the United States Environmental Protection Agency, and as a judicial law clerk on the Tenth Circuit Court of Appeals. At the Justice Department, I served as the Principal Counsel for Complex Litigation where I was responsible for leading the teams that defended the government's highest profile and most controversial NEPA decisions. I worked closely with the agencies in assessing the necessary scope of NEPA documents and maintained a 100 percent success rate defending such documents in the courts.

Both in the government and in private practice, I have served as counsel in almost every case addressing climate change and greenhouse gases. Last year, the Supreme Court in *UARG v. EPA* specifically adopted a position advanced by my clients that both affirmed in part and rejected in part the EPA's GHG regulation under the Prevention of Significant Deterioration ("PSD") permitting program. In my current capacity as a private practitioner, I am privileged to work with a number of stakeholders, including private companies and trade associations, environmental organizations, and the government, to develop regulatory solutions that advance environmental protection and address climate change while also enabling the United States to retain economic competitiveness in a trade sensitive, global environment where very few economies provide even the faintest glimmer of our own environmental controls.

Finally, in both my government and private careers, I am very proud of the opportunities I have to participate in and advance international rule of law initiatives, working to help develop the enactment of environmental and public participation laws in growing economies. Recently, I served as one of two vice-chairs in the United States of the International Bar Association's Climate Change Justice and Human Rights Task Force, which released a landmark report regarding international legal mechanisms to address climate change. I am also honored to serve on the American Bar Association's President's Sustainable Development Task Force, Rule of Law Initiative, and as a delegate to the United Nations at the Rio+20 sustainable development conference in Brazil and the World Justice Forum at the Hague.

NEPA and the Need to Assess GHGs in Appropriate Ways

I. NEPA as a Shield to Protect the Environment

While NEPA is unique among environmental laws in that it does not impose substantive requirements on the decisionmaking agency, its reach and influence may be the broadest of any environmental statute. NEPA applies to any Federal agency action with a significant impact on the environment. Importantly, NEPA does not mandate any particular outcome or require an agency to select an alternative that has the lowest environmental consequences or GHG emissions. NEPA simply requires that an agency take a “hard look” at the environmental consequences of any major Federal action it is undertaking. *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350–51 (1989); *Kleppe v. Sierra Club*, 427 U.S. 390, 410, n.21 (1976). Once the procedural elements of NEPA have been satisfied and the environmental consequences of a proposed action have been given the required scrutiny, an agency may issue its decision relying on the factors and considerations specified in the statute under which it is acting.

When evaluating a proposed agency action under NEPA, an agency can begin by conducting an Environmental Assessment (EA), which is a concise environmental analysis that allows an agency to evaluate the significance of any potential environmental impacts of the proposed action. *See* 40 C.F.R. § 1508.9. If the agency determines that the environmental impacts of a proposed action will not be significant, it can issue a Finding of No Significant Impact (FONSI) and conclude its NEPA obligations. *Id.* §§ 1508.9, 13. However, if an agency determines—either before or after conducting an EA—that a project’s environmental impacts will be significant, it must prepare an EIA that addresses, among other things, “the environmental impact of the proposed action” and “alternatives to the proposed action.” 42 U.S.C. § 4332(C).

To complete this analysis, an agency must consider the direct, indirect, and cumulative effects of the proposed action 40 C.F.R. §§ 1508.7, 8. However, the scope of such a review is appropriately limited by the requirement that such effects be “reasonably foreseeable” and, for indirect effects, proximately caused by the proposed action under review. *Dep’t of Transp. v. Public Citizen*, 541 U.S. 752, 767 (2004); *city of Shoreacres v. Waterworth*, 420 F.3d 440, 453 (5th Cir. 2005). In addition, the agency must evaluate mitigation measures which, if implemented, could reduce the environmental impact of the proposed action. *Id.* §§ 1508.20, 25.

The scope of a NEPA analysis is not unlimited, and only that information that is useful to the environmental decisionmaker need be presented. *See Dep’t. of Trans. v. Public Citizen*, 541 U.S. 752, 767–770 (2004) (“Rule of reason” limits agency obligation under NEPA to considering environmental information of use and relevance to decisionmaker.). For example, an agency need not evaluate an environmental effect where it “has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions.” *Id.* Thus, despite its lack of substantive requirements, these procedural obligations, coupled with opportunities for public involvement, *see* 40 C.F.R. Part 1503, ensure that agencies are fully informed of potential environmental impacts before taking final action with respect to a proposed Federal action.

II. NEPA as a Sword to Obstruct Projects

Environmental lawyers most frequently associate NEPA as the bedrock of the American environmental legal regime. Project developers who rely upon Federal action, however, more typically consider NEPA their opponents’ most powerful tool of creating uncertainty, delay and risk.

Importantly, the projects challenged under NEPA are among those that are most critical to realizing the goals of pursuing energy independence, a diverse mix of conventional and renewable fuels, and the infrastructure for a modern energy future. NEPA is frequently cited in challenges to energy projects that require permits, licenses, and approvals from the Federal Government, such as wind and solar farms, oil and gas development on Federal lands, pipelines, rail expansions, import and export terminals, and even roads, highways, and bridges. Delays and cancellations to such projects frustrate the Administration’s other policy goals, such as the President’s Clean Power Plan goal of lowering the GHG footprint of the energy generating sector by 30 percent by 2030. Importantly, these actions also have consequences beyond just the energy sector. The manufacturing renaissance in the United States is dependent on the availability and accessibility of affordable and reliable energy at home. Thus, efforts to frustrate such projects under NEPA have broader impacts on manufacturing and other industrial sectors and—ultimately—the strength of the economy and jobs at home.

At the outset, it typically takes 18 to 42 months to develop a draft EIS, respond to comments and convert that document into a final EIS. In addition, decisions on whether to issue EAs or EISs under NEPA, as well as the substance of the final documents, are subject to judicial review in Federal district court. According to CEQ, every year, opponents of a variety of projects that require Federal approval bring about 100 new challenges alleging violations of NEPA.

Fortunately the government wins a much higher percentage of NEPA decisions than it loses. However, ultimate victory in the courts alone is a misleading metric. Frequently, an outcome of a project hinges not on just an affirmance by the court, but more importantly the *timing* of such a decision. NEPA litigation in Federal district court can take 9 to 18 months or longer. There is then a right to appeal in the courts of appeals, which can add another year to 2 years for a final decision. And remands to correct information in the record are not uncommon and can add many months to a year of additional delay.

Because many project investors are risk averse, they are frequently unwilling to proceed without the security blanket of a final decision from the Federal courts. As a result, project opponents have become skilled over the decades of using NEPA in their arsenal as not only a sword to strike down projects but, just as importantly, a tool to delay final decisions to the point that financing windows close, project investors lose patience, or the risk of litigation itself vacates interest in proceeding with a project. As a matter of practice the government has responded proactively. Government staff across the agencies increasingly have become skilled at creating “litigation proof” NEPA records that anticipate likely litigation arguments at the earliest stages and address such positions proactively in the administrative record. This has contributed to the successful outcomes in the courts, but has not solved the significant problems associated with delay. Increasingly the bigger threat to projects is not *whether* a NEPA decision will be defended, but *when*.

Ultimately, in order to create such strong records that survive judicial review, there must be clear and strong direction regarding what NEPA requires to be considered as part of the decisionmaking process. Because the assessment of GHGs is in its relative infancy compared to the history of NEPA, we are in a stage where without proper and appropriate guidance, the courts will be providing the direction to the agencies for the first time years after the NEPA documents are finalized, which risks significantly longer delays in the case of a remand. For example, in *High Country Conservation Advocates v. U.S. Forest Service*, 52 F. Supp. 3d 1174 (D. Colo. 2014), the court found that a final EIS was arbitrary and capricious because the agencies failed to properly justify their decision not to apply the draft Office of Management and Budget (OMB) social cost of carbon estimates in assessing climate change impacts. *Id.* at 1191. Significantly, although the court remanded the document back to the agency, the court did not mandate the inclusion of the draft OMB social cost of carbon estimates in NEPA cost benefit analysis and observed that “the agencies might have justifiable reasons for not using (or assigning minimal weight to) the social cost of carbon protocol to quantify the cost of GHG emissions from the Lease Modifications.” *Id.* at 1193. This case highlights the challenges that agencies face when addressing novel issues without adequate guidance on how to apply the law.

Because NEPA is strictly a procedural statute, it may seem intuitive to adopt a “more is more” approach to create the most inclusive and expansive documents possible. But such an approach carries two significant risks: (1) adding undue delay to the development of the documents where every week causes larger delays on the timing of finalizing documents and ultimately defending a final decision in the courts; and (2) adding unnecessary information that not only confuses the reader, but more importantly generates additional litigation risks by providing further targets for project challengers, even if such information should not be required in the first instance.

Thus, while guidance can be of paramount help to implementing agencies in defining the approach and scope to NEPA documents, such guidance must be carefully and surgically crafted to advise on what is required under NEPA without creating the risk for superfluous analysis. To require agencies to do more than what is necessary or required will lead to unnecessary delays and introduce significant litigation risk without better informing decisionmakers or the public. Overly broad guidance thus runs the risk of jeopardizing projects important and necessary to stronger energy independence, opportunities for renewable energy and a modern infrastructure and, in turn, the manufacturing renaissance in the United States associated with these goals.

III. NEPA as a Vehicle for Assessing GHG Impacts

Congress has yet to pass a law that is specifically drafted to substantively and directly address GHGs or climate change. In the meantime, existing laws such as the Clean Air Act are being put to new and creative service by regulatory agencies to address climate change.

NEPA is no exception. Although Congress has not amended NEPA to address climate change, NEPA's broad language requiring a hard look at impacts of a project, as well as the extensive case law that has evolved over 45 years, makes it clear that assessing GHG emissions is relevant to NEPA analysis for certain projects. For approximately a decade, an assessment of certain projects' GHG emissions have been part of the analysis of environmental impacts when such a project is likely to emit or otherwise impact GHG emissions to a significant extent.

Thus, for certain types of proposed Federal actions, quantifying GHG emissions in appropriate and specific circumstances can be an effective tool in comparing various alternatives in a NEPA analysis. However, it is important to remember a fundamental NEPA principle I identified earlier: the statute's goal is to achieve informed decisionmaking on the particular matter pending before the agency; it is not to develop encyclopedic materials on larger issues that should be decided in a broader framework. In order for such an approach to achieve NEPA's primary goal of informing agency decisionmaking, it is critical that the GHG emissions included in the comparison are appropriately limited to those that are closely related to the proposed project and thus are useful to inform the agency's decision. As the causal connection between a proposed action and potential upstream and downstream effects becomes more attenuated, attempts to quantify GHG emissions also become more speculative and uncertain. Without appropriate limits in place, the scope of a NEPA review could become boundless and preclude any meaningful comparison between alternatives.

At the same time, beyond assessing GHG emissions themselves, the unique nature of GHG emissions and climate change presents fundamentally different considerations than any other environmental issue and, in turn, bars a one-size-fits-all approach for all agencies addressing all projects in all situations as CEQ proposes. As CEQ explains in the Revised Draft Guidance, "GHG emissions from an individual agency action will have small, if any, potential climate change effects. Government action occurs incrementally, program-by-program, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government." 79 Fed. Reg. at 77,825. And as the Environmental Protection Agency ("EPA") stated in its endangerment determination for GHG emissions from mobile sources, "greenhouse gas emissions emitted from the United States (or from any other region of the world) become globally well-mixed, such that it would not be meaningful to define the air pollution as greenhouse gas concentrations over the United States as somehow being distinct from the greenhouse gas concentrations over other regions of the world." 74 Fed. Reg. 66,496, 66,517 (Dec. 15, 2009). As a result, the GHG concentration at a given location cannot be traced to a specific source or subset of sources, but instead is the product of the incremental contributions of all sources of GHG emissions across the planet.

The global nature of GHG emissions and climate change has important implications for NEPA analyses and the evaluation of the potential environmental effects of a proposed Federal action. As CEQ and other Federal agencies have recognized:

climate change presents a problem that the United States alone cannot solve. Even if the United States were to reduce its greenhouse gas emissions to zero, that step would be far from enough to avoid substantial climate change. Other countries would also need to take action to reduce emissions if significant changes in global climate are to be avoided.

Interagency Working Group on Social Cost of Carbon, Technical Support Document:—Social Cost of Carbon for Regulatory Impact Analysis—Under Executive Order 12866 at 10 (Feb. 2010). In light of the comparative magnitude of GHG emissions from other sources, it is virtually impossible to isolate and evaluate the climate change impacts of GHG emissions from a single Federal action, let alone the incremental differences in climate change impacts between various alternatives.

In recognition of these unique challenges posed by the global nature of GHG emissions and climate change, CEQ has proposed to use GHG emissions as a "proxy for assessing a proposed action's climate change impacts." 79 Fed. Reg. at 77,825. It is important to recognize, however, the limitations with respect to establishing a causal link between GHG emissions from a particular source and the environmental and climate change impacts related to such source. Since the proportional and relative

emissions from any given project are infinitesimally small, CEQ must ensure that agencies avoid any temptation to expand the scope of the NEPA review to include other upstream or downstream GHG emissions that lack the requisite causal connection to the proposed action in an effort to artificially increase the significance of a proposed project's climate change impacts. CEQ must take steps to ensure that a NEPA discussion of GHG emissions provides pertinent and helpful information to an agency decisionmaker rather than simply adding fuel to an ongoing debate about climate change.

Five Ways to Reconcile a Revised CEQ Guidance with NEPA Law and Practice

As described above, I agree with CEQ regarding two overarching assumptions in the draft CEQ guidance: (1) that an assessment of GHG emissions is relevant to NEPA analysis for certain projects; and (2) that appropriately drafted guidance can be an aid to Federal decisionmakers, project developers, interested stakeholders, and the courts. However, although GHG emissions and climate change present distinct challenges from other types of environmental impacts as described above, these distinctions do not excuse CEQ from acting within the bounds of NEPA law and regulations, case law, and past practice. As described below, there are at least five key ways revised guidance should be drafted to ensure that the CEQ directive is fully consistent with NEPA law and practice. In the meantime, CEQ should withdraw the Revised Draft Guidance to avoid confusion and uncertainty to decisionmakers, stakeholders and the courts in the interim as it considers the comments provided by stakeholders.

1. Any Final Guidance Should Not Expand Consideration of Upstream and Downstream Effects

At the outset, any final GHG Guidance must be clear that agencies are not required to expand the scope of NEPA analysis to include upstream and downstream effects that are not closely related to the proposed Federal action under review. CEQ's current regulations require agencies to consider direct, indirect, and cumulative effects within certain prescribed limits. CEQ cannot use a guidance to effectively amend those regulations by broadening their scope. The Revised Draft Guidance's broad allowance to consider upstream and downstream effects could be construed as expanding the scope of NEPA reviews beyond what is permissible under CEQ's regulations and well-established case law. Further, eliminating agency discretion to determine which potential indirect or cumulative impacts should be considered would, as the Supreme Court recognized in *Andrus v. Sierra Club*, 442 U.S. 347, 355 (1979), "trivialize NEPA."

The purpose of NEPA is to inform agency decisionmaking. To achieve this purpose, it is critical that agencies avoid consideration of potential environmental impacts that are irrelevant to the proposed Federal action because they are either too far removed from the proposed Federal action or are too speculative in nature. CEQ's regulations address this concern by directing agencies to limit their consideration of cumulative and indirect effects to those that are "reasonably foreseeable." 40 C.F.R. §§ 1508.7, 8. These regulations ensure that agencies will not consider potential environmental effects over which the agency has no control and allows them to avoid unnecessary litigation over hypothetical, tangential, or *de minimis* impacts. Courts interpreting these regulations have adopted a standard based on the tort concept of proximate cause to ensure that a sufficiently close relationship exists between the proposed Federal action and the potential environmental impact. *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 774 (1983); see also *Public Citizen*, 541 U.S. at 767 (citing *W. Keeton, et al., Prosser and Keeton on Law of Torts* 264, 274–75 (1983) for proximate cause standard). Thus, for example, an agency need not consider environmental effects of actions over which the agency has no control. *Public Citizen*, 541 U.S. at 770 ("We hold that where an agency has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions, the agency cannot be considered a legally relevant 'cause' of the effect."); *National Association of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 667 (2007) (same). This is a heightened level of causation, and it is not enough that a proposed Federal action would be a "but for" cause of the potential impact.

Courts have applied this proximate cause standard in several past cases addressing upstream and downstream impacts that are instructive in the context of GHG emissions. Courts have frequently held that a proposed Federal action cannot be considered a proximate cause of an upstream or downstream action if the upstream or downstream action would occur even if the Federal action did not occur. For ex-

ample, courts have held that agencies need not consider the effect of future growth or economic development if the proposed Federal action is responding to, rather than inducing, that growth. *See, e.g., Citizens for Smart Growth v. Dep't of Transp.*, 669 F.3d 1203, 1205 (11th Cir. 2012) (no need to evaluate “the project’s stimulation of commercial interests in a previously residential area” when “commercial uses in the study area were already being planned or developed”); *City of Carmel-By-The-Sea v. Dep't of Transp.*, 123 F.3d 1142, 1162 (9th Cir. 1997) (“The construction of Hatton Canyon freeway will not spur on any unintended or, more importantly, unaccounted for, development because local officials have already planned for the future use of the land, under the assumption that the Hatton Canyon Freeway would be completed.”); *Morongo Band of Mission Indians v. Fed. Aviation Administration*, 161 F.3d 569 (9th Cir. 1998) (“[T]he project was implemented in order to deal with existing problems; the fact that it might also facilitate further growth is insufficient to constitute a growth-inducing impact under 40 C.F.R. § 1508(b).”). Likewise, in the context of an oil pipeline, a court held that an agency does not need to consider upstream impacts from extracting the oil if the oil would be extracted, transported, and consumed even if the pipeline were not built. *Sierra Club v. Clinton*, 746 F. Supp. 2d 1025, 1045 (D. Minn. 2010).

In addition, an agency’s obligation to evaluate indirect and cumulative impacts is limited to those effects which are “reasonably foreseeable.” 40 C.F.R. §§ 1508.7, 1508(b). “Reasonable foreseeability” does not include ‘highly speculative harms’ that ‘distort[] the decisionmaking process’ by emphasizing consequences beyond those of ‘greatest concern to the public and greatest relevance to the agency’s decision.’” *City of Shoreacres*, 420 F.3d at 453 (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 356 (1989)) (alteration in original). Applying this standard, the Fifth Circuit affirmed the Department of Transportation’s decision to exclude from its cumulative impacts analysis of a proposed LNG facility the potential environmental effects of other proposed Federal projects for which draft EISs had not yet been prepared. *Gulf Restoration Network v. Dep't of Transp.*, 452 F.3d 362, 370 (5th Cir. 2006). The court explained that the agency was “entitled to conclude that the occurrence of any number of contingencies could cause the plans to build the ports to be canceled or drastically altered.” *Id.*

As CEQ has recognized, GHG emissions and climate change are difficult to address under NEPA because GHGs are well-mixed, global pollutants emitted by countless sources. As a result, the relative and proportional climate change impacts of emissions associated with any given Federal action will be infinitesimally small and such impacts are likely to be realized regardless of the project due to other GHG emissions globally. In response, in order to create a larger climate change footprint for a project, some may be tempted to advocate for an expansion of the scope of upstream and downstream emissions under consideration to increase the overall emissions associated with a proposed Federal action. That outcome, however, is precisely what CEQ’s own regulations and NEPA case law have sought to prevent.

The Revised Draft Guidance does not do enough to discourage such an expansive approach to addressing upstream and downstream GHGs and climate change impacts. To the contrary, the Revised Draft Guidance includes an example of an open pit mine and suggests that a NEPA review should encompass GHG emissions from every activity beginning with clearing land for extraction and extending to the ultimate use of the resource. These actions strain the concept of proximate cause and could encourage agencies to look too far in their NEPA reviews and project challenges to cite the guidance in litigation when the agencies stay within proper bounds. CEQ should clarify that nothing about GHGs or climate change alters the limits established in the regulations and caselaw, and that an expanded upstream and downstream assessment for GHGs is neither required nor lawful.

2. Any Final Guidance Should Not Be Applied Across the Board to Diverse Land and Resource Management Actions

The Revised Draft Guidance departed significantly from CEQ’s prior 2010 draft Guidance by proposing to apply the Guidance across the board to land and resource management actions. In doing so, the Guidance fails to fully appreciate that land and resource management actions are inherently diverse, complex and not conducive to a one-size-fits-all approach. Applying the Revised Draft Guidance to all land and resource activities will make an already difficult NEPA review process even worse. The complexity of these actions requires a more tailored approach than the Revised Draft Guidance offers.

Agencies responsible for Federal land management are strictly bound by statutory requirements to manage Federal land for multiple and diverse uses, many of which have some associated environmental impacts. Relevant statutes here include the Multiple-Use Sustained-Yield Act, National Forest Management Act, Federal Land

Policy and Management Act, and Alaska National Interest Lands Conservation Act. A core principle of many of these statutes is the requirement that agencies develop comprehensive resource management plans that then guide agency actions at the site-specific level. Once established, these plans must be revised on a regular basis to reflect changing conditions and changing public needs.

Land and resource management action and decisions are often among the most contentious under NEPA. This is particularly true of comprehensive resource management plans, which, in many cases, are dramatically slowed—if not paralyzed—by NEPA challenges brought by groups who oppose certain uses of Federal land. For example, opponents of off-road vehicle use, timber harvesting, and oil and gas development can use the NEPA process and related litigation to stall implementation of otherwise authorized uses with which they happen to disagree.

Given the far-reaching scope of NEPA to diverse actions across the Federal Government, applying a generic one-size-fits-all evaluation of GHG emissions to the diverse universe of land and resources management actions will only serve to exacerbate these challenges. While uniformity and consistency are laudable goals, they should not be applied indiscriminately to actions that are so fundamentally different. Thus, to the extent that guidance is necessary for addressing GHG emissions from land and resource management actions, such guidance should be done separately for various types of activities in a manner tailored to specific types of land and resource management decisions that agencies face.

3. *Any Final Guidance Should Not Require Agencies to Apply OMB's Draft Social Cost of Carbon Estimates in NEPA Reviews*

The Revised Draft Guidance also directs agencies to apply OMB's draft Social Cost of Carbon in NEPA reviews when costs and benefits of a proposed Federal action are monetized. OMB's draft Social Cost of Carbon estimates are among the least transparent environmental decisions of this Administration, having been formulated in a "black box" interagency process without public input that itself seems to go against every principle of public participation otherwise omnipresent in NEPA and other environmental laws. In substance, the estimates are a work in progress at best and should not be applied in NEPA reviews. To do otherwise would gloss over several critical flaws in this draft metric and apply mere estimates that have not been vetted by the public with a degree of certainty and precision that is deserved. As a result, applying social cost of carbon estimates would fail to provide the transparency on which NEPA is based and would impede rather than promote informed agency decisionmaking.

The OMB's draft Social Cost of Carbon estimates suffer from a number of significant flaws that should exclude them the NEPA process. First, projected costs of carbon emissions can be manipulated by changing key parameters such as time frames, discount rates, and other values that have no relation to a given project undergoing review. As a result, applying social cost of carbon estimates can be used to promote pre-determined policy preferences rather than provide for a fair and objective evaluation of a specific proposed Federal action. Second, OMB and other Federal agencies developed the draft Social Cost of Carbon estimates without any known peer review or opportunity for public comment during the development process. This process is antithetical to NEPA's central premise that informed agency decision-making must be based on transparency and open dialog with the public. Third, OMB's draft Social Cost of Carbon estimates are based primarily on global rather than domestic costs and benefits. This is particularly problematic for NEPA reviews because the Courts have established that agencies cannot consider transnational impacts in NEPA reviews. See *NRDC v. NRC*, 647 F.2d 1345 (D.C. Cir. 1981). Fourth, there is still considerable uncertainty in many of the assumptions and data elements used to create the draft Social Cost of Carbon estimates, such as the damage functions and modeled time horizons. In light of the lack of transparency in the OMB's process, these concerns over accuracy are particularly problematic.

The problems associated with the confusion and uncertainty surrounding the draft OMB social cost of carbon estimates to NEPA analyses are readily observable in the *High Country* decision, discussed above. The court found that the final EIS was arbitrary and capricious because the agencies failed to justify their decision not to apply the draft OMB social cost of carbon estimates. 52 F. Supp. 3d at 1191. Significantly, however, the court did not mandate the inclusion of the draft OMB social cost of carbon estimates in NEPA cost benefit analysis and observed that "the agencies might have justifiable reasons for not using (or assigning minimal weight to) the social cost of carbon protocol to quantify the cost of GHG emissions from the Lease Modifications." *Id.* at 1193. Given the critical flaws and deficiencies in the draft OMB social cost of carbon estimates and the district court's clear direction that agencies have discretion to exclude the draft OMB social cost of carbon estimates

from cost benefit analysis when properly justified, it is critical that CEQ provide guidance to the agencies that explains the deficiencies in the draft OMB social cost of carbon estimates and assists agencies in articulating a reasoned basis for excluding the metric from cost benefit analyses in future NEPA reviews at this time.

Requiring agencies to apply a flawed Social Cost of Carbon estimate is contrary to NEPA's requirements that agencies must understand and address uncertainty and unknown data points. In fact, 40 C.F.R. § 1502.22, provides a procedure for agencies to address incomplete or unavailable information, directing them to explain the information that is missing and its relevance to the proposed agency action. Directing agencies to apply the OMB's flawed draft Social Cost of Carbon estimates will give the public a false sense of certainty with respect to those estimates and will prevent them from appreciating the uncertainty related to potential climate change impacts. Thus, until OMB completes a more transparent process that produces a more accurate method of calculating the cost of carbon emissions, CEQ should direct agencies to avoid using the estimates and instead rely on existing CEQ regulations addressing incomplete or unavailable information.

4. Any Final Guidance Should Make Clear that NEPA Does Not Require Adoption of Specific Mitigation Methods

The Revised Draft Guidance also arguably goes beyond what NEPA requires by suggesting that agencies could be required to adopt GHG mitigation measures as part of their NEPA analyses and subsequent decisions. While evaluation of mitigation measures can be an appropriate part of a NEPA analysis, agencies are under no legal obligation to adopt mitigation measures. To avoid confusion, CEQ should clarify that the guidance's discussion of GHG mitigation measures is not intended to alter existing NEPA law and regulations for mitigation.

It is well-settled that NEPA does not impose substantive requirements on agency decisionmaking. Instead, as the Supreme Court has explained, NEPA's "mandate to the agencies is essentially procedural." *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 558 (1978). Consistent with this requirement, CEQ's regulations direct agencies consider "mitigation measures (not included in the proposed action" as alternatives in their NEPA analyses. 40 C.F.R. § 1508.25(b)(3). In interpreting NEPA and CEQ's regulations, courts have frequently confirmed that mitigation measures are an important ingredient of assessment in NEPA analyses, but held that agencies have no substantive obligation to adopt the mitigation measures that they identify.

Mitigation measures do play a central role in "mitigated findings of no significant impact," or mitigated FONSI. Rather than preparing a full EIS, an agency can conduct a less detailed EA. If the agency concludes after the EA that there will be no significant environmental impact from the proposed action, it can issue a FONSI and conclude its NEPA review; if significant impacts are identified, the agency must prepare an EIS. Agencies can issue a mitigated FONSI with binding mitigation requirements if it determines that including those mitigation measures will avoid any significant environmental impacts.

The Revised Draft Guidance as written creates a risk it could be interpreted by decisionmakers, project challengers, and courts as crossing the established line between assessing mitigation impacts and requiring agencies to adopt mitigation measures. For example, in discussions of the Record of Decision or ROD that is issued after an EIS, CEQ directs agencies to "identify those mitigation measures [adopted to address climate change] and . . . consider adopting an appropriate monitoring system." Similarly, CEQ directs agencies to evaluate "the permanence, verifiability, enforceability, and additionality" of proposed mitigation measures. 79 Fed. Reg. at 77828. This language is similar to what is required by regulatory agencies in mandatory offset programs for GHGs and other pollutants and, therefore, could be interpreted to include substantive, rather than merely procedural, components. Finally, in comments on the 2010 draft guidance, several commenters urged CEQ to "explicitly acknowledge that adoption of mitigation measures considered under NEPA are not *per se* required, and should not be required under the NEPA statute." *Id.* at 77,819. EPA declined to do so, creating further uncertainty about the role of mitigation of GHG emissions in NEPA reviews. Statements such as these could be misconstrued as crossing the line to impose substantive requirements as part of a NEPA analysis. CEQ must clarify in any final guidance that NEPA cannot be used to compel an agency to adopt mitigation measures.

5. *Any Final Guidance Should Not Adopt a Presumptive Threshold for Quantifying GHG Emissions in NEPA Analyses*

In the Revised Draft Guidance, CEQ retains a presumptive GHG emissions threshold of 25,000 metric tons and suggests that agencies should attempt to quantify GHG emissions if they will exceed that threshold. This presumptive threshold is both contrary to well-established NEPA precedent and without basis in the administrative record.

First, adopting a presumptive threshold such as this is inconsistent with the discretion that agencies are given in conducting NEPA reviews. Rather than providing detailed procedures, NEPA directs agencies to apply the “rule of reason” when determining when and how to do things such as quantifying emissions. Indeed, there are no similar thresholds for quantifying emissions of other pollutants. Further, it is unlikely that CEQ can fully cure this deficiency by adding appropriate disclaimers that the threshold merely is presumptive or illustrative and need not be followed in all cases. As a practical matter, once a quantifiable figure—such as 25,000 metric tons—is provided as guidance, it will likely be applied as a *de facto* standard by many agencies and the courts.

Second, the Revised Draft Guidance does not explain why 25,000 metric tons is an appropriate threshold for NEPA reviews. Instead, the number, which first appeared in the 2010 draft guidance appears to be taken from EPA’s then-proposed regulations for GHG emissions from stationary sources under the PSD permitting program. As an initial matter, that EPA rulemaking served a very different purpose than NEPA review and CEQ offered no explanation as to why the same number is appropriate in each case. Further, in the final Tailoring Rule, EPA substantially increased the emissions thresholds to 100,000 and 75,000 metric tons, casting even more doubt on the appropriateness of a 25,000 metric ton threshold.

Conclusion

CEQ SHOULD WITHDRAW THE REVISED DRAFT GUIDANCE PENDING
CONSIDERATION OF COMMENTS

For the reasons above and stated more thoroughly by stakeholders in comments filed in the public record, there is a need for significant revisions before finalizing any guidance. In the interim, although the revised Guidance is labeled “draft,” this is a unique scenario where the existence of a draft can have the effect of influencing decisionmakers in the interim as if it were a final document. Implementing Federal agencies are likely to look to any CEQ direction, whether draft, interim, or final, in assessing how they should approach GHG and climate change analysis in their NEPA documents. Similarly, opponents of projects undoubtedly will cite even a draft CEQ guidance to the courts as carrying weight and relevance. For these reasons, CEQ should withdraw the Draft Revised Guidance while it considers and responds to the filed comments and the input of this committee.

The CHAIRMAN. Thank you.
Dr. Christy.

STATEMENT OF JOHN CHRISTY, PROFESSOR OF ATMOSPHERIC SCIENCE AND STATE CLIMATOLOGIST, NATIONAL SPACE SCIENCE AND TECHNOLOGY CENTER, UNIVERSITY OF ALABAMA, HUNTSVILLE, ALABAMA

Dr. CHRISTY. Thank you, Chairman Bishop for this opportunity, and Ranking Member Grijalva, I hope your investigation has found me to be an independently minded climate scientist.

I am John Christy, a professor of atmospheric science at the University of Alabama in Huntsville—we don’t play football at my campus—an Alabama State climatologist. I have served in many climate capacities, including as a lead author of the United Nations IPCC.

My research might best be described as building data sets from scratch to advance our understanding of what the climate is doing,

and why it does what it does. The main point of my testimony is simple; there is no causal link between the elimination of any single project and changes in the global climate. Thus, no individual project should be held up, due to climate change concerns.

But let me go much, much further. Suppose the United States closed everything and ceased to exist on this day, May 13, 2015. No people, no cars, no industry, no utilities. Climate models tell us the result of this imaginary scenario in 50 years might be a few hundredths of a degree, an amount smaller than the amount by which the global temperature already bounces around from one month to the next. The impact would be so small as to be unattributable to regulations. This result is well known, as described in my written testimony. I have presented similar calculations in Federal court that went uncontested.

But we should back up a bit and address the presumed causal link between CO2 emissions and climate change. You know, we monitor the climate for such variables as temperature. What we do not have is a direct and observable means to tell us why those changes occur. Our thermometers only tell us what has happened; they do not tell us why it happened.

To understand why these changes occur, we use climate models whose equations attempt to contain all of the important factors that affect climate. If they are accurate, we can then see how each factor, such as rising greenhouse gases, affects the climate and whether CO2 would be the cause of the changes we see.

[Slide]

Dr. CHRISTY. As shown in my written testimony, and up on the chart here, the models failed the simplest validation test. They can't even reproduce what has already happened. All 102 model runs warm up the planet more than has actually occurred in the past 36 years. On average, the warming rate of the atmosphere in these models is three times reality. As a consequence, our science has not established the causal link between CO2 emissions and what the climate is actually doing.

Therefore, emissions cannot be used as a proxy for climate change. Further, the CEQ guidance gives a list of weather and climate events it claims are increasing, due to extra greenhouse gases. But, as demonstrated in my written testimony, several of these phenomena have shown no change, while CO2 emissions have risen. So there is no proof of a link. This evidence indicates that it has not been established that CO2 emissions have a confident and quantifiable causal link to climate change, whether one is talking about global temperature or about disruptive weather events.

Now, it is no secret that the state of Alabama is in a desperate fight with the Federal EPA. Our elected officials understand, as do I, their State Climatologist, that the regulations being established will do nothing to alter whatever the climate is going to do. We are fighting for our industries, which are being tempted by lower costs in Mexico and China, where their emissions will actually rise. We are fighting for our utilities, which sell over 30 percent of their electricity production to nearby states who need it. And we are fighting for the many poor people in our state who do not need another hike in their utility bills to satisfy a regulation whose only

demonstrable impact will be this further drain on their meager resources.

This is a time when even so-called green countries like Germany and Japan are adding to their carbon emissions by building more coal-fired power plants, while the rest of the world is moving forward with affordable carbon-based energy. It simply does not seem to me to be scientifically justifiable or economically rational that this Nation should establish regulations whose only discernable consequence is an increase in economic pain visited most directly and harshly on the poorest among us.

Thank you.

[The prepared statement of Dr. Christy follows:]

PREPARED STATEMENT OF JOHN R. CHRISTY, PROFESSOR OF ATMOSPHERIC SCIENCE,
UNIVERSITY OF ALABAMA

I am John R. Christy, Distinguished Professor of Atmospheric Science, Alabama's State Climatologist and Director of the Earth System Science Center at The University of Alabama in Huntsville. I have served as a Lead Author, Contributing Author and Reviewer of United Nations IPCC assessments, have been awarded NASA's Medal for Exceptional Scientific Achievement, and in 2002 was elected a Fellow of the American Meteorological Society.

It is a privilege for me to offer my analysis of the impact that proposed regulations might have on the climate system. My research area might be best described as building data sets from scratch to advance our understanding of what the climate is doing and why. I have used traditional surface observations as well as measurements from balloons and satellites to document the climate story. Many of our UAH data sets are used to test hypotheses of climate variability and change.

IMPACT OF SINGLE (OR MANY) FEDERAL PROJECTS ON CLIMATE

The basic question under consideration here is to understand whether there is a causal relationship between the carbon emissions generated by a single proposed Federal project and possible climate change related to those emissions. It is obvious that the emissions generated by a single project would be vanishingly small in comparison to the current emissions of the global economy or even of the United States as a whole. Because of the minuscule nature of the relative size of its emissions, the impact of a single project on the global climate system would be imperceptible.

To demonstrate any impact at all on the climate system, we must scale up the size of the emission changes to a much larger value than that of a single project. By doing so, our tools would then be able to provide some results. Let us assume, for example, that the total emissions from the United States are reduced to zero, today, 13 May 2015. In other words as of today and going forward, there would be no industry, no cars, no utilities, no people—i.e. the United States would cease to exist as of this day. With this we shall attempt to answer the question posed by the NEPA statement which is, essentially, what is the “climate change through GHG emissions.”

[Note: There seems to be some confusion here. The NEPA statement appears to call for the calculation of the amount of climate change brought about by the emission levels proposed for each project. However, the CEQ guidance states, “the potential effects of a proposed action on climate change as indicated by its GHG emissions.” The CEQ guidance, in effect, claims that any GHG emissions in some sense relate to all of the alleged consequences of extra GHGs. Thus, the guidance apparently seeks to claim emissions are a direct proxy for negative impacts of climate change (which as shown below has not been established) while skipping any calculation of that effect from the individual projects. Then, inconceivably, the guidance does not even consider the inarguably positive consequences of increases in GHG emissions which are quantifiable as well: (1) the enhancement of the length and quality of human life through affordable energy, and (2) the invigoration of the biosphere (specifically plant material used for human food).]

Using the U.N. IPCC impact tool known as Model for the Assessment of Greenhouse-gas Induced Climate Change or MAGICC, graduate student Rob Junod and I reduced the projected growth in total global emissions by U.S. emission contribution starting on this date and continuing on. We also used the value of the equilibrium climate sensitivity as determined from empirical techniques of 1.8°C. After 50 years, the impact as determined by these model calculations would be only 0.05 to 0.08°C—an amount less than that which the global temperature fluctuates from month to month. [These calculations used emission scenarios A1B-AIM and A1F-MI with U.S. emissions comprising 14 percent to 17 percent of the 2015 global emissions. There is evidence that the climate sensitivity is less than 1.8°C, which would further lower these projections.]

Because changes in the emissions of our entire country would have such a tiny calculated impact on global climate, it is obvious that single projects, or even entire sectors of the economy would produce imperceptible impacts. In other words, there would be no evidence in the future to demonstrate that a particular climate impact was induced by the proposed regulations. Thus, the regulations will have no meaningful or useful consequence on the physical climate system—even if one believes climate models are useful tools for prediction.

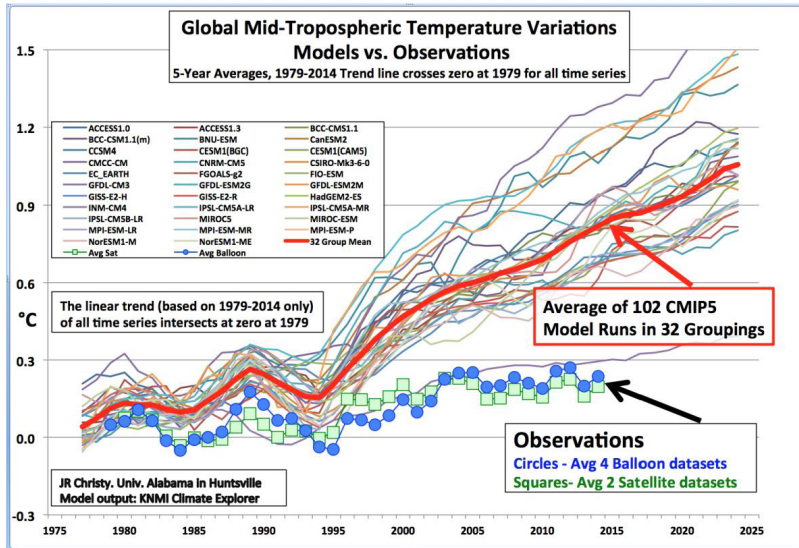
HOW WELL DO WE UNDERSTAND THE CLIMATE?

It is important to understand that projections of the future climate and the specific link that increasing CO₂ might have on the climate are properly defined as scientific hypotheses or claims, not proof of such links. The projections being utilized for this and other policies are based on the output of climate model simulations. These models are complex computer programs which attempt to describe through mathematical equations as many factors that affect the climate as is possible and thus estimate how the climate might change in the future. The equations for many of the important processes are not exact, but represent the best approximations modelers can devise at this point.

A fundamental aspect of the scientific method is that if we say we understand a system (such as the climate system) then we should be able to predict its behavior. If we are unable to make accurate predictions, then at least some of the factors in the system are not well defined or perhaps even missing. [Note, however, that merely replicating the behavior of the system (i.e. reproducing “what” the climate does) does not guarantee that the fundamental physics are well-known. In other words, it is possible to obtain the right answer for the wrong reasons, i.e. getting the “what” of climate right but missing the “why”.]

Do we understand how greenhouse gases affect the climate, i.e. the link between emissions and climate effects? A very basic metric for climate studies is the temperature of the bulk atmospheric layer known as the troposphere, roughly from the surface to 50,000 ft altitude. This is the layer that, according to models, should warm significantly as CO₂ increases. And, this CO₂-caused warming should be easily detectable by now, according to models. This provides a good test of how well we understand the climate system because since 1979 we have had two independent means of monitoring this layer—satellites from above and balloons with thermometers released from the surface.

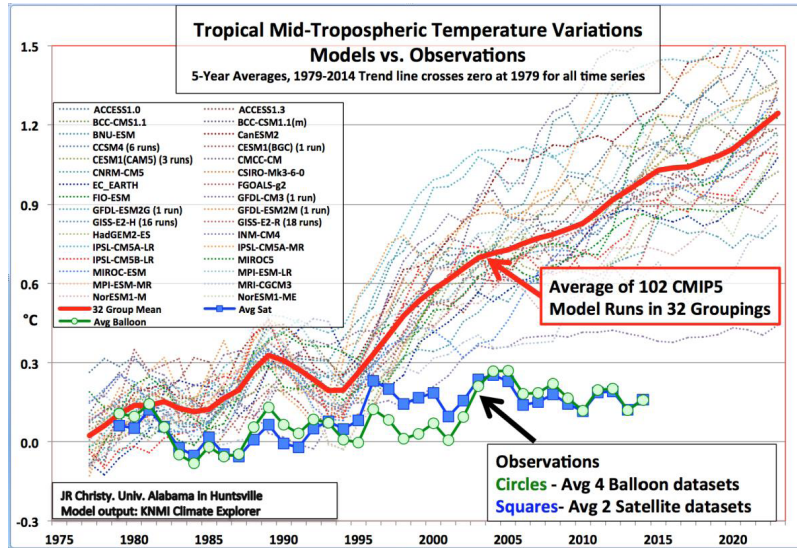
I was able to access 102 CMIP-5 rcp4.5 (representative concentration pathways) climate model simulations of the atmospheric temperatures for the tropospheric layer and generate bulk temperatures from the models for an apples-to-apples comparison with the observations from satellites and balloons. These models were developed in institutions throughout the world and used in the IPCC AR5 Scientific Assessment (2013).



Above: Global average mid-tropospheric temperature variations (5-year averages) for 32 models representing 102 individual simulations (lines). Circles (balloons) and squares (satellites) depict the observations.

The information in this figure provides clear evidence that the models have a strong tendency to over-warm the atmosphere relative to actual observations. On average the models warm the global atmosphere at a rate three times that of the real world. Using the scientific method we would conclude that the models do not accurately represent at least some of the important processes that impact the climate because they were unable to “predict” what has occurred. In other words, these models failed at the simple test of telling us “what” has already happened, and thus would not be in a position to give us a confident answer to “what” may happen in the future and “why.” As such, they would be of highly questionable value in determining policy that should depend on a very confident understanding of how the climate system works.

There is a related climate metric that also utilizes atmospheric temperature which in models has an even larger response than that of the global average shown above. This metric, then, provides a stronger test for understanding how well models perform regarding greenhouse gases specifically. In the models, the tropical atmosphere warms dramatically in response to the added greenhouse gases—more so than that of the global average atmospheric temperature.



Above: Tropical average mid-tropospheric temperature variations (5-year averages) for 32 models representing 102 individual simulations (lines). Circles (balloons) and squares (satellites) depict the observations.

In the tropical comparison here, the disparity between models and observations is even greater, with models on average warming this atmospheric region by a factor of four times greater than in reality. Such a result re-enforces the implication above that the models have much improvement to undergo before we may have confidence they will provide information about what the climate may do in the future or even why the climate varies as it does. For the issue at hand, estimates of how the global temperature might be affected by emission reductions from the halting of projects would be over done and not reliable. *As such greenhouse gas emissions cannot be used as a proxy for alleged climate change because our capability to demonstrate how greenhouse gases influence the already-observed climate is so poor.*

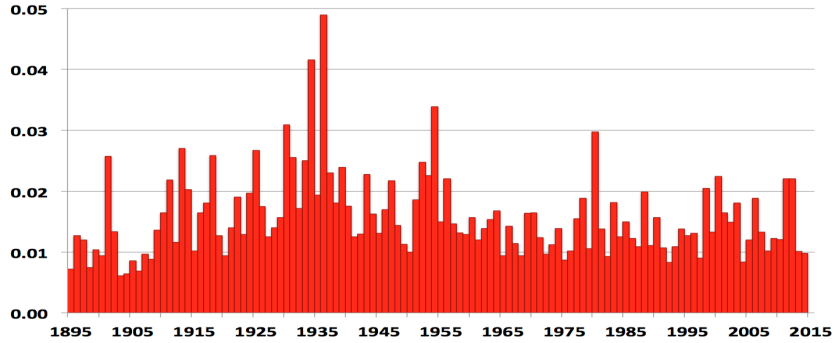
ALLEGED IMPACTS OF HUMAN-INDUCED CLIMATE CHANGES OUTLINED IN THE CEQ GUIDANCE

As stated in the bracketed paragraph earlier, the CEQ guidance attempts to equate any GHG emissions with all alleged impacts of these emissions, which as mentioned earlier is apparently not consistent with NEPA. In other words, CO₂ is assumed to be a direct proxy for alleged climate change due to human activities. However, these claimed impacts are not even consistently backed up by observational evidence: from the CEQ, “observed to date and projected to occur in the future include more frequent and intense heat waves, more severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea-level rise, more intense storms, harm to water resources, harm to agriculture, and harm to wildlife and ecosystems.” (Section II.B pp 6–8.)

A simple examination of several of these alleged “observed to date” changes in the climate indicates the CEQ has evidently disregarded the actual observational record. I shall offer several examples which indicate these claims are misrepresentative.

In terms of heat waves, below is the number of 100°F days observed in the United States from a controlled set of weather stations. It is not only clear that hot days have not increased, but it is interesting that in the most recent years there has been a relative dearth of them.

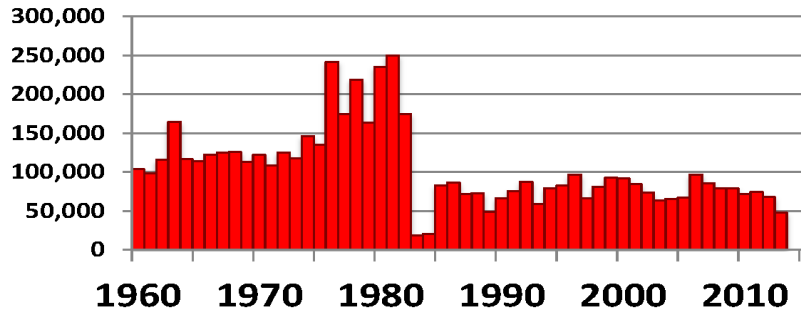
Fraction of Daily High Temperatures at 982 USHCN Stations exceeding 100°F per year 1895-2014



Above: Average per-station fraction of days in each year reaching or exceeding 100°F in 982 stations of the USHCN database (NOAA/NCEI, prepared by JR Christy). A value of 0.03 is equivalent to an average of 11 days per year greater than 99°F per station using all 982 stations nationwide.

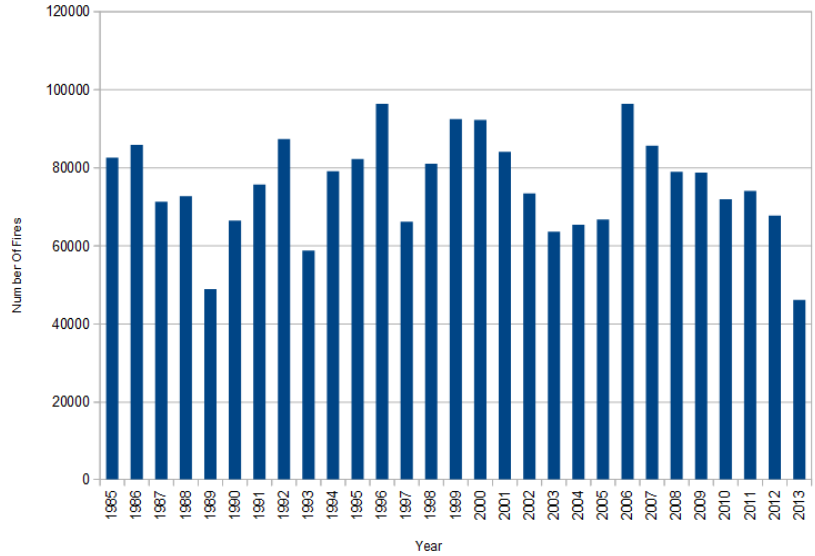
Forest and wild fires are documented for the United States. The evidence below indicates there has not been any change in frequency of wildfires. Acreage (not shown) shows little change as well.

Number Wildfires



Above: Number of U.S. wildfires. As the management of these events changes, the number also changes, but the number of events since 1985 has remained constant.

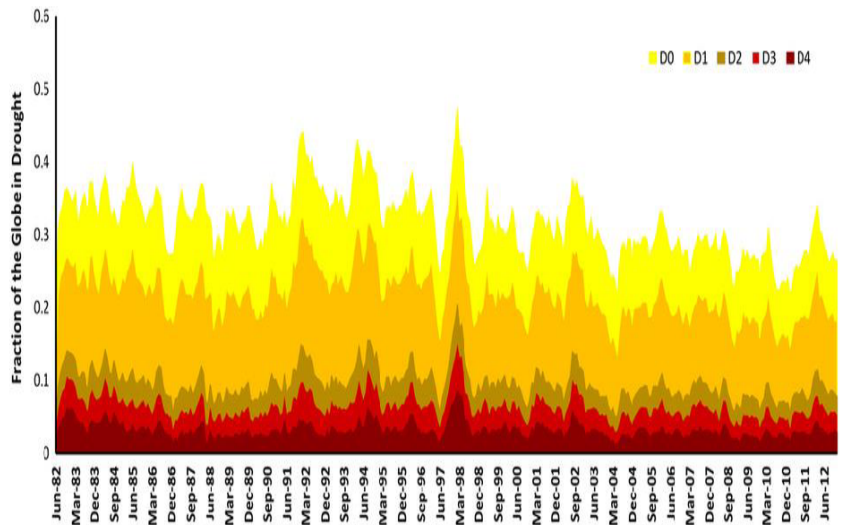
US Forest Fire Count



Above: Number of U.S. forest fires per year since 1965.

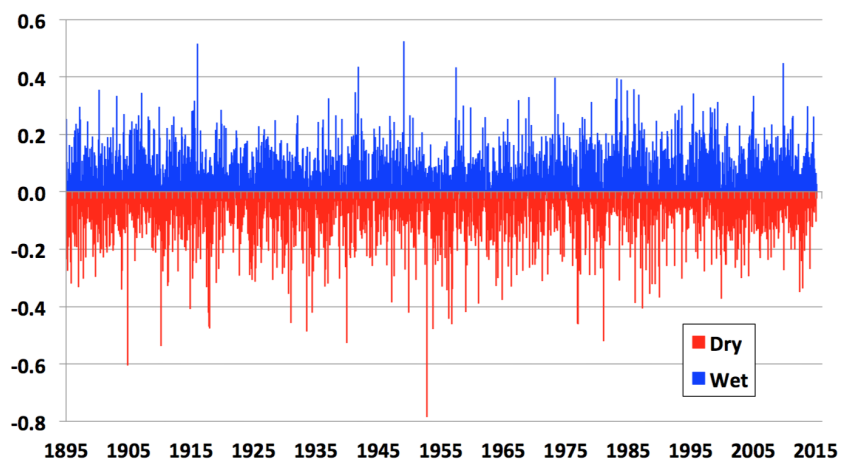
The two figures above demonstrate that fire events have not increased in frequency in the United States during the past several decades.

The claims that droughts and floods are increasing may be examined by the observational record as well.



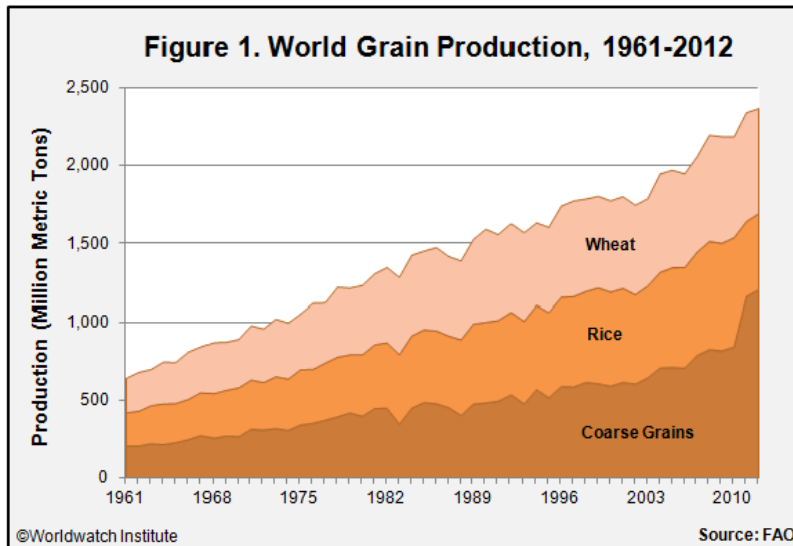
Above: Global areal extent of five levels of drought for 1982–2012 where dryness is indicated in percentile rankings with $D0 < 30$, $D1 < 20$, $D2 < 10$, $D3 < 5$ and $D4 < 2$ percentile of average moisture availability. (Hao et al. 2014)

**Monthly Fraction of US with Very Wet (floods) or Very Dry (drought) Conditions
Jan 1895 – Feb 2015 NOAA/NCDC**



Above: Areal fraction of conterminous U.S. under very wet (blue) or very dry (red) conditions. NOAA/NCEI.

The two figures above demonstrate that moisture conditions have not shown a tendency to have decreased (more drought) or increased (more large-scale wetness). Such information is rarely consulted when it is more convenient simply to make unsubstantiated claims that moisture extremes, i.e. droughts and floods (which have always occurred), are somehow becoming even more extreme. Over shorter periods and in certain locations, there is evidence that the heaviest precipitation events are tending to be greater. This is not a universal phenomenon and it has not been established that such changes may be due to changes in greenhouse gas concentrations as demonstrated earlier because the model projections are unable to reproduce the simplest of metrics.



Above: World grain production 1961–2012. U.N. Food and Agriculture Organization.

It is a simple matter to find documentation of the ever-rising production of grains. One wonders about the CEQ allegation that there has been “harm to agriculture” from human-induced climate change because when viewing the total growth in production, which appears to be accelerating, one would assume no “harm” has been done during a period of rising greenhouse gases.

With the evidence in these examples above, it is obviously difficult to establish the claims about worsening conditions due to human-caused climate change, or more generally that any change could be directly linked to increasing CO₂. This point also relates to the issue of climate model capability noted earlier. It is clear that climate models fall short on some very basic issues of climate variability, being unable to reproduce “what” has happened regarding global temperature, and therefore not knowing “why” any of it happened. It is therefore premature to claim that one knows the causes for changes in various exotic measures of weather, such as rainfall intensity over short periods, which are not even explicitly generated in climate model output.

In summary, the information above indicates that preventing individual projects from going forward or even shutting down entire sectors of the energy economy will have no impact on the global climate system. Further, the information above indicates that the scientific understanding (i.e. climate models) of how increasing greenhouse gases are affecting the climate is rather poor, with no quantified and established link between emissions growth and specific changes in climate or disruptive weather.

QUESTIONS SUBMITTED FOR THE RECORD BY REP. GRIJALVA TO JOHN CHRISTY

Question 1. Much of your testimony and answers to questions in the hearing hinges on one possible interpretation of the differences between modeled and what you labeled as observed temperature trends—the models are wrong. Are there many other (not mutually exclusive) interpretations of the differences between modeled and observed tropospheric warming trends?

Answer. Applying the scientific method, I find that the difference between the average model result and the observations is “significant” indicating that the model-average value failed the hypothesis test (the test essentially being, “Is the average 36-year model trend of the bulk atmospheric temperature equal to the observational trend since 1979?”). There are many explanations for this failure and this is per-

haps what the question is seeking. Some say the models fail because they are not advanced enough to account for natural variations. Others say that fundamental processes such as the exchange of heat between the ocean and air or the processes which distribute heat and moisture (clouds) within the atmosphere are so poorly represented in models that they tend to accumulate too much heat in the atmosphere. In any case, the fundamental result stands: the average of the climate model simulations fails to depict the actual bulk atmospheric temperature since 1979. Many explanations have been offered, but they all admit that the models are not accurate enough to mimic the real world regarding the bulk atmosphere. [Note: Because the observations are produced by three separate and independent methods, balloons, satellites and reanalyses, and by multiple institutions, we don't have evidence to conclude the observations are so wrong that they can be made consistent with the model output—see later where this issue is more directly addressed.]

Question 2. My understanding of the satellite temperature data is that it does not represent observations, but estimates. The satellites measure microwave emissions from oxygen molecules, which must then be converted into a temperature reading using a series of corrections, like correcting for orbital drift, and subjective judgments. So the satellite data seems to me more like a modeled temperature than an actual temperature reading.

a. Why are your modeled satellite temperatures more trustworthy than the many other independently derived models which have the backing of the vast majority of qualified scientists?

Answer. The notion that satellite temperatures are not observations is remarkable. The satellites measure the intensity of microwave radiation near the 60 GHz absorption band which is a direct and fundamental measurement of the temperature of those molecules. Indeed it is a more direct observation than is typically made by a thermometer because a thermometer requires the energy to impact a response material (such as liquid rising in a glass tube) which is then measured as a secondary response to the temperature of the air. With satellites, the emitted radiation is the metric that is directly related to temperature and this is what is measured. While the measurement is a direct indication of the temperature of the atmosphere, the instruments, especially the early ones, required adjustments for the issues you mentioned—many of which my group discovered. These adjustments have been applied. This is no different in a basic sense than the many adjustments that must be applied to surface temperature records to account for the many problems that affect their data sets.

I do not understand what is meant by “independently derived models”? If this is a reference to climate models, those clearly cannot be thought of as observations while satellite radiances certainly are observations. If the question is dealing with the various observed data sets (i.e. not models) and their differences, then I have discussed these issues in the annual reports of the official *State of the Climate* reports that appear in the *Bulletin of the American Meteorological Society* for which I serve as the Lead Author of the section on tropospheric temperatures. Quoting from the publication *State of the Climate—2014* to appear soon regarding the global temperature trend of the lower troposphere, “. . . the long-term global trend based on both radiosondes and satellites (starting in 1979) is $+0.13 \pm 0.02^\circ\text{C}/\text{decade}$. The range represents the variation among the different data sets which then serves as an estimate of the structural uncertainty . . .” This quote refers to the lower troposphere for 1979–2014 and demonstrates how closely the various and independent data sets are. Applying the same analysis to the mid-troposphere, the metric shown at the hearing, the value would be $+0.07 \pm 0.03^\circ\text{C}/\text{decade}$ (including the European Centre Reanalyses but not UW and IUK data sets as they were not available).

To place this in perspective, the average of the 102 CMIP-5 model runs for the “mid-troposphere” (or bulk-atmosphere) is $+0.21^\circ\text{C}/\text{decade}$, which is highly significantly different from the observations ($+0.07$). In scientific terms we would say that, for the globally averaged, bulk tropospheric temperature, the hypothesis that the average model trend is equal to the observational trend has been falsified at an extremely high level of significance.

b. Why does your testimony not mention the possibility that some of the differences between most other models and temperature changes from your models may be due to remaining errors in your estimated temperature data?

Answer. I shall assume that a misunderstanding has been created here and consider “model” to mean “observation”. The testimony did not include such discussion as this is found elsewhere in the literature and does not affect the conclusions provided. As stated above, the range in the various model data sets is small. Removing the UAH data set (assuming “your estimated temperature data” is the UAH data

set) from the comparison does not change the result in any significant way. All data sets have errors, including UAH's, and no two give the identical trend as any other, but the differences, as stated several times, are small. This implies the errors are also small for the problem at hand (model comparison). Below is a table of the global and tropical average trends of the bulk-atmospheric temperature for 1979–2014 by data set.

Layer MT (Bulk Atmosphere)	Global	Tropical	Method
RAOBCORE	+0.077	+0.064	Balloon
RICH	+0.079	+0.087	Balloon
RATPAC (NOAA)	+0.043	+0.017	Balloon
IUK (1979–2012)	N/A	+0.066	Balloon
UAHv6.0b2	+0.068	+0.057	Satellite
RSSv3.3	+0.074	+0.085	Satellite
UW (1979–2012)	N/A	+0.114	Satellite
STAR (NOAA)	+0.102	+0.097	Satellite
ERA-I	+0.085	+0.089	Reanalyses
102 CMIP5 Models	+0.211	+0.268	Models

The situation with the critical region of the tropics is even worse for models whose average trend over the period 1979–2014 is $+0.27^{\circ}\text{C}/\text{decade}$. The balloon average is $+0.07$ (without RATPAC), satellites $+0.09$ and reanalyses $+0.09^{\circ}\text{C}/\text{decade}$. These tropical results were shown at the hearing because the models show that a clear and rapid response to greenhouse gases should be observable by now, so this is the region to test model performance against observations. Again, the difference between models and observations is significant, requiring a conclusion that models failed to reproduce the bulk atmospheric temperature change since 1979, the period when greenhouse gases should have impacted the climate system by the largest amount.

c. Why did you leave out the latest results from Sherwood et al. (2015) and from Po-Chedley et al. (2014) that show pronounced warming of the tropical mid- to upper troposphere over the satellite era?

Answer. The results of Sherwood et al. (2015) and Po-Chedley et al. (2014) for the tropics are included in the table above because they were published in their papers (Sherwood et al. and Po-Chedley et al. do not have geographically averaged public files yet as do all of the other data sets). In any case, they do not show “pronounced warming” in the bulk tropical atmospheric layer which I presented at the hearing. Their inclusion, as done in the previous paragraph, does not change the results. Sherwood (IUK) is cooler than the average trend and Po-Chedley (UW) is warmer. Indeed UW is warmest of all observational data sets and raises suspicion as the data set has not been independently tested as have the other data sets. In any case, including even UW does not change the results regarding the failure of the climate model simulations to reproduce the past 36 years of temperature change.

Question 3. Scientists at Remote Sensing Systems, the University of Washington, and NOAA/NESDIS are also working to estimate tropospheric temperature from satellite microwave radiometry. For temperature changes in the tropical mid- to upper troposphere, these three groups obtain results that are substantially different from yours.

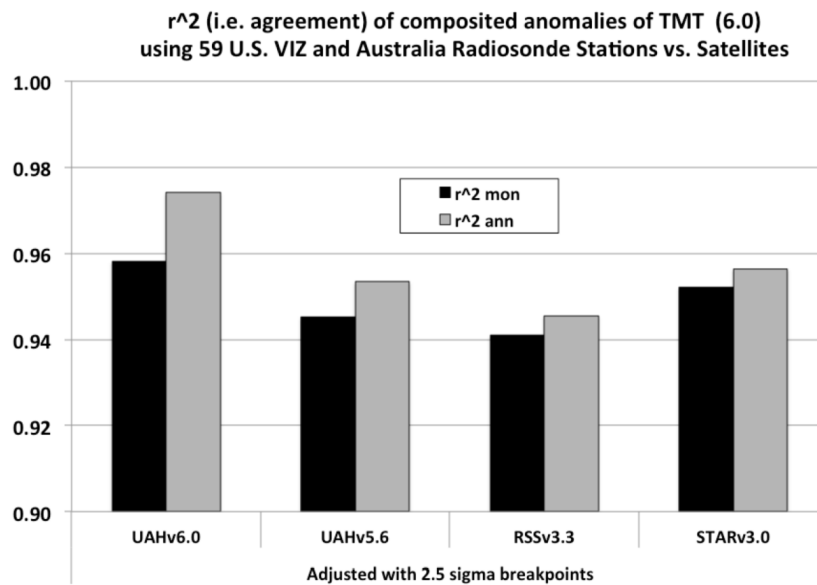
Answer. See the discussion and table above. The results indicate all satellite data sets agree for the tropics at the level of $\pm 0.03^{\circ}\text{C}/\text{decade}$ (i.e. 0.055 to 0.115, or $+0.085 \pm 0.03^{\circ}\text{C}/\text{decade}$). This is within the margin of error. This does not imply “substantially different” trends, yet confirms the significant difference between observations (which average $+0.085$) and models (which average $+0.268^{\circ}\text{C}/\text{decade}$).

a. What can be done to collaboratively work with the other three groups to resolve the causes of these differences?

Answer. We have been fairly open with the exchange of information among the groups. For example, UAH placed its new methodology on a Web site prior to finalizing the products for community input. RSS provides a significant Web site to understand the products they produce. The key, missing ingredient for better collaboration is substantial funding.

b. Please explain why your satellite-based temperature estimates are more reliable than theirs?

Answer. The claim that UAH data are “more reliable” was not made at the hearing. There are a few metrics that indicate UAH has some characteristics that demonstrate reliability which I will show here. Below, for example, is a comparison between four of the satellite data sets in which the satellite temperatures are directly compared with balloon measurements at 59 stations in the United States, U.S. controlled islands, and Australia (update of Christy et al. 2011). The quantity shown is the magnitude of the agreement (variance) between the balloons and the given satellite data set. Each balloon station has had adjustments applied based on the identified satellite data set, thus all comparisons are apples-to-apples. In this comparison, UAH shows the better agreement with the independent balloon data, though all show excellent agreement.

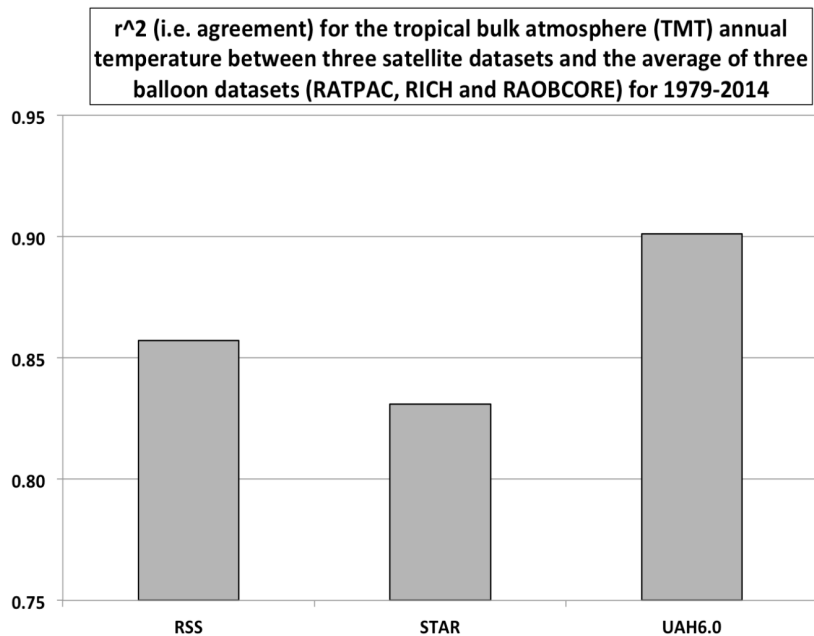
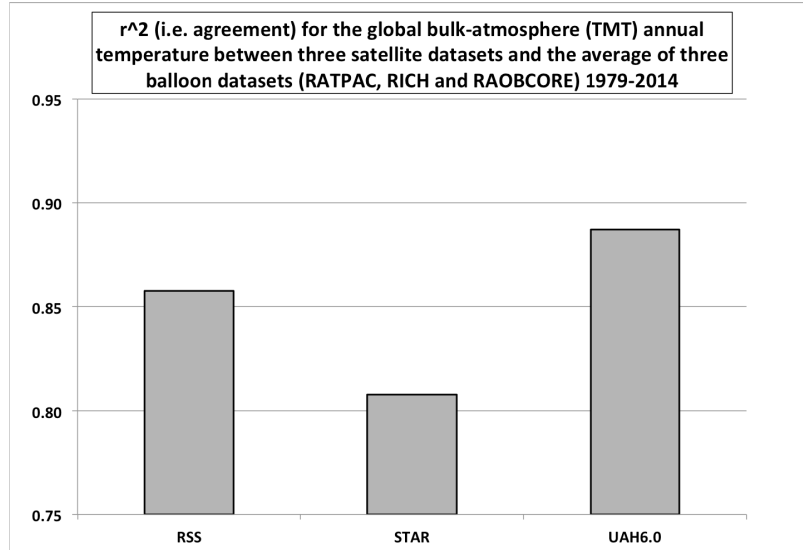


A curious result involving UW data is that the tropical UW bulk temperature data over the ocean show a trend that is warmer than that over land. STAR does as well, but since UW essentially begins their construction with the STAR data set, the two are not completely independent and so would share common errors. All surface temperature data sets as well as UAH, RSS and ERA-I show that the bulk atmospheric temperature trend over land is warmer than over the ocean. This raises questions regarding the method by which UW (and STAR) applied the adjustment for the east-west drift of the spacecraft. This is one topic for which further investigation is needed.

Question 4. There have been important changes over time in our understanding of tropospheric temperature changes inferred from weather balloons. You have argued for over 25 years that weather balloon temperature data provide an unambiguous gold standard for evaluating the quality of satellite-based tropospheric temperature estimates. Do you still believe this?

Answer. The claim that I have argued that the balloon temperature data are an “unambiguous gold standard” is new to me. Balloons have homogeneity issues with which to deal and I have been one of the scientists who has published extensively regarding these issues. As Lead Author of the IPCC 2001 report on upper air temperatures, I discussed many of the problems that require attention with balloons (section 2.2.3). The real advantage of balloon data is their total independence from satellite measurements. Several groups have built data sets which account for the inhomogeneities, including me. I prefer, as shown above in the chart, to utilize the individual balloon data from the U.S. VIZ and Australian stations as these have considerable documentation of instrument and procedural changes which allow for more confident means to account for changes.

However, rather than comparisons performed at individual stations, another direct comparison simply compares the global and tropical average bulk temperatures produced by NOAA (RATPAC) and the University of Wein (Austria, RICH and RAOBCORE) with the satellite data. Below are the results for these comparisons (I do not have UW results, but as indicated above they should be similar to NOAA STAR).



The results above, though not thoroughly definitive, again suggest that the UAH product has characteristics that better-match results from independently homogenized balloon data sets.

Question 5. Weather balloon and satellite-based estimates of tropospheric temperature change have evolved in important ways as scientists have identified non-climatic errors in these estimates. Yet, you argue that your satellite temperature estimates are always in very close agreement with weather balloon data.

a. Is such agreement with uncertain weather balloon data a source of concern to you?

Answer. As noted above, there are multiple sources and collections of weather balloon data produced by independent groups, and indeed UAH data tend to have higher levels of agreement with the balloons than do the other data sets in the tests we produce. However, these don't represent all of the types of tests possible. We have higher confidence in the results from weather balloons as the "non-climatic errors" are identified and accounted for independently. Each balloon data set has its own uncertainties which over time have been better-characterized and which lead to a reduction in errors, especially as independent groups evaluate these issues separately. The UAH satellite data set has also evolved over time as we have discovered issues that must be fixed, some of which increase the trend and others that decrease the trend by small amounts. The high level of agreement with balloons has been consistent through time because our evolving satellite adjustments are relatively small when applied to the trend (order of a few hundredths °C/decade). With little change in the adjustments to the satellite data, there is little change in the results of the balloon comparisons.

One of the most interesting of the data sets however, is the Reanalyses from the European Centre for Medium Range Forecasts (ERA-I above). This global data set uses completely independent means to correct for both balloon errors as well as satellite errors in the most advanced system of its kind in the world. This data set is used, for example, as the demonstration data set in the annual, internationally produced *State of the Climate* reports mentioned earlier of which I am a co-author. In comparison with this data set, UAHv6.0 again shows the most consistency (i.e. similar to the two figures above) though only very slightly better than the other two satellite data sets (RSS and STAR) available for this type of comparison at this time (though again, UW should be very similar to STAR in its results.) These results do not prove UAH has the best of the satellite data sets, but does suggest that the data set is certainly useful as a comparison metric for climate model evaluation.

The main point of my analysis for the hearing is that even given the differences (which are small) among the balloon, satellite and reanalyses, their global and tropical bulk-atmospheric trends are all consistently (and significantly) less than the average trend of the climate model simulations.

b. Are the true uncertainties in weather balloon and satellite estimates of tropospheric temperature change far larger than you have claimed in your recent and past testimony?

Answer. To answer this question I would need to understand the magnitude of what is asserted as "far larger". In the table above I have provided the magnitudes of the bulk-atmospheric trends from nine different sources. The range of global trends of the seven data sets with published global values is +0.04 to +0.10 °C/decade. In other words a statement that the global bulk-atmospheric trend is +0.07°C/decade ±0.03°C/decade captures all values and provides a sense of where the central value lies (this is similar to the information in the *State of the Climate—2014* publication.)

Does the question ask whether the error range should be greater than ±0.03? As a thought experiment we could double the error range to ±0.06°C/decade, though with little justification. This would give a range of +0.01 to +0.13°C/decade, being, again, well below the climate model average, confirming the results presented at the hearing.

The CHAIRMAN. Thank you.
Mr. Clark.

STATEMENT OF RAY CLARK, PRESIDENT, RIVERCROSSING STRATEGIES, LLC, BIRMINGHAM, ALABAMA

Mr. CLARK. Good morning, Chairman Bishop, Ranking Member Grijalva, and members of the committee. Thank you for the opportunity to appear before you today to discuss this revised draft guid-

ance for the Federal departments and agencies on the consideration of greenhouse gas emissions and the effects of climate change and NEPA reviews.

I began my career at an Army installation over 35 years ago, helping develop the first environmental program at that installation. I wrote and reviewed NEPA analyses as a part of that and, before I left, I was responsible for the power production and energy program at the facility, as well as the management of the natural resources and environmental program.

During that period, the Army constructed a chemical decontamination training facility, the only one in the world, and I headed up a team that prepared the NEPA analysis and was responsible for getting that facility permitted. In 1985, I moved to the Assistant Chief Engineer's office at the Pentagon, and then to the Secretary of the Army's office. I wrote the Army's first NEPA regulation during this period, and was part of a senior-level team that prepared the EISs to destroy chemical weapons, and to advance the Army's biological defense research program, and all the analysis for base closure and realignment, and many other controversial and necessary programs for national defense.

In 1992, during the President George H.W. Bush administration, I was asked to come to the Council on Environmental Quality, and was asked to stay after President Clinton took office. Part of my job at CEQ was to develop NEPA guidance on topics such as cumulative effects analysis. But most of my career has been related to environmental policy around matters such as Army infrastructure, environmental programs, and policy development.

In 1999, President Clinton appointed me as the Principal Deputy Assistant Secretary for Installations and Environment at the Army. And, at the end of the Clinton administration, I was asked by Secretary Rumsfeld to stay over and help with the transition of his facilities team.

The firm I developed in 2001 worked on a number of Federal agencies' NEPA analyses, and I have worked ever since, trying to improve the management of NEPA analysis.

I think people will tell you that I am not a fan of voluminous documents, nor am I a fan of unnecessary delay. I developed a program at Duke University in the Duke Environmental Leadership Program to teach young and emerging leaders how to develop programs that were based on better decisions, not better documents. I led that program for over 20 years.

I come to address this committee on whether or not I think CEQ guidance incorporating climate change is appropriate, and whether or not such analysis can be done in a practical and timely manner. Finally, to provide my honest assessment of what I would advise a client who will face this guidance. And I have at least one client who probably will.

I do support CEQ providing the agencies with guidance on how to incorporate climate change in the NEPA analysis. It was this House Merchant Marine and Fisheries Committee, more than 45 years ago, that reported out a bill to require that we use new and emerging science about the environment to advise decisionmakers within government about courses of action. It was this committee that responded to the anomalies like rivers catching fire, oil spills

along our coast, garbage piles in our cities, and “No Swimming” signs along many of our coasts. It was this committee that shepherded NEPA through the legislative process, and got it passed by a margin that was supported by both parties.

One of the major contributions to the statute was the Chairman of the House Merchant Marine and Fisheries Committee’s insistence that there be established a Council on Environmental Quality in the Executive Office of the President.

Climate change falls squarely in the consideration in a NEPA analysis. Scientists and the Supreme Court have said that greenhouse gases are precisely the kind of issues that NEPA and CEQ regulations intended for agencies to assess.

While many may say that few agencies are going to emit anything significant, the truth is that it may be individually minor, but it is the collective number of small actions, whether positive or negative, that may lead to a cumulative significant impact.

It is important that agencies should understand the impacts that climate change will have on Federal facilities, and think about how to design and site facilities. Most agencies are already doing this, based on their own understanding of resilience and adaptation.

I support CEQ’s efforts, because I think it is about better government. Government is supposed to answer to its citizens and be transparent. NEPA has helped communities get answers from the Federal agencies operating in their communities. In many ways, that is NEPA’s major success.

I support CEQ’s efforts because I think it will lead to better investments. The government is, after all, using other people’s money. The money we spent to build facilities in the Army went through a long and arduous process to get approval. And, while I was there, many of these proposals were disapproved, frankly, because some of them were just dumb ideas.

I will just conclude, Mr. Chairman, that I support CEQ’s efforts because I think it will lead to better decisions, not better documents. The purpose of NEPA is to make sure that, in any proposal that is undertaken by agencies, they balance all the costs, from the mission to the social and the environmental costs. And many agencies, including my own Army, is already moving out on this, whether we do anything about this, or not. If not guidance—

The CHAIRMAN. Sir, you have to conclude in one sentence, please.

Mr. CLARK. Pardon?

The CHAIRMAN. You are way over. Conclude in one sentence, please.

Mr. CLARK. Oh, OK. I am sorry. I would just say that I will be happy to answer questions.

[The prepared statement of Mr. Clark follows:]

PREPARED STATEMENT OF RAY CLARK, RIVERCROSSING STRATEGIES

Good morning Chairman Bishop, Ranking Member Grijalva, and members of the committee. Thank you for the opportunity to appear before you today to discuss the Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas (GHG) Emissions and the Effects of Climate Change in NEPA Reviews.

I began my career at an Army installation over 35 years ago helping develop the first environmental program at that installation. I wrote and reviewed NEPA analyses as part of that, and before I left I was responsible for the power production and energy program at the facility, as well as the management of natural resources

and environmental program. During this period the Army constructed a Chemical Decontamination Training Facility, the only one in the world and I headed up a team that prepared the NEPA analysis and was responsible for getting the facility permitted.

In 1985, I moved to the Assistant Chief of Engineers office at the Pentagon, and then to the Secretary of the Army's office. I wrote the Army's first NEPA regulation during this period and was part of the senior level team that prepared the EISs to destroy chemical weapons and to advance the Army's Biological Defense Research Program, all the analyses for base closure and realignment, and many other controversial and necessary programs for national defense.

In 1992, during the President George H.W. Bush administration, I was asked to come to the Council on Environmental Quality and was asked to stay after President Clinton took office. Part of my job at CEQ was to develop NEPA guidance on topics such as cumulative effects analysis, but most of my career has been related to environmental policy around matters such as Army infrastructure and environmental program and policy development.

In 1999, President Clinton appointed me as the Principal Deputy Assistant Secretary of the Army for Installations and Environment. At the end of the Clinton administration, I was asked by Secretary Rumsfeld to stay over to help with the transition of his facilities management team.

The firm I developed in 2001 worked on a number of Federal agencies NEPA analyses. And I have worked ever since trying to improve the management of NEPA analyses. I think people will tell you I am not a fan of voluminous documents, nor am I fan of unnecessary delay. I developed a program at Duke University in the Duke Environmental Leadership Program to teach young and emerging leaders how to develop programs that were based on better decisions, not better documents. I led that program for over 20 years.

I come to address this committee on whether I think CEQ guidance is incorporating climate change into NEPA analyses is appropriate and whether I such analysis can be done in a practical and timely manner. Finally, to provide my honest assessment of what I would advise a client who will face this guidance (and I have at least one client who will).

I do support CEQ providing the agencies with guidance on how to incorporate climate change into NEPA analysis. It was the House Merchant Marine and Fisheries Committee more than 45 years ago that reported out a bill to require that we use new and emerging science about the environment to advise decisionmakers within government about courses of action. It was this committee that responded to the anomalies like rivers catching fire, oil spills along our coasts, garbage piles in cities, and no swimming signs along many of our coasts.

It was this committee that shepherded NEPA through the legislative process and got it passed by a staggering margin that was supported by both parties. One of the major contributions to the statute was the Chairman of the House Merchant Marine and Fisheries Committee's insistence that there be established a Council on Environmental Quality in the Executive Office of the President.

Climate change falls squarely into consideration in a NEPA analysis. Scientists and the Supreme Court have said that greenhouse gases are a pollutant. These are precisely the kind of issues NEPA and CEQ regulations intended for agencies to assess. While many may say that few agencies are going to emit anything significant, the truth is that it may be individually minor, but it is the collective number of small actions that lead to a cumulatively significant impact. As important, is that agencies should understand the impacts that climate change will have on Federal facilities and think about how to design and site facilities. Most agencies are already doing this based on their own understanding of resilience and adaptation.

I support CEQ's efforts because I think it about better governance. Government is supposed to answer to its citizens and be transparent. NEPA has helped communities get answers from the Federal agencies operating in their communities. In many ways that is NEPA's major success.

I support CEQ's efforts because I think it will lead to better investments. The government is, after all, using other people's money. The money we spent to build facilities in the Army went through a long and arduous process to get approval and while I was there when many proposals were disapproved, frankly because some of them were just dumb ideas.

I can tell you today that when the Army is studying where to site and how to build facilities around the world, they are already factoring in rising sea levels, storm surge expansion onto land, and increasing drought frequency. It is common sense that they consider and plan for these impacts before spending taxpayer money. CEQ's guidance will not change the Army's dedication to this, but it will help bring structure and consistency to those efforts and reduce confusion.

I support CEQ's efforts because I think it will lead to better decisions, not better documents. The purpose of NEPA is to make sure in any proposal that is undertaken by Federal agencies balance all the costs including mission, environmental, and social costs. Any Federal proposal should start a conversation with the affected community. And that conversation should lead to a better decision and in the best of worlds the project makes the community a better place to live.

I support CEQ's efforts because guidance to the agencies is overdue. Since 1997 CEQ has struggled with guidance that agencies have been seeking. If there is criticism to be aimed at CEQ, it could be that it has taken this long to issue guidance. They have been asked by agencies, the practitioner community, and finally petitioned. In the face of confusion and controversy, they have been pretty methodical, thoughtful and not rushed to judgment. They have sought advice from scientists and agencies, but they are getting close to deserving the fair criticism of it being overdue in their responsibility to help the agencies with some clarity.

If not now with guidance, when? Never? Absent this guidance would agencies take climate change into account? Most agencies are very far along in considering climate change in their day-to-day operations. The Chief of the Corps of Engineers, LTG Bostick recently said the Corps is translating science into policy and adapting new infrastructure to withstand changes in climate. They are also looking at existing infrastructure to see where it is vulnerable to changing climate. They are moving on.

Other agencies need guidance. If they don't get this guidance, they will needlessly spend more time and money and they will face litigation. Either the executive branch designs an approach or the courts will and judges will establish precedents that perhaps no one wants to see. A lack of guidance does not stop lawsuits, it encourages them.

My sense, based on my own experience, is that we are in a similar environment when agencies were confused about how to assess cumulative effects and they were getting litigated. I headed up a team that produced the 1996 CEQ guidance that by all accounts helped the agencies and CEQ improved on that guidance in 2007.

My final point is that I do think this analysis can be done in a practical, timely manner. Much like the cumulative effects guidance, there were some who thought it would add much more time. The opposite is true; The reality is that this new guidance does not change the approach to NEPA analysis in any meaningful way; it simply requires taking climate change into account as an integral part of designing new proposals. Every step of the current NEPA process, scoping, alternatives analysis and impact analysis simply requires thought about how the project is designed. There should be a better project because they took it into account.

The opportunity in this guidance is that we will have better siting and design of facilities, we may move to a more efficient method of approaching NEPA by preparing programmatic analyses and integrating NEPA analyses into the agency planning process, and the Federal Government will do its part in adapting to the future.

I will be happy to answer any questions you may have.

QUESTIONS SUBMITTED FOR THE RECORD BY REP. GRACE F. NAPOLITANO TO
MR. RAY CLARK

Question 1. In 2014, Former Defense Secretary Chuck Hagel stated, "Among the future trends that will impact our national security is climate change." The Department of Defense also announced the integration of climate change threats into all of its plans, operations, and training. The U.S. Military has thousands of bases, installations and facilities across the globe. In your former role overseeing installations for the U.S. Army, what type of impact can climate change have on the U.S. military facilities both at home and overseas?

Answer. The most significant installation impact resulting from climate change is its potential to undermine the capacity of our domestic installations to support training activities. Installations have extensive built infrastructure in cantonments and training ranges. Training ranges are often large natural landscapes and serve as realistic training environments for soldiers and support small and large weapons training. Climate change will also add to existing stresses on the installation infrastructure and will exacerbate other stresses such as lack of a robust operations and maintenance program. Climate stresses will likely increase the need for O&M budgets in an era of declining budgets for facilities.

As sea levels rise, and average temperatures increase, facilities that were planned and constructed in another era become vulnerable. Heat events, changes in severe weather and occurrence of tropical cyclones, and alteration of the ecosystems and

natural landscapes used for training will add additional strain on Army facilities and soldiers.

Family housing could be devastated, and extreme storms could completely remake a valuable or even one-of-a-kind training facility. Based on the predictions of climate scientists, water scarcity or flooding could accompany small increases in temperature rise. The Army alone has more than 14 million acres and over 2,000 Installations, 12,000 historical structures, a multi-billion dollar military construction program, and a base operations program. Not only should the Army be preparing for the effects for which they may not be the cause, the Army is rightfully examining how their institutional processes are creating greenhouse gases, what the installations can do to be apart of local, regional and national solutions, and how they are going to adapt the 21st century base structure to the new realities of climate change. The Army is currently one of the national leaders in converting to renewable energy.

As the Department of Defense report "National Security and Climate Change" points out, "Lack of planning for (critical defense installations) can compromise them or cause them to be inundated, compromising military readiness and capability."

Whether a facility is in the United States or abroad, if it planned to be an integral part of the national security infrastructure of the future, planning for the impacts of climate change should already have begun.

Question 2. While the draft guidance can only be implemented in the United States, is it important to get our departments agencies thinking about the future effects of climate change abroad? Climate change is not just something that threatens us at home, but also abroad. For example, rising sea levels can affect our Navy installations all over the globe. If our Navy does not have the proper facilities, our ships cannot properly assess threats and easily move around the globe.

Answer. It is indeed true that NEPA applies only to actions within the United States. However, NEPA is simply a good planning tool to assess and mitigate impacts of actions, whether man-made or natural. It does not mandate or regulate an outcome. I believe the Department of Defense is taking climate change seriously, whether the facilities are in the United States or abroad and I think that it is wise to have some structural way to think about investments abroad as a result of climate change. Many of DOD planning processes are similar to NEPA.

The CHAIRMAN. Thank you.

I will start the questioning process for our witnesses. We appreciate you very much for giving your testimony, both orally and written. I am going to ask my questions at the end of the panel, so I will turn to Representative Lummis for the first questions.

Mrs. LUMMIS. Thank you, Mr. Chairman. My first question is for Ms. Goldfuss. Welcome to the Committee.

CEQ says that this draft greenhouse gas guidance is not a rule or regulation, this document does not establish legally binding requirements in and of itself. What does that mean?

Ms. GOLDFUSS. Well, Congress has given CEQ the responsibility to interpret and implement NEPA, and that means working with the agencies to give them the guidance they need to do it properly. So we have issued guidance on several occasions on many issues to help them with that process. So this guidance—

Mrs. LUMMIS. What does it—

Ms. GOLDFUSS [continuing]. Falls in that category.

Mrs. LUMMIS. Yes. What does it mean, though, when it says this is "not legally binding, in and of itself"?

Ms. GOLDFUSS. It means it is not a regulation. This is guidance for the agencies to help them with their decisionmaking process.

Mrs. LUMMIS. So you expect agencies to follow the guidance?

Ms. GOLDFUSS. We do. It is our hope—that is part of the purpose of putting out the guidance—

Mrs. LUMMIS. OK.

Ms. GOLDFUSS [continuing]. That the agencies will use it.

Mrs. LUMMIS. So what if an agency says, "We don't want to follow the guidance"?

Ms. GOLDFUSS. Well, agencies do have much discretion. And, on a case-by-case basis, they may make that decision. But it is CEQ's hope that they will use the guidance, when appropriate.

Mrs. LUMMIS. OK. So if a disagreement occurs between agencies about the application of the guidance, would CEQ get involved? Would you mitigate or arbitrate that?

Ms. GOLDFUSS. That is not necessarily our role. On occasion, a project will become so contentious between agencies that we will get a referral, that's what it is called, and then we will help them work that through. But it is not our intent to intervene on that level.

Mrs. LUMMIS. So how does—

Ms. GOLDFUSS. Each agency has their own discretion—

Mrs. LUMMIS. How does a referral happen? Does one agency sort of tell on the other agency? You know, "They are not playing nice with us, they are"—

Ms. GOLDFUSS. No.

Mrs. LUMMIS [continuing]. "Disagreeing with us"?

Ms. GOLDFUSS. No, it is—

Mrs. LUMMIS. Well, how does it work?

Ms. GOLDFUSS. It is an official process. We have not had one since the 1980s to CEQ, though. So it has been a long time since there has been a referral.

Mrs. LUMMIS. So what would be the practical effects of an agency not following the guidance?

Ms. GOLDFUSS. If they went forward and determined that it was not appropriate to use the guidance on their project, they could continue with their process. And then, if the courts determined that was not an appropriate choice, they would then have to redo.

Mrs. LUMMIS. So the courts can get involved.

Ms. GOLDFUSS. The courts get involved—

Mrs. LUMMIS. Even with the guidance, a non-binding guidance, access to the courts is somehow—

Ms. GOLDFUSS. The guidance is not what gives them access to the courts.

Mrs. LUMMIS. OK, what—

Ms. GOLDFUSS. It is the regulations for NEPA.

Mrs. LUMMIS. OK. But how does the guidance layer on top of that to give court access?

Ms. GOLDFUSS. It doesn't give court access. The guidance is simply a tool for agencies when they ask questions about how to implement NEPA.

Mrs. LUMMIS. OK. Well, if two different agencies are interpreting the guidance differently, on how to apply NEPA, are you going to arbitrate that?

Ms. GOLDFUSS. No.

Mrs. LUMMIS. What is going to happen?

Ms. GOLDFUSS. Agencies have discretion to implement NEPA the way that they see fit on a—

Mrs. LUMMIS. Why are you providing this—

Ms. GOLDFUSS [continuing]. Project-by-project basis—

Mrs. LUMMIS. What is this guidance for, then? Why are you doing this?

Ms. GOLDFUSS. We have a series of court cases and questions from the agency, specifically, about how to address climate change. We have heard from the courts, as Mr. Martella also referenced, that including climate change is an appropriate consideration in NEPA reviews.

So, from questions from stakeholders, the courts, and the agencies themselves, they have been asking how to do this. So this is our best guess at the way to do it.

Mrs. LUMMIS. OK. So let's say a disaffected party, like, a permitting document, could they seek a legal appeal and use the guidance against an agency that did not accept it?

Ms. GOLDFUSS. This is new guidance that is not final yet, and I can't speculate on how individuals will use it in the courts in—

Mrs. LUMMIS. What do you think about that question, Mr. Martella?

Mr. MARTELLA. Well, thank you, Vice Chairman. Your question goes exactly to my point on why I believe the guidance needs to be withdrawn now, as CEQ considers it further.

At the end of the day, we have a practical reality and two perspectives. One is a—let's take the Forest Service as an example. Even though it is a draft guidance, no one at the Forest Service is going to ignore it. They are going to give deference to CEQ. And no one at the Forest Service is going to risk not paying attention to the draft CEQ guidance. It is, de facto, in effect, in my view, across the Federal Government.

And, from the court's perspective—let's say the Forest Service says, "Well, we are going to disagree with CEQ." What is going to happen is someone is going to challenge that Forest Service decision, take it to the court, and the first thing they are going to say in their brief, "Well, CEQ said the Forest Service should have done it differently," and the court, again, is going to give that significant weight. So that, I think, is the danger and the risk.

While, again, I recognize there is a need for guidance, as a general proposition, that is the danger and the risk of having a draft guidance out there that is inconsistent with the law.

Mrs. LUMMIS. Thank you, Mr. Martella. And thank you, Ms. Goldfuss. I yield back.

The CHAIRMAN. Thank you.

Ms. Bordallo.

Ms. BORDALLO. Thank you very much, Mr. Chairman.

I just have one question for you, Mr. Clark. In 2006, the Center for Naval Analysis, the CNA, Military Advisory Board, composed of 11 retired three- and four-star generals and admirals, released its landmark report, "The National Security in the Threat of Climate Change." Now, the report concludes that, among other things, climate change is a threat multiplier that makes unstable security situations bad, and bad situations worse, across the world.

The Department of Defense has echoed that conclusion, including, in the 2014 Quadrennial Defense Review, and is incorporating climate change into the operations. Can you please expand on how seriously the U.S. military takes the threat of climate change, and

how this guidance will enable other Federal agencies to better access its impacts when planning and permitting activities?

Mr. CLARK. Thank you for that question, Congresswoman. I am proud to say that I think that the U.S. Army, in particular, the Department of Defense in general, has sort of led the way on some of the science regarding climate change, and they have done these threat assessments, as you note.

The QDR, the Quadrennial Defense Review—it is very difficult to get your issue in front of the QDR, and they took up this issue. It might not be a big surprise, if you think about it, that if there is climate change, when there is climate change, the things that are predicted, like droughts, will create conflict around the world. And when there is conflict, it is often our U.S. Army who is the first to have to show up at that.

So, the Army has taken this very seriously. I just recall reading that General Bostick, who is the Chief of Engineers, is now doing a study on the vulnerability of Army installations. And I will just say the Department of Defense is moving very quickly. Whether the CEQ or anybody else issues guidance, the Department of Defense is going to act on climate change.

Ms. BORDALLO. Since they are the leader, Mr. Clark, the Department of Defense, is it enabling other Federal agencies to look into the matter? I mean I think that is pretty much what it would—

Mr. CLARK. Yes, again, I think the U.S. Army is often looked to, and the Department of Defense is often looked to, as a leader within the Federal agencies. And I hope that they can create some very efficient framework for the other agencies to act. So, I suspect that other agencies will look to the Department of Defense in that regard.

Ms. BORDALLO. Well, good. Thank you, and I yield back, Mr. Chair.

The CHAIRMAN. Thank you. Mr. Young, do you have questions?

Mr. YOUNG. Thank you, Mr. Chairman.

Director, I am deeply concerned about this. I have been around here long enough to watch the CEQ work, and I am somewhat concerned about—we are trying to build a gas line in Alaska. We have five different agencies that will be involved. And you keep saying this is not a regulation, it is not a rule. But the gentleman just mentioned a moment ago, I have never seen an agency that goes through a recommendation from the White House, because the Secretary will get fired. It's that simple. So, they do follow it. Whether they do it subconsciously or consciously, I don't know, but I just know—go back to the court action.

Maybe something, if, let's say, an agency doesn't follow your recommendations—you say it is a recommendation. And the Sierra Club, one of my favorite agencies—I say it is an agency because they have more staff than your agency does, by the way—they will file suit against the Fish and Wildlife or against the Corps of Engineers or against FERC, and that delays the project. Why are we doing this, if that is the case? I mean is there any safety that says this won't happen?

Ms. GOLDFUSS. So I would just add right now, as the status quo, that challenge still could come. We have more than 20 cases that have criticized the agencies in how they have or have not analyzed

climate change in their review. So, with or without this guidance, that challenge can come. I can't speak to the specific situation in Alaska, and what the outcome would be. But the status quo would allow for that challenge already.

Mr. YOUNG. OK, but—it would allow. You can sue a skunk for crossing a road. But, in reality, will this give another legal—Mr. Martella, you can address this. You know what I am leading up to? I have gone through this. We had the past legislation in this committee to build the Trans-Alaska Pipeline that has given this Nation 17 billion barrels of oil, so there would be no lawsuits. It is the only time in history that happened, and we did it.

Now, what do you see happening if this supposed advice to the agency occurs?

Mr. MARTELLA. I understand your point, sir, and I agree with it fully. I was a Justice Department attorney for many years, where I defended the government in NEPA decisions. And it is unrealistic to think that any Federal decisionmaker would ignore any kind of guidance from the White House on these issues.

But I would like to give you an example that brings your hypothetical to a reality. Just last year, about 9 months ago, there was a court decision in Colorado, where a NEPA document was done for a coal mine, and the NEPA document did not address the social cost of carbon from OMB, something I talked about. And the court looked at this EIS, after many years of preparation, and the court said, "Well, you never talked about this thing that came out of OMB. I am not sure if you have to talk about it or not. But the fact you didn't even explain it gives me concern," and it remanded the EIS back to the agency to explain why it was or was not considering it.

So, that is a prime, real-world example of a court decision within the last year that did exactly what you are concerned about, which is to remand a decision back after many, many years of analysis, simply because the Federal agency did not follow something that was coming out of the White House.

Mr. YOUNG. OK. Director, again, how are you funded?

Ms. GOLDFUSS. [No response.]

Mr. YOUNG. Where do you get your money?

Ms. GOLDFUSS. CEQ gets our money from you, sir. We are funded by Congress.

Mr. YOUNG. That is what I thought. Gentlemen, I think that is something we should look at. Because I just don't know why this extra layer is going in. You haven't explained it is not a regulation, it is not a law, and yet it is there. And I think it is a lawyer's dream. And, if I had anything to do—if I was a dictator, I would shut down every law school.

[Laughter.]

Mr. YOUNG. We would be a lot happier, there would be more things done in the United States, instead of everybody worried about being sued. I just think this is a lawyer's dream. What you are proposing now will be used in the courts, and that is not what we are all about.

You know, take into consideration—go back to my gas line. You know, they can say, "Well, it is going to add to the so-called climate

change down in" wherever we sell the gas. Someone didn't take that and consider it.

I am just concerned, Mr. Chairman. Thanks for holding this hearing, because it is another example, I think, of a continued overreach, unnecessary, not needed. Yield back.

The CHAIRMAN. Thank you. And if you go through with that, I will make you dictator after all.

Mr. Grijalva.

Mr. GRIJALVA. Thank you, Mr. Chairman. Mr. Clark, your testimony is largely complementary of CEQ guidance. However, let me ask you if you have any concerns about it.

For instance, the one example, there have been questions raised about the upstream and downstream impact provisions, and whether they would require limitless unending analysis. Do you think CEQ needs to provide further clarity on that, with respect to those provisions in the final guidance?

Mr. CLARK. This is certainly a complex issue.

The CHAIRMAN. Is your microphone on?

Mr. CLARK. I'm sorry. I said that this is a complex issue, and my substantive criticism of this is that it does introduce new lexicon, new ideas that are not contained within NEPA itself, nor is it contained within the CEQ regulations. And I fear that some reading of the guidance could lead one to believe that the guidance is expanding the law. I don't think that was the intent, but I do think that the upstream-downstream lexicon creates a whole new complexity that is unnecessary.

Mr. GRIJALVA. Thank you.

Director, Mr. Clark's response to that question, that provision, any comments on that?

Ms. GOLDFUSS. Yes. I would say that we have heard about this issue of upstream and downstream more than any other one specific issue, and are listening to industry and stakeholders on it directly, and are considering, as we go through the 100 comments that we have right now, those recommendations.

It is our hope, our focus, and our intent to really focus on what NEPA, the major tenants of NEPA, which are the direct, indirect, and cumulative impacts, and not be speculative about it. So we don't want to add confusion to what exists already.

Mr. GRIJALVA. Thank you. Mr. Clark, one more question. I know of a number of large companies, including Shell, BP, Exxon Mobil, Wal-Mart, Wells Fargo, Disney, and others have used something akin to a social cost of carbon for their own internal planning to guide their investment strategies and decisions in the future. In fact, even these internal prices, and the social cost of carbon price are similar.

But we have heard criticisms about it from one of the witnesses today. Since major corporations see fit to include a carbon price in their planning, doesn't it make sense that the Federal Government would use that index, as well?

Mr. CLARK. Well, let me start out by saying I am not an expert on the social cost of carbon. My career, though, as I have been doing NEPA and doing NEPA analysis, is to try to do a full cost accounting of the impacts. And what I mean by a full cost accounting is that if you are a beneficiary of the impacts that are being

cast on someone else, that you ought to be able to capture the cost. I don't know that that is the social cost of carbon, I don't know that that is the mechanism. But somehow, to account for your impacts, I think, is a smart move. I don't know that social cost of carbon is it.

Mr. GRIJALVA. OK. Yield back.

The CHAIRMAN. Thank you.

Mr. Lamborn, do you have questions?

Mr. LAMBORN. Ms. Goldfuss, you said that the revised draft guidance will not—I will start over, thank you. If you could, start the clock over.

[Laughter.]

Mr. LAMBORN. Ms. Goldfuss, you said that your revised draft guidance “is not a rule or regulation, and is not legally enforceable.” So you have no legal authority to impose your guidance on other Federal agencies, but you are doing so, anyway. It sounds to me like you have been learning at the feet of President Obama, who is taking action by executive order, using his pen and his phone, whether, in my belief, he has the legal authority or not.

OK. Dr. Christy, I have a couple of questions for you. In your testimony you state, “Because changes in the emissions of our entire country would have such a tiny calculated impact on global climate, it is obvious that single projects, or even entire sectors of the economy, would produce imperceptible impacts.”

In light of this, is the CEQ guidance well advised?

Dr. CHRISTY. I don't think so. I look at it from the scientific perspective, as a working stiff scientist. And the fundamental thing here is that there is no proof that these emissions cause specific things you see in climate. So how can one link a cause to an effect here? Because there is no proof of it. I build those climate data sets. It is not there.

Mr. LAMBORN. If all of the climate models that Ms. Goldfuss and others do adhere to were correct, are you still saying that a single country, or a single project within a country, like a particular electrical generating coal-fired power plant, is going to have an imperceptible, maybe even an immeasurable impact? Is that correct?

Dr. CHRISTY. That is correct. The emissions globally are so large, compared to what a country has, or what a single project would have, you would be spitting in the ocean, is what you would be doing.

Mr. LAMBORN. Thank you. Now, you say in your testimony also that “greenhouse gas emissions cannot be used as a proxy for alleged climate change, because our capability to demonstrate how greenhouse gases influence the already-observed climate is so poor.” Could you elaborate on that, please?

Dr. CHRISTY. As I showed in my chart, none of the climate models is able to reproduce the most simple of metrics, the global atmosphere temperature, over the past 36 years. This is a period in which we have had satellite information to show—and also independent balloon information—what has happened in the real world is not produced by these models that have a greenhouse gas effect in them. So we don't know what the effect of greenhouse gases are to the climate.

Mr. LAMBORN. Is it scientific for someone to say that a particular climate event, like a drought in the West, or wildfires resulting from a drought, can be attributable to human climate actions?

Dr. CHRISTY. Well, two quick things. That is not provable. One cannot prove that. And, second of all, if you look at the charts I included in the testimony, drought around the world is not increasing. So we have no link, in terms of global drought, versus global emissions.

Mr. LAMBORN. What about severe events like hurricanes?

Dr. CHRISTY. There is no increase in hurricanes. We have monitored them for 150 years. There is no increase in intensity or severity of hurricanes. So there is no link there.

Mr. LAMBORN. So if someone stands up in Congress, for instance, and says a hurricane was caused by human climate action, is that scientific or not?

Dr. CHRISTY. That is not scientific.

Mr. LAMBORN. OK, thank you. Now, your testimony suggests that climate models are not useful tools for prediction. Why is that? And are there better tools?

Dr. CHRISTY. Well, the simple answer to that is can they reproduce the past first? That should be a simple test. Can you reproduce what has already happened? And, as I demonstrated in the testimony, the climate models have been unable to reproduce what has actually happened in the past. I would not claim that they would have—I would have confidence in them to tell us what would happen in the future.

Mr. LAMBORN. So what would be a better model?

Dr. CHRISTY. I think the better model is to look at the real world, as it is going on. And that is what we do, in observational science. I mean I built my first climate data set 50 years ago, before NEPA. So we can watch the real world. That will tell us what is going on. And not much is happening, in truth.

Mr. LAMBORN. Thank you for being here.

And, Mr. Chairman, thank you for having this hearing. I yield back.

The CHAIRMAN. Thank you. Ms. Tsongas.

Ms. TSONGAS. Thank you, Mr. Chairman, and thank you all for appearing before the committee today.

To reiterate, the bill that we are talking about today, the National Environmental Policy Act, is one of our Nation's bedrock environmental laws, crafted on a bipartisan basis by Congress, signed into law by President Nixon, this committee having played a very important role. NEPA has informed Federal decisionmaking and increased transparency for over 40 years. It is the starting point for evaluating the environmental impacts of Federal action.

NEPA does not dictate decisionmaking or project choices, nor does it require Federal agencies to elevate environmental concerns above all others. Instead, it simply makes sure that agencies have all the necessary information on potential environmental impacts, and consider alternatives before moving forward with a Federal project.

To put it simply, NEPA makes sure we "look before we leap," and are using our taxpayer dollars wisely. It is also one of the primary ways through which the public is able to participate in the Federal

decisionmaking process, fulfilling the fundamental right of American citizens to have a voice regarding a proposed Federal project. We hear much on this committee about the conflict between states and the Federal Government. But, in essence, NEPA ensures that the Federal Government is a good neighbor, giving its neighbors a chance to be heard on Federal actions.

So, I strongly support the Administration's efforts to better incorporate the impacts of climate change in the NEPA review process. Climate change is a critical generational issue that we cannot ignore. The proposed guidance that we are discussing today will increase predictability and certainty for Federal agencies, state, and local governments, not least the Defense Department, private businesses, and the public, on how climate change impacts will be considered as part of NEPA. Our Federal courts have also overwhelmingly determined that this is something that we need to do.

Mr. Clark, I want to thank you for appearing before this committee today and sharing your expertise. As Ms. Bordallo is, I am also a member of the Armed Services Committee, so I particularly appreciated the fact that, in your testimony, you stated that the Army considers the impacts of sea-level rise, storm surge, and increasing frequency of drought when studying where and how to build facilities.

I know when I first went on to that committee, I was very impressed with the ways in which the different services were really in leadership positions of taking into account the impacts of climate change. And it is my hope, as you referenced in your testimony, that as they deal with this through the NEPA process, that they will create templates for other agencies to follow.

But from your experience, having served in both Republican and Democratic administrations, if we don't conduct careful planning, could the impacts of climate change negatively impact military readiness? We know that they certainly deal with it in national security framework, but could it impact military readiness?

Mr. CLARK. Well, the Army is doing a number of those studies now, and one of the things that they are concerned about is operations and training, about whether or not climate change can impact that.

So, yes, they are taking that into account. And I would also refer you to the study that the Army did, I think, in 2012, about the vulnerability of the Army.

Ms. TSONGAS. You also said in your testimony that CEQ's guidance will "help bring structure and consistency" and "reduce confusion" for the Army's current efforts. Can you expand on this? Can you give some examples of confusion under the current process that could be improved by increased guidance from CEQ?

Mr. CLARK. Well, I would like to answer that by giving some experience when I was at CEQ. When I first came to CEQ, I came from the Secretary of the Army's office, and I was asked to put together a cumulative effects guidance. And that had much of the same discussion that we are having now, that this was going to create new law, it was going to create more stoppages of projects, and all that sort of stuff. But what was really going on was that the agencies were getting sued, and the agencies were begging CEQ for guidance. It was not an easy thing to do, but we did put

together a framework. And I think that is the major contribution of this, to put together a framework that agencies can work with.

Ms. TSONGAS. So it creates consistency across the agencies, which is what you are saying.

Mr. CLARK. Yes, ma'am.

Ms. TSONGAS. Great. Thank you. I yield back.

The CHAIRMAN. Thank you. I am assuming climate change is causing you guys to screw around with the equipment over there and break things?

[Laughter.]

The CHAIRMAN. There is a social cost to that. I just want you to know.

[Laughter.]

The CHAIRMAN. Mr. Wittman, you are recognized.

Dr. WITTMAN. Thank you, Mr. Chairman. I want to present a question to the entire panel. I just want to get in my mind the magnitude of what we are talking about here, in looking at reducing the impact of emissions on global climate change. And how much would the United States have to reduce its emissions to have an impact on overall global emissions? And would there be a noticeable impact on the environment if no other nation did the same?

In other words, if we were the sole entity to reduce our emissions, what would the total impact be on the conditions that we assert would be affected by this? Sea-level rises, the overall average temperature change, plus or minus. Panel members, can you give me a perspective on what would happen under that scenario?

Ms. GOLDFUSS. I want to make sure I understand the question. So you are saying if we were the only country to address this.

Dr. WITTMAN. If we were the only country to address it, how much would we have to reduce our emissions in order to have an impact, a noticeable impact, on those conditions, sea level and—

Ms. GOLDFUSS. I can't estimate that number. I apologize.

Dr. CHRISTY. Well, I have done those calculations, Congressman. Our effect would be between five and eight hundredths of a degree. We would not even be able to measure any sea-level—the sea-level change would be so tiny as to be immeasurable.

By the way, sea-level has been rising for 20,000 years. It will continue to rise. So, no matter what anyone does about their emissions, it will continue to rise. It is not the inch per decade that is the problem; it is that 20 feet in 6 hours from the next hurricane. That is the problem. And that is a different kind of issue to address.

Dr. WITTMAN. Ms. Goldfuss—or anybody else that would like to answer that?

[No response.]

Dr. WITTMAN. OK. Ms. Goldfuss, let me ask you this—again, to get a perspective. Do you envision any single project that you either wouldn't approve, or wouldn't be approved under this guidance that would have a significant effect on global climate, sea-level rise, all those different parameters? Can you give us an example about how, if you didn't do a project or a project that you anticipate—a single project that would have an effect on those conditions?

Ms. GOLDFUSS. NEPA would not lead to a decision where you would not do a project. It is not about outcomes; it is about informed decisionmaking.

Dr. WITTMAN. Well, give us the nature of how it would inform decisionmaking. What do you think the outcome of that would be? In other words, if you are saying, well, we have to have this information that we believe would reflect climate change, how do you envision that would impact the outcome of that decisionmaking?

Ms. GOLDFUSS. Well, CEQ is responsible for helping the agencies to implement NEPA. And we give them great deference in making those decisions. So it will be decided on a case-by-case basis, what the impact will be, and whether or not the guidance is appropriate for that project.

Dr. WITTMAN. Would you see under the NEPA process what you see now, incorporating climate change information, would you see that being the turning point for a project then not being approved, based on the projected impact of—

Ms. GOLDFUSS. No, I once again would go back to the fact that this is about informed decisionmaking, so it is up to the decisionmaker to determine whether or not one of the alternatives is appropriate for all the factors that go into the NEPA review, not just the greenhouse gas guidance.

Dr. WITTMAN. OK. Mr. Christy, I want to ask this. The one purpose of NEPA, as we know, is to increase transparency, so we understand the information that is being exchanged in this decisionmaking process. The draft guidance suggests that agencies incorporate the social cost of carbon into NEPA review documents. Can you tell me, was the social cost of carbon created in a transparent process?

Dr. CHRISTY. What I know of the social cost of carbon is minimal. I do know it is a black box, and that it is not representative of the science that we really have today. And one of the real shortcomings of the social cost of carbon is it does not consider the real benefits that come when people have access to low-cost energy, plus some other things. But when you add all those in, you find out burning carbon creates benefits, not costs.

But the fundamental climate parameters that are going into that model are that red line I showed you earlier, which is not what is happening in the real world. So, immediately, the social cost of carbon is giving an erroneous answer.

Ms. GOLDFUSS. I just want to clarify. NEPA does not require cost benefit analysis, and this guidance does not require that the social cost of carbon be used. So I can direct you to language specifically in the guidance, but it is not a requirement.

Dr. WITTMAN. OK. Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. Mr. Huffman.

Mr. HUFFMAN. Thank you, Mr. Chairman. And thanks to the witnesses.

It was very interesting for me to hear a scientist tell us, “We don’t know the effects of greenhouse gases on the climate,” and that prompted me to just quickly do a Google search to look at what NASA has to say on the subject. And the NASA Web site right here says multiple studies published in peer-reviewed journals show 97 percent or more of the climate scientists in the world

agree to a very different proposition than what we heard today, that, in fact, human activities and greenhouse gas emissions are contributing to climate change and global warming.

So, I want to congratulate the Majority for finding a scientist with this unique, contrarian view. I suppose, if we looked hard enough, we could find a cardiologist who would tell us that chocolate cake is good for us. But when there is such an overwhelming scientific consensus—you know, just a thought—we might want to hear scientific testimony that reflects that.

There has been some question about the need for this CEQ guidance, Director Goldfuss. And I just wanted to ask you now, courts have looked at the question of whether NEPA requires consideration of climate change matters. And, by my count, I found about 27 cases that have held that various Federal agencies must consider climate change in their NEPA analysis. There is one case out there that disagrees, but does that sound about right to you, that the Federal courts are weighing in 27 to 1 that this must be included in NEPA?

Ms. GOLDFUSS. Yes. And each of those decisions is somewhat inconsistent on what they are telling the agencies. So those different decisions are part of the reason that the agencies have been asking us to clarify what their approach should be.

Mr. HUFFMAN. Right. Thank you for bringing that up, because the other point that has been made is that this is some kind of a lawyer's dream, or an attempt to set up a litigation trap.

If you've got agencies out there with so much conflicting guidance from the courts, and no guidance on how they are supposed to actually do this climate analysis, this hard look under NEPA, if left to their own devices, are they more likely to face litigation or less likely?

Ms. GOLDFUSS. I would say they are more likely. I mean there are 27 different approaches and ideas about how it should apply it, and then it is left to the agencies to determine what their approach should be, based on those decisions.

Mr. HUFFMAN. And with some guidance from your office, and some consistency, would you say that the projects that they are analyzing are more likely to be approved and successful, or less likely?

Ms. GOLDFUSS. With consistent approach and developing the tools, and using the tools that—excuse me, let me restate that. We don't want them to develop new tools, but using the existing tools that they have, they will be more successful in their approach of carrying out NEPA.

Mr. HUFFMAN. That is what I thought. So we are probably looking at less litigation, more effective NEPA analysis, and a smoother path for the various projects that are subjected to that than left to the uncertainty of how courts are addressing this under the status quo.

My colleague, Mrs. Lummis, brought up an interesting point. Theoretically, at least, humans emit greenhouse gases, right? And she said that under this guidance from CEQ, theoretically, any emission would have to be subject to climate analysis. I just wanted to ask you about that, because my understanding was you have

set a threshold of 25,000 metric tons per year for any action that would even need to be subject to this analysis. Is that right?

Ms. GOLDFUSS. Well, just one little correction. It is just a point of reference, not an actual threshold. So we wanted to give the agencies a point of reference to focus on the projects that will have the greatest greenhouse gas emissions impact.

Mr. HUFFMAN. OK. Is it possible for a human being to emit 25,000 metric tons of greenhouse gases in a year?

Ms. GOLDFUSS. That would be an impressive human being.

Mr. HUFFMAN. OK. Just wondering, because, I mean, using Mrs. Lummis's hypothetical—we all like Mrs. Lummis, we like hanging around her, she has lots of friends—but if someone emitted that much greenhouse gas, would they have any friends?

[Laughter.]

Ms. GOLDFUSS. I will let the committee answer that one.

Mr. HUFFMAN. All right. Thank you very much. I yield back.

The CHAIRMAN. With what I ate last night, I am close to that already. And you did say that when you are doing your final guidance, you are not going to eliminate chocolate cake, right?

[Laughter.]

Ms. GOLDFUSS. That is outside our authority, I would say, Chairman.

The CHAIRMAN. I hope to shout. All right. Mr. Gohmert, you are recognized.

Mr. GOHMERT. Thank you, Mr. Chairman, and I appreciate the witnesses being here. I was just curious, in considering the kind of questions you have just been asked, and the questions that you often get, Professor Christy, do you ever feel like Galileo?

Dr. CHRISTY. [No response.]

Mr. GOHMERT. You remember Galileo? The overwhelming amount of science was against Galileo. And the other scientists got money from the church, they got money from the government for their research in opposing Galileo. And yet, Galileo was right, and he had the courage to stand up and say so.

I know it is often said by climate fearmongers that, Gee, money really dictates the kind of results. I am curious. Is it true you would have access to hundreds of millions of potential grant dollars if you would change your scientific position?

Dr. CHRISTY. I don't consider myself a Galileo in that sense. No one has arrested me yet.

Mr. GOHMERT. That is coming.

Dr. CHRISTY. And it does get personal when you talk about chocolate cake, though. I wonder about that.

What I see as a real problem in the government is that there is an agenda that has been stated from the top: climate change, settled science, on and on and on, like that. That is a message to everyone in the agencies, which have the funding, to make sure that happens.

We do not see what I would call a red team situation, where, if an issue is going to cost the economy so much that you would set aside some funding to say, "Are there problems with this, are there independent people, skeptical people, that will look and see what might be wrong with it"—I am one of the few people that actually

builds these climate data sets from scratch, so that we can see what the real climate is doing.

Mr. GOHMERT. Well, I understand you may have a slide that compares the various climate models.

Dr. CHRISTY. Yes, being from Alabama, a lot of target numbers there—

Mr. GOHMERT. Would you explain that?

[Slide]

Dr. CHRISTY. So this is a target. That is the trend and the atmospheric temperature that has happened since 1979. That is the target that you want to hit with your climate model.

So, it is like we give someone 102 bullets to shoot at that target. OK, go to the next one.

[Slide]

Dr. CHRISTY. That is what they got. Not a single one of these climate model projections was able to hit the target. That is the basis, though, on which the policy is being made, it is on those climate models, not on the evidence before us.

Mr. GOHMERT. That is what we are basing all of these rules, all of this massive amount of paper that is produced, reports that are produced, requirements for reports—let me just tell you. I have a woman over 80 in my district, lives in a rural area, and she said, “When I was born and raised, it was in a home where the only energy we had was in our woodburning stove, and my power is getting more and more expensive. I am afraid I am going to die in a home like that.”

Do you have another slide that shows a difference in what is projected and what is real?

[Slide]

Mr. GOHMERT. Oh, this is the one you were showing a while ago.

Dr. CHRISTY. Yes, I think everyone here in this room can understand that slide, and I think they would understand something is wrong with the scientific theory we have about how greenhouse gases affect the climate. No one has said this slide is wrong. It has been available for over 2 years, or over a year. It took me a long time to build it, because that is downloading 102 models, and so on.

But that is, the way I understand it, the extreme claims about climate change are based upon what those models, what that red line is showing, and not on what the real world is actually doing.

Mr. GOHMERT. Yes. Well, as someone who was shocked, and didn’t believe all the scientific projections in the 1970s that said we are at the beginning of a new ice age, I get a little leery of the new projections that we are headed toward warming this place up to where we are going to have more crops than we have ever had. What a terrible thing.

But—yes, sir?

Dr. CHRISTY. Right, yes. And one other thing is I lived in Africa. So your comment about the woodburning stove, and so on—I can say this, without a doubt, that without energy, life is brutal and short. I witnessed it as someone living in Africa. And to withdraw energy, make it more expensive, make it inaccessible, that is not being—that is immoral.

Mr. GOHMERT. That does more harm to men than anything. I am on record as believing climate change to be a fact in east Texas, where I live. It happens four times a year.

The CHAIRMAN. Mr. Beyer.

Mr. BEYER. Thank you, Mr. Chairman. And thank you to the witnesses. Although I am not a lawyer, I do feel I should take 10 seconds to defend the rule of law.

I understand what makes our democracy endure is that we are a nation of laws, and that there are many tragic examples today of dystopic countries that do not have the rule of law: North Korea, Somalia, Sudan. A quick aside.

Ms. Goldfuss, Mr. Martella had written that “GHGs are well-mixed, global pollutants emitted by countless sources. As a result, the relative and proportional climate change impacts of emissions associated with any given Federal action will be infinitesimally small.”

Then, Dr. Christy testified that if we close the USA, a few hundredths of a degree.

These statements seem to ignore the leadership role of the United States, that the laws and regulations we pass, the actions we take, do affect what other countries will do. I have been trying to think of the best analogy. There are many, but I keep coming up with is it OK to throw one beer can out the window, because there will be a lot of other beer cans thrown out the window, so it is OK for me to do it.

Can you tell me what the big picture is for CEQ if any one plant is really not going to make any difference?

Ms. GOLDFUSS. For starters, we are talking about NEPA here today, which is a great example of how we have impacts across the country, because this model that was created 45 years ago has now been emulated in many countries as a process that works, in terms of looking at different options and informing our decisions.

So, yes, we lead by example. All of these decisions that are being made, and work that is being put into climate talks around the globe, the Obama administration clearly recognizes that we can't do this on our own. The historic announcement that was made with China and, as we lead up to negotiations in Paris, this is a challenge of enormous proportions that really requires that we look at this in every decision.

So, maybe not one individual decision is going to tip the scales, but, cumulatively, we can have an impact on this problem, and not just here, in the United States, but China, India, and all of the countries around the world.

Mr. BEYER. Yes, thank you. And, Director Goldfuss, Mr. Martella argued against applying the new guidance to land and resource management actions. And does it make any sense to apply the greenhouse gas metrics to, say, oil and gas explorations on Federal lands, when there is greenhouse gas, by definition? I mean what is the rationale for doing that? So—

Ms. GOLDFUSS. We looked at many comments with relation to the land sector, specifically. And when the draft guidance was first put out in 2010, it was an open question, as to whether or not this guidance would address actions on Federal lands.

The Federal Government manages about 30 percent of the land mass across the country, as Chairman Bishop is very familiar with. That is more than 600 million acres. So it is our responsibility to look at those actions. We understand that it is different with relation to forestry activities, or other actions that are taken, so we have tools that specifically, sector by sector, can calculate these emissions, both short-term and long-term, but feel that it is appropriate, given the land management position that we hold to analyze those emissions, as well.

Mr. BEYER. Great. Thank you. In the minute I have left, Dr. Christy, I appreciated your building the data sets from scratch, and the slides that we saw. It would be, maybe at another time, interesting to take those slides farther back to 1950, 1900, 1850, and not just compare what the IPCC scientists have projected the difference in temperature would be over a 5-year period of time, but look at the temperature, and look at the J-curve on the greenhouse gas emissions, and see how they align. I am sure you have worked on things like that, too, but this is where the 97 percent of the climate scientists come down on believing that climate change is something that is real, and that we have to deal with.

Dr. Christy.

Dr. CHRISTY. OK. I would hope I could disabuse you of that 97 percent number. That has been debunked in several studies. So that is just not real.

Mr. BEYER. I was just quoting my colleague.

Dr. CHRISTY. Yes, and remember, the NASA Web site is controlled by a specific government. So the key about the diagram I showed is, when are the greenhouse gases supposed to be most evident, in terms of the response of the climate system. It is the last 36 years. That is the time period you need to study and see, because that is where the response is measurable, according to climate models. We can hardly measure much of a temperature increase in that time, as you saw on the chart.

So, that is why you want this period, because this is when greenhouse gases, the increase in greenhouse gases, would be affecting the climate the most.

The CHAIRMAN. Thank you. And if it was 30 percent of my state, I would be a lot nicer to you, as well.

Mr. Fleming.

Dr. FLEMING. Thank you, Mr. Chairman. And let me say, first of all, as a physician who has practiced 40 years, including cardiology, I can say that chocolate cake is good for you. But I don't recommend eating in excess. Nor do I recommend eating kale in excess, either.

[Laughter.]

Dr. FLEMING. So, that brings us to this. As a physician, I was always taught, and still practice, the fact that it is the scientific method that really leads us into progress, to do what is right for the future.

Now, Mr. Huffman suggests this may be consensus. And certainly there has been a suggestion here that maybe the courts should decide these things.

But, Professor Christy, enlighten us on this whole issue. What is the science, and what is this 97 percent? My understanding about

the 97 percent—it is often quoted that this is consensus, rather than true settled science—is that this was 97 percent of colleagues who were asked the question. And certainly, you are going to get any outcome you want, as long as you ask the people that you choose to ask.

Dr. CHRISTY. There are many failings with that study that came up with the 97 percent. One was how the sample was chosen.

Dr. FLEMING. Right.

Dr. CHRISTY. Who did the decision about whether someone came on one side or the other. That was one of the problems with that.

But when it comes to scientific method, I am right with you. If we think we understand a system, then we have to be able to predict it. If we can't predict it, we don't understand it.

Dr. FLEMING. Yes.

Dr. CHRISTY. The climate is clearly something we can't predict. Therefore, there is something very fundamental about the system we do not understand, as I have shown in the charts. And I think we have a long way to go.

Dr. FLEMING. Absolutely. So you show very clearly there that, out of 102 different models, not a single one of them even comes close, it appears, to being accurate in predictability.

Dr. CHRISTY. Yes. That should concern everyone in this committee.

Dr. FLEMING. Absolutely. So, now we have a tremendous amount of policy coming out of our government, out of governments around the world. And, by the way, I believe it is Australia that actually repealed their cap and trade tax. So some of them, I think, are getting smart and actually looking at the science.

So, after all of these years, and all of this policy, and now cost to government and to free enterprise, to private businesses and individuals, we actually find out that all of that policy is based on what perhaps one could say is voodoo science. What would you say?

Dr. CHRISTY. Well, I would say the policy is based upon some theory that needs a whole lot of correction to it.

But also, you should look at the numbers, too, about carbon emissions and coal burning, and so on. No one is following the United States on this. Emissions are rising. I mentioned Germany and Japan. Their emissions are rising. They are building more coal-fired power plants. So no one, really, is following us. Look at the numbers; they will tell you the truth.

Dr. FLEMING. Well, what about this social cost thing, now that is coming up? The social cost of carbon. And it was calculated. How is that number calculated?

Dr. CHRISTY. Now we are talking about voodoo, I think. But I am familiar more with the inputs that are on the climate side. If the climate does this, I think it is basically the global temperature does this, then all these other factors are—

Dr. FLEMING. Right.

Dr. CHRISTY [continuing]. Supposed to happen, and theoretically happen. That is fundamentally the wrong input, because I have shown you that the input that is just based on the global temperature is already off by a good bit. So any of those downstream effects that the social cost of carbon determines are going to be off.

Dr. FLEMING. So there is no way to truly calculate the offsetting taxation necessary in order to improve the climate outcomes when we, first, don't have the science, or the predictable science, in place, to begin with.

Dr. CHRISTY. Yes. You are talking about an economic question.

Dr. FLEMING. Yes.

Dr. CHRISTY. I probably am not an expert at all on that. But I would say, since you start with a false or an erroneous input, you are not going to get a good answer at the end—

Dr. FLEMING. Right.

Dr. CHRISTY [continuing]. No matter what else you do on—

Dr. FLEMING. You basically have to make a number up, and extrapolate from there, then, is what you are saying, in order to come up with any number, because you don't really have the science to prove what you can do economically with taxes and regulations that are actually going to mitigate climate change.

Dr. CHRISTY. Right. We can test some of these things, as I have done. OK, let's shut down the United States. What would that affect be? So there are tests like that we can do. And they all show that these regulations and intents will just do nothing to whatever the climate is going to do.

Dr. FLEMING. Well, it just certainly appears to me that before we continue down this road, Mr. Chairman, of taxing individuals, taxing businesses, taxing our economy, and hyper-regulating our economy, killing jobs, flattening our economy even more than it is today, we should actually get the science right.

With that, I will yield back.

The CHAIRMAN. Mr. Lowenthal.

Mr. LOWENTHAL. Thank you, Mr. Chair. Dr. Christy, I am a little confused, so I just really want some quick clarification.

In an earlier statement today you said that you did not believe in a causal link between carbon dioxide, CO₂, and climate change. In fact, I think you said that thermometers say that temperatures have gone up, but they don't say why. Is that accurate?

Dr. CHRISTY. Yes, thermometers tell us what has happened; they don't tell us why.

Mr. LOWENTHAL. So you do not believe that, as I say, that there is this causal link. We have not proven this causal link.

Dr. CHRISTY. Yes. What I believe is irrelevant. I am just looking at data, the output from the theory, and the output from the real world. They don't match.

Mr. LOWENTHAL. I got it. Then you went on to say, though, in response to a question from my esteemed colleague, Mr. Wittman, that you know exactly how much less the earth would warm if the United States stopped emitting all of its greenhouse gases.

So, on one hand, you say there is no causal connection between greenhouse gases and the warming. And then you say, in the same hearing, you can definitely predict the exact future warming due to less greenhouse gases. How do you reconcile this?

Dr. CHRISTY. I think if you listened to what I said, Congressman, I said if you use the climate models, this is what they tell us.

Mr. LOWENTHAL. So you do not believe in that climate model at all.

Dr. CHRISTY. What I believe is irrelevant.

Mr. LOWENTHAL. I am asking you a question.

Dr. CHRISTY. I look—

Mr. LOWENTHAL. Do you—

Dr. CHRISTY. I look at the information there—

Mr. LOWENTHAL. You told us exactly how much there would be less greenhouse warming.

Dr. CHRISTY. I use the climate models—the magic sea model, which is the IPCC-approved model, to demonstrate what they would say.

Mr. LOWENTHAL. So, you pick and choose when you use that model, by saying to us that it does not occur. So, to me, I am trying to understand. Are you saying that you do not understand how much CO₂ will warm the earth, that there is no relationship, or that there is—that CO₂—not that CO₂ will warm the earth, it is just how much it will warm the earth, is that what you are saying?

Dr. CHRISTY. That is pretty accurate, that CO₂ is a greenhouse gas. All things being equal, it will cause increased warming of the atmosphere. The amount of that warming, from the evidence, from the observations, is quite small.

Mr. LOWENTHAL. All right. So then, I would just like to say, as we go on, before I even ask any more questions, that I first want to put into the record, Mr. Chair, if it is OK, a letter that 53 of my colleagues and I wrote to the Director, indicating our strong support on the Council of Environmental Quality's December 2014 draft guidance providing Federal agencies the direction. So I would like that to be in the record, that 53 of my colleagues have supported what the CEQ is doing, if that is OK.

The CHAIRMAN. Without objection.

Mr. LOWENTHAL. Thank you. Then I just want to also make a statement that I am pleased that we are holding this hearing, first, to acknowledge the successes of NEPA. It has been a bedrock of transparency, it has been an essential tool, also, for many, many people who have been cut out of the process, or otherwise would be cut out of the process, because of their lack of money or power.

For example, in my own district recently, there is a new 8½ mile light rail that is being developed in Los Angeles. But because of community comments during the NEPA process, which included public meetings and comment periods, the developer has now repurposed 5 miles using existing tracks, rather than build the entire 8½ miles from scratch, cause less disruption, and save substantial time and money.

So, I think that we can see this tremendous benefit of NEPA, especially in providing greater and greater input. I believe that a NEPA analysis should include the impacts of projects on greenhouse gases. I think that is really important. And I just want to make sure, for the record, that—Mr. Clark, do you agree that they should, that this would be very helpful for them to include this?

Mr. CLARK. I believe it would be very helpful.

Mr. LOWENTHAL. Thank you. Also, Director?

Ms. GOLDFUSS. Yes, definitely.

Mr. LOWENTHAL. Good. I am then, again, very pleased that 53 of my colleagues have agreed with me, and place this into the record, and I yield back.

The CHAIRMAN. Mr. Thompson.

Mr. THOMPSON. Thank you, Chairman. Well, just for the record, let me say I would hope that NEPA would include the social cost of government bureaucracy and the impact on individual lives and, quite frankly, there be a requirement that we use transparent science in setting that.

Mr. Martella, I have a series of questions for you. Would you consider a CEQ guidance that addresses programmatic environmental reviews as procedural in nature?

Mr. MARTELLA. I get back to my overarching proposition to anything CEQ does, anything it does with the guidance. It is going to effectively be binding the day it comes out. The Federal Government, all the decisionmakers, are going to follow that CEQ guidance as the command that they have to be paying attention to.

Mr. THOMPSON. How about a CEQ guidance that addresses categorical exclusions, procedural?

Mr. MARTELLA. Whether it is procedural or substantive, I think it has the same impact, that the agencies are going to follow it and give it great weight. And if the agencies don't follow it, then there are going to be significant vulnerabilities defending the decision in the courts.

Mr. THOMPSON. Then, specifically, would you consider a CEQ guidance that addresses the efficiency of NEPA process as procedural?

Mr. MARTELLA. Again, I believe it is going to be binding on the agency. It is going to effectively give them substantive direction on how they should be applying NEPA.

Mr. THOMPSON. Finally, do you consider this draft guidance on the GHG emissions, greenhouse gas emissions, to be procedural or substantive?

Mr. MARTELLA. I believe it is substantive. I believe it is—as I have said before, it is in effect, to some extent, right now, that if I were working at the Forest Service, how could I look away from it? I would have to be applying it.

One of the things that makes me particularly nervous about it—I appreciate Director Goldfuss saying they are paying very close attention to the comments, they are going to take them into consideration. I see some things in her written testimony that were encouraging to me. But what makes me concerned about it is it—those changes need to happen now. There is always a risk that the government never finalizes something that is a draft. And if it is not finalized, it is going to always stick out there as a draft, and it is just never going to go away.

So, while I very much support the efforts to take the comments into consideration, I think we have a challenge in the interim, that is it in effect at the moment, *de facto*. It should be withdrawn while they are considering these comments. And there should also be a commitment to address the comments, I think, within a reasonable period of time, so we don't just have it lingering out there indefinitely.

Mr. THOMPSON. It seems to me—when you look at—the cost of carbon requirement is really going to lead to massive new litigation. It paints a bulls eye on the back of industries, on the back of our national forests, the Bureau of Land Management, it is really becoming—those lawsuits, nuisance lawsuits, have become a

fundraising scheme for certain groups, and then we have the audacity to reimburse those costs under the Equal Access to Justice Act that has been hijacked. That was not the purpose of that, what was an excellent law, when it was written.

So, I guess my question is, do you agree that this requirement is just going to expand that bulls eye, and just going to attract more nuisance lawsuits, which comes at a direct cost to the taxpayers, but also comes at a social cost, because I would argue, somewhat related to management of national forests, have been—the Forest Service has been, really, it has melted down their ability to actively manage these forests to keep them healthy—invasive species, wildfires, terrible economies in rural areas, and I just see this as expanding that target.

Mr. MARTELLA. Well, as I have indicated earlier, your prediction has already come true. I cited the case from 2014 in Colorado that struck down many years of hard work on an EIS because of the inconsistency, and how they considered the social cost of carbon. So that is already a reality, and why it needs to be addressed.

And if I could just clarify, too, my fundamental criticism—and I have several with the social cost of carbon—but we have heard from both sides today, everybody complimenting NEPA as being so transparent, and opening up the doors to public transparency and public participation, and I fully concur in that. It is the landmark statute for doing that. The social cost of carbon is at the exact polar opposite of that. This was a decision by several agencies and the Federal Government that was done behind closed doors, in a black box, without the public even knowing about it, and then just announced from on high.

So, for CEQ to now incorporate the social cost of carbon into NEPA documents, and to say this is a metric, it takes away the whole public participation transparency component that all of us have agreed today is so essential to the success of NEPA going forward. So it should not be addressed until the public has an opportunity to participate in the social cost of carbon process.

Mr. THOMPSON. Thank you. Chairman, I yield back.

The CHAIRMAN. Mrs. Torres.

Mrs. TORRES. Thank you. Ms. Goldfuss, as my home state of California grapples with a fourth consecutive year of drought, it is no secret that climate change is real, and is already having a negative impact on California's water resources. From reduced snow pack to a rising sea level, warming temperatures will continue to strain our state's water storage capacity, as well as posing a threat to millions of acres of farmland.

And as this demand for water supply continues to grow, we urgently need to invest in and upgrade our water infrastructure. As a former mayor, I know, from firsthand experience, that our local government budgets lack the resources for the planning and permitting of vital projects.

Can you expand on how the NEPA process can streamline the permitting and planning process across all levels of government, to ensure that local and state governments can build projects that increase efficiency and make our economies more competitive?

Ms. GOLDFUSS. I guess where I would start, not knowing specifically which project to address here, that, overall, NEPA allows

state governments, local governments, and Federal Governments to work together. We do not require duplication of review or analysis. So what one agency or one entity does can be used for the overall review, so that the outcome is appropriate. In large projects, you frequently have Federal dollars, state dollars, local dollars. You have private dollars, you have all of this coming together, which makes a very complicated project that has a major impact on a community.

So, through NEPA, we are able to make sure it is cited properly, we are able to work together with all of those entities, and come out with the best result.

Mrs. TORRES. Thus expediting projects, and not having to duplicate reports.

Ms. GOLDFUSS. Not having to duplicate reports. And, in the best outcome, when NEPA is given the appropriate partnership and analysis, the project leads to a better project, and less delay, and no litigation.

Mrs. TORRES. As the one cited by Mr. Lowenthal. Thank you.

Mr. Clark, some have suggested that this draft guidance is forcing agencies to use an outdated law—in their opinion, NEPA—to address something that was seen as a problem when the law was passed; namely, climate change.

However, the beauty of NEPA is that it is flexible, adaptable law that was intended to help the government incorporate new scientific information into the decisionmaking. Will you please explain why this guidance is appropriate under NEPA?

Mr. CLARK. Thank you, yes. It was this committee who actually, in much of the hearings about NEPA, was urging to take account of new and emerging science. It was recognized that we did not know a lot of things about ecosystems. We didn't know a lot of things about the environment, scientifically, that we have learned over 40 years. NEPA itself has been so flexible to allow the agencies to take into account new and emerging science. I think that that is where we are now, and I think that we will learn a lot more about climate as we go along. I am hoping that the NEPA reviews will actually help that.

But let me just say that 95 percent of all environmental reviews are categorically excluded. In a \$4 trillion Federal budget, 95 percent are categorically excluded. About 4 percent are environmental assessments, which leads to, usually, findings of no significant impact. And less than 1 percent turn out to be EISs and a \$4 trillion budget.

Mrs. TORRES. Thank you, and I yield the rest of my time.

The CHAIRMAN. Thank you. Dr. Benishek.

Dr. BENISHEK. Thank you, Mr. Chairman.

Director Goldfuss, I would like a little bit more information about your agency. Maybe I just don't understand it well. Do you advise the Administration on environmental policies besides the other different, the other agencies? Do you advise the Administration, as well?

Ms. GOLDFUSS. Well, the National Environmental Policy Act created CEQ to advise the Administration—advise the President, in particular. There are 11 components in the White House. The

National Security Council is one of those that you may be more familiar with.

Dr. BENISHEK. Right, right.

Ms. GOLDFUSS. So we are the Council on Environmental Quality, responsible for advising the President on—

Dr. BENISHEK. Right.

Ms. GOLDFUSS [continuing]. Environmental decision—

Dr. BENISHEK. Here is my question. This is of great concern to me, because I just don't understand how it works, to tell you the truth, because I think Americans have spent billions and billions of dollars improving our environment here, at home. But I am somewhat concerned about the fact that we are adding more and more controls for less and less improvement in our environment, while we are allowing foreigners to pollute and put out all kinds of greenhouse gases, other gases, pollutants, without any restriction from us. And we are allowing them to out-compete us.

In other words, our steel industry has gone overseas. It is cheaper to produce steel overseas in some areas that pollute like crazy. I have been to China, I have been to India, and the pollution there is unbelievably bad. But we are making stuff so expensive here that it is—people are going overseas and actually making more pollution overseas.

Now, do you take any of this kind of economic reality into account when you advise the President, that some of the laws that we are actually—by making it easier for foreigners to compete against us at home, are actually polluting the world worse than if we did the production here? I mean I am very concerned about this.

Ms. GOLDFUSS. Well, Congressman, I would respectfully say that last week the jobs number came out with an unemployment rate of 5.4, and we have had 60—

Dr. BENISHEK. I am not talking about unemployment. I am talking about—

Ms. GOLDFUSS. Yes, but we are having a strong economic recovery now, and—

Dr. BENISHEK. I can tell you that—

Ms. GOLDFUSS. I guess I don't agree—

Dr. BENISHEK [continuing]. The steel industry in this country is going down the tubes because of foreign competition. A lot of it is based on the price of energy to produce steel, which is a lot cheaper in China, which has no pollution controls on any of the stuff they do. And we, here, are trying to produce steel in an environment that protects our environment, and they don't have any of that over there.

So, do you take that into account when you advise the President—

Ms. GOLDFUSS. I would also say that we have had an enormous energy growth in this country over the past several years that has really carried this economy, that has happened with these environmental rules and information in place. So these things can happen at the same time. We can have a strong environment, and have an economic recovery—

Dr. BENISHEK. You are denying the fact that our friends overseas have an economic advantage over us because we are investing—

Ms. GOLDFUSS. I am saying that—

Dr. BENISHEK [continuing]. In our infrastructure to save the environment, and they are not? You deny that there is any advantage to that?

Ms. GOLDFUSS. I am saying that it is important here, in the United States, that we both have infrastructure that we build, and we have energy development, and we protect our environment at the same time. And the American public—

Dr. BENISHEK. So we don't care what the people across the globe are doing?

Ms. GOLDFUSS. [No response.]

Dr. BENISHEK. I mean I am asking if you are advising the President about what people around the globe are doing, and they are not protecting the environment. We are working to protect our environment. We are arguing about it all the time, how the best to do it, and there are people overseas that are not doing a thing to protect the environment—

Ms. GOLDFUSS. I would say—

Dr. BENISHEK [continuing]. And they are out-competing us because of that, in my opinion, to a certain degree. So, do you advise the President about that? Or what to do about it?

Ms. GOLDFUSS. I would say that we have—as the United—

Dr. BENISHEK. You do not advise the President about that issue, then. Is that what you are saying?

Ms. GOLDFUSS. I advise the President on making smart environmental decisions, and we do that in the—

Dr. BENISHEK. The issue I am asking—

Ms. GOLDFUSS [continuing]. Complex decisionmaking scheme—

Dr. BENISHEK [continuing]. Is the issue that I mentioned, the fact that foreigners are not investing enough in their environmental stuff as we are. Do you advise him on that issue, in particular?

Ms. GOLDFUSS. I would say Todd Stern from the State Department, and members of my team, as well, as we work with partners—

Dr. BENISHEK. All right. Well, I guess that is a no.

Ms. GOLDFUSS [continuing]. Around the globe—

Dr. BENISHEK. I will yield back.

Ms. GOLDFUSS [continuing]. To have a strong environment and a strong economy.

The CHAIRMAN. Thank you.

Mr. Polis.

Mr. POLIS. Thank you, Mr. Chair.

Director Goldfuss, I come from the town of Boulder, Colorado. We had unprecedented floods in the year 2013, six people died and tens—hundreds of millions of dollars in property damage, public and private. We have seen similar unprecedented catastrophes across the country and the world, and science has shown that natural disasters are more common and more severe and more detrimental than they have been. Might take longer to conclusively establish that trend, but we have certainly seen a short-term trend in that direction. And, whatever you want to call that, it seems we ought to plan for it.

We have a responsibility to ensure taxpayer-funded development is done in the most informed and effective way possible, not only so we can mitigate against any negative environmental impacts,

but so that we can ensure our communities are prepared for the intensity of future storms or weather patterns, and are adept in dealing with their effects.

I was hoping that you could speak to weather, and how the need for Federal consideration of increasingly severe and threatening weather patterns when considering new developments went into CEQ's calculus as the guidelines were developed.

Ms. GOLDFUSS. Yes, I would say that we—certainly within the guidance, and then more specifically, when we hear from local mayors and governors who are dealing with the impacts on their infrastructure and the decisions that they need to make in their towns, they step away from the politics of it, and this idea of building more resilient infrastructure, and making sure taxpayer dollars are spent responsibly is going into their planning already.

As we look at the guidance, we have two components of it. One is to incorporate greenhouse gas emissions. The other is to—in this look-before-you-leap proposal, what information do we have about where sea-level rise is? If we are in a drought-stricken area, are there smarter decisions that could be made about how we build, where we build, and where we spend taxpayer dollars, so that we are making the smartest decision for the future?

Mr. POLIS. Mr. Clark, it has been argued that the CEQ guidelines are somehow an overreach of the Council's authority. To my knowledge, no Federal court has declared things like increasing temperatures and sea-level rise to be illusionary. In fact, quite the contrary.

So, with that in mind, it seems like a changing climate is exactly the kind of occurrence we should be considering as we review newer additional Federal projects for the purposes of both the developer, as well as the contracting agency.

I was hoping you could explain to me how the clients you serve would benefit from adding these impacts to their list of considerations, as they navigate the Federal Government and the NEPA process, specifically.

Mr. CLARK. Well, I represent some developers. I have represented developers ever since I left the Administration. NEPA is about informed decisions, and it is a structure and a framework to consider what you are about to do. All of the discussions about whether or not we ought to consider this or not, there are many things that we consider within a NEPA context.

I would advise my clients to start with—see if this is categorically excluded, because, as I said, 95 percent of everything is categorically excluded right now.

Number two, then, I would say that we would integrate low emissions into everything that we buy, and everything we build. I would make sure that we prepared the Environmental Impact Analysis at a more programmatic level, because that is a more efficient way to go about doing the analysis in this project-by-project approach.

And then, I would advise them to scope it so that the discussions are proportional to the impacts we are talking about in a programmatic way.

Then I would say, "Don't go out and gather new data. There is so much data out there right now that you can borrow, steal, and

buy, data that is out there that has been tested.” So—to make this a more efficient way to go about doing it.

Finally, I would say, “Don’t speculate about anything.”

Mr. POLIS. Would you think that there are some dangers to not including these impacts on a list of considerations with regard to the Federal Government and NEPA?

Mr. CLARK. Well, I think the CEQ’s guidance really does help the agencies in a lot of ways, because rather than expanding NEPA, or rather than expanding the CEQ reach, they are actually trying to put some boundaries around how the agencies go about doing it. And I think that, in the end, it will lead to a much more efficient way to go about doing it. That is one of the reasons I support the CEQ guidance.

Mr. POLIS. Thank you. I yield back the balance of my time.

The CHAIRMAN. Thank you.

Mr. Gosar.

Dr. GOSAR. Mr. Clark, did I just hear you say you wouldn’t take new data in?

Mr. CLARK. I am sorry. The question was?

Dr. GOSAR. Did I just hear you answer my colleague that you wouldn’t take new data in, because there is so much data out there, floating around, you have plenty of it?

Mr. CLARK. I would say that I would, first of all, see if there is data out there, and there is much data that is existent. It is existent in NASA, it is existent in universities across the country. It is existent in many agencies who have already generated it.

Dr. GOSAR. Oh. Well, please explain to me, then, cancer research. Because you can’t get enough data.

I am going to take another question for you. Are you familiar with the Paleozoic Era and the Mesozoic Era?

Mr. CLARK. [No response.]

Dr. GOSAR. I mean, once again, you have to learn from your past to go forward. And when we make these comments, you have to be held accountable.

Do you know that 80 percent of all marine life in the Paleozoic Era went extinct? Was there climate change there? Absolutely. Unlike my colleague from Texas that said four seasons, climate change has been happening without man forever. Geology tells us that. Would you not agree, Dr. Christy?

Dr. CHRISTY. Well, yes, and especially about the droughts in California. That is where I started building my data sets, as a native of California. And it turns out that California has experienced droughts hundreds of years long, not just four.

Dr. GOSAR. And part of the problem is—I am from Arizona, by the way, OK? So we invested in infrastructure. We built dams for reserves, we actually put water in the ground. We bank. So we are better off than California is, that keeps flushing water because they haven’t built those processes.

Ms. Goldfuss, my colleague over there talked about these court cases, the Federal court cases, 2701. You are very familiar with that, right? Those 2701 court cases in the Federal courts, right?

Ms. GOLDFUSS. I am not familiar with the details of each of those cases.

Dr. GOSAR. But you are following the court cases.

Ms. GOLDFUSS. We—yes.

Dr. GOSAR. And you are advising the President on that.

Ms. GOLDFUSS. We are looking at what is coming out of those court cases, yes.

Dr. GOSAR. Who has the highest legal opinion in the land? Would it be the Supreme Court?

Ms. GOLDFUSS. I believe that is true, yes.

Dr. GOSAR. So why would you be advising the President in going forward even at all from another agency called Waters of the U.S.? We have four Supreme Court rulings that defy EPA from going there. I find it kind of contradicting that we are citing when we want to cite, but then, on the other hand, we don't cite the Supreme Court ruling, the highest of the land of the Federal courts, in that jurisdiction. I find that kind of interesting, don't you?

Ms. GOLDFUSS. Well, the Supreme Court cases that we have on Waters of the U.S. are less than clear. And we have been given the tall task of clarifying what—

Dr. GOSAR. But what that means is that you need to come back to Congress to work the law. Wouldn't you agree, Mr. Martella?

Mr. MARTELLA. Right. And, on Waters of the United States, I would probably disagree with Director Goldfuss. I think that there are things that the Administration is proposing on those that are flatly inconsistent with what the Supreme Court has directed, and the Supreme Court is the highest law of the land, in terms of those directions.

Dr. GOSAR. Yes. Now, let's go back to the NEPA. I mean NEPA is not really transparent.

I am from rural America. By the way, I have had to deal with the Forest Service. So it has been—in Arizona, catastrophic fires, I have had to deal with them, 19 firefighters dying in the Prescott and Yarnell fire, the Wallow fire, the largest fire in Arizona history. There are consequences in these aspects, and I am one of those pushing that we have to do something different.

We don't know a lot about ecosystems, because we have gotten it wrong, particularly in Arizona. We know some of the things, but we are off on a lot of these aspects.

The timetable for NEPA—and time is money. I am a dentist, by the way, so very calibrated. Do you know it takes, like, to infinity and beyond in rural America to get a NEPA done? Would you address that, Ms. Goldfuss?

Ms. GOLDFUSS. Yes. I would say that, when it comes to NEPA timelines, as Mr. Clark referenced earlier, more than 90 percent of the NEPA decisions are categorical exclusions, which happens in a week or two.

Dr. GOSAR. Oh, I—

Ms. GOLDFUSS. And then—

Dr. GOSAR. I have to stop you right there. So the categorical exclusions. But let's focus on the ones that actually go through. Those are the cases that are most important, because once you get that niche, everything becomes non-categorical exclusions, because NEPA applies all the way across the board. Does it not, then?

Ms. GOLDFUSS. I am afraid I don't understand the question.

Dr. GOSAR. I have run out of time, so I will have more for you to follow. Thank you.

Ms. GOLDFUSS. Thank you.

The CHAIRMAN. Mr. Westerman.

Mr. WESTERMAN. Thank you, Mr. Chairman. I have a question for Director Goldfuss.

You did state rather emphatically, and included in your written testimony, that carbon pollution is the biggest driver of climate change. You know, that obviously is debatable. It has been debated here quite a bit today. But I want to go past that, and I want to pretend with you that carbon is arch enemy number one. And I want to talk through some of the issues in your draft, because I believe, as proposed, your calorie counter will make the atmosphere fat with carbon and defeat your purpose to reduce carbon.

I have a fitness app on my phone. I think it is called Fitness Pal. So if we had a CEQ app on our smartphone called Carbon Pal, how would it register current management of Federal lands? Would it show that they are sequestering more carbon? More of a sync? Are they more of an emitter?

Ms. GOLDFUSS. Well, the truth on that is I don't have the exact calculations. And we have many tools that look at specific case-by-case decisions. So that is what we would do in the case of CEQ.

Mr. WESTERMAN. So how would you say it would rank with privately managed land?

Ms. GOLDFUSS. I don't have those estimates.

Mr. WESTERMAN. So not even an idea of whether privately managed lands sequesters more carbon, or publicly managed land? So we really don't know what is going on there with our carbon sequestration on Federal lands.

You—assuming in your position you are familiar with the carbon—photosynthesis, the way that works, how when we—

Ms. GOLDFUSS. Yes.

Mr. WESTERMAN. Trees pull carbon dioxide out of the air, and that is what makes them grow, and everything. Probably also familiar with the biological growth curve, how the younger something is, the faster it grows. So, naturally, the faster it is growing, the more carbon it is pulling out of the air.

My concern is, in reading through this draft, that some of the recommendations that you would be making might cause forestry managers, or other managers of public lands, to stop some of their forestry management practices because of this concern of emitting too much carbon, which—prescribed burn is a method to manage land. Also, harvesting.

I am also concerned that people who are in the biomass energy business, they will get left out because somebody will interpret this to say biomass is really not carbon neutral. How would you address those concerns?

Ms. GOLDFUSS. First, I understand, and we understand, that the land sector is different. Each of these decisions will have to be made on a case-by-case basis, and we will have to analyze the short- and long-term impacts of the climate cycle. So, I completely understand what you are saying, in terms of how we assess that, and there are tools and data sets that allow us to do that.

What was the second part of your question?

Mr. WESTERMAN. Well, my question was, really, how do you prevent your data from being used wrongly, so that the renewable

fuels business—that biomass isn't considered a renewable fuel because somebody says, "Well, you cut down trees to make biomass, or you cut down any kind of vegetation to make biomass, you are increasing the carbon load," when, by science, we know that—back to that growth curve. When something grows back, it is pulling out more carbon out of the atmosphere than what was actually cut.

Ms. GOLDFUSS. So this guidance would just advise the Forest Service or any agency to use the available data to make the decisions on a case-by-case basis. So, with the appropriate science, they should be able to make a decision and get to the right place.

Mr. WESTERMAN. I think you are correct, if we are using appropriate science. But what I am hearing from the field is that people who manage land on national forests are concerned that they are not going to be able to manage the land any more, which is going to cause it to slow down its growth. It is going to cause it to be more susceptible to wildfire, which is going to, in the end, have catastrophic wildfire that puts more carbon into the atmosphere.

So, I just have a real concern that the way these rules are proposed, it is going to ultimately add to more carbon in the atmosphere, which, if you follow your statement, would be detrimental.

Ms. GOLDFUSS. Based on the specific land section we have in the guidance, it is our hope to work with agencies that that would not be the case. We want to make this to work for them, and they can apply it on each decision, to the best of their ability.

Mr. WESTERMAN. I am out of time, Mr. Chairman.

The CHAIRMAN. Thank you.

Jim, do you need more time, or are you ready?

Mr. COSTA. I am ready.

The CHAIRMAN. Mr. Costa, you are recognized.

Mr. COSTA. Thank you very much, Mr. Chairman, and members of the committee, for holding this hearing, although I must say that I find the discussion somewhat mind-numbing. Having been a part of similar hearings in the past, I can give the talking points for both sides.

I want to make some comments and an observation, and then I don't know if any of our witnesses would care to respond. Dr. Christy, who is here, actually he and I went to Fresno State University together just a few years ago, so I know him to be, obviously, well versed in his subject field.

But the themes, obviously, from my Republican colleagues, is that NEPA delays or prohibits development of projects on Federal lands, and it fosters litigation. And I believe some of that is true, there is no doubt about it. Of course, my Democratic colleagues point out that NEPA provides an opportunity for public input, it is a tool for the environmental justice, it saves money—sometimes, maybe, not so sure—and that the Obama administration is making an effort to modernize it—although that is in the eye of the beholder, of course.

Recently, effort on the actions to update to administrative guidance is the subject of six separate updates for guidance since 2010. Generally, the goals of NEPA, I think, are laudable. Public disclosure, increased access for communities most impacted by Federal action, that is laudable. Unfortunately, its litigation tools have provided an opportunity for some stakeholders to delay Federal action,

and to litigate, litigate, and litigate—forcing Federal agencies to try to create these bullet-proof documents that are never, ever possible, it seems.

So, I guess my observation, or my comment, is this, and that is that the Majority continues to attack NEPA. I am not so sure it is helpful, in terms of changing it. The Minority's wholehearted endorsement, without recognizing the challenges, both in the statute itself, and, most importantly, how it is being utilized in the real world, I think, are equally unhelpful.

So, what Congress ought to be doing is working together on a bipartisan fashion to look at this after 45 years. President Nixon signed this into law in January 1970, a good Republican president. And, clearly, in 45 years, we have a lot of case history as to what we think has worked, and what are the problems with the current NEPA process. That is my comment and my observation, and that is why I find, once again, this discussion in this committee to be somewhat mind-numbing.

So, I don't know if any of the witnesses care to respond. Mind-numbing, that is when you numb the mind after you hear, and hear, and continue to re-hear talking points that both sides are very good at giving. I describe that as mind-numbing. So that is my observation, those are my comments, and I don't care—I mean I care, I would like to hear, I guess, if the witnesses have any instructive—instructive—comments on how we might get past our talking points.

Ms. GOLDFUSS. So, Congressman Costa, thank you for that. I know at CEQ—and we work with our colleagues at OMB and other areas around the Executive Office of the President—we are trying hard to modernize NEPA. And that does mean getting appropriate timelines, working through technology tools to help the agencies. When we come up against big projects that we know will be difficult, we try to start out with a cooperative approach with agencies all coming together.

But, yes, these can be difficult discussions, and I think your point about making it work, and modernizing it, is something that we have been trying to do in this Administration as much as possible.

Mr. COSTA. The graduate of Fresno State University have any insights?

Dr. CHRISTY. This is more of a political discussion, but I will say that it was just a few years ago we graduated, wasn't it? But for the coming rainy season, I will pray for rain for California.

Mr. COSTA. And I am praying every day.

Mr. CLARK. Congressman Costa, I would say that—and I have talked about this for a very long time—I think the management of the NEPA process really needs the scrutiny of this committee. It is not the National Environmental Policy Act that needs the scrutiny. It is, in my view—it is constitutional in nature, and it is fine.

The management of the NEPA process, though, could use a lot of oversight. And—

Mr. COSTA. That is where you think we ought to focus.

Mr. CLARK. That is where the focus really needs to be. You have one person at CEQ right now who is trying to do oversight for all

of the Federal agencies and a \$4 trillion budget. So, I would urge you to take a look at the way the process is managed.

Mr. COSTA. My time is expired. Thank you, Mr. Chairman. Thank you, Ranking Member.

The CHAIRMAN. You did say that mind-numbing is a social cost of carbon, right?

[Laughter.]

The CHAIRMAN. Mr. Hice.

Mr. COSTA. It could be viewed that way.

The CHAIRMAN. Yes, OK. Mr. Hice.

Dr. HICE. Thank you, Mr. Chairman.

Dr. Christy, I know you said it perhaps in jest a little bit, but I would agree that prayer is probably the most effective thing we can do for a drought. We certainly can't legislate the rain to come.

Mr. Gosar brought this up a while ago, about one of the purposes of NEPA is transparency. The draft guidance suggests that agencies incorporate the social cost of carbon into the NEPA review documents. Just your opinion, was the social cost of carbon created in a transparent manner, Dr. Christy?

Dr. CHRISTY. I would say no. It is very difficult to untangle the kinds of models that are there, and virtually impossible to reproduce exactly what is there. And that is fundamental to any kind of oversight you have. Can you independently reproduce the outcome of such a thing? And then you understand how it works.

But I just know in the part I deal with, on the climate part, that the input of that is already wrong, because it is based upon the climate models I showed are, basically, invalidated.

Dr. HICE. So you are saying there are problems with the social cost of carbon?

Dr. CHRISTY. Oh, absolutely, yes.

Dr. HICE. All right. With that train of thought, is the social cost of carbon based solely on domestic costs, or does it include global?

Dr. CHRISTY. That I would not be able to answer right off the bat.

Dr. HICE. OK. Does anyone have the answer to that?

Mr. MARTELLA. My recollection is it does incorporate transnational impacts as well as—

Dr. HICE. It does?

Mr. MARTELLA. That is my best recollection.

Dr. HICE. OK. Mr. Martella, I will just let you continue this question, since you brought that up. Since agencies really cannot consider global impacts into NEPA analysis, how are they supposed to extrapolate the foreign costs from the social cost of carbon?

Mr. MARTELLA. Well, I think you are right on the proposition. It gets back to my theme, that while my dispute is not with, if this is my project, not with assessing the greenhouse gases of this project. My dispute is that the guidance goes much further, and says we have to look not just at this project, but all the downstream effects, and all the upstream effects.

So, if we limited the emissions to the direct, indirect, cumulative impacts of the project, as CEQ has always said in its regulations, we wouldn't have a transnational issue. It is only because of this downstream, upstream, and the incorporation of social cost of carbon that triggers these transnational concerns.

So, again, I would urge CEQ, as they revise the guidance, to limit it, consistent with the regulations, and not go beyond the scope of the regulations.

Dr. HICE. Yes, and they can't go beyond the scope of the regulations. So what is the point of dealing with it from a global perspective, period? We have a major problem there.

Back to you, Dr. Christy. Just from your perspective, how large would a project really have to be before it would have a direct impact on the environment or a climate change?

Dr. CHRISTY. Well, as we calculated the number, the project would have to be bigger than the entire economy of the United States of America.

Dr. HICE. So it is not going to happen, in your opinion.

Dr. CHRISTY. In my opinion that would not happen. I hope it doesn't happen.

Dr. HICE. All right, and then you add into the equation no ability for us to control foreign governments when it comes to them being involved with these environmental policies.

What in the world would we have to do to have a significant impact on climate change?

Dr. CHRISTY. The climate is always going to be changing. Right now it looks like the effect of the enhanced greenhouse gases that we are putting into the atmosphere is pretty minor, and difficult to even extract from the way the natural climate system works.

I just look at numbers when we talk about the evidence here, and I don't see anything happening in the rest of the world that is going to change their means of getting energy, because carbon-based energy is the energy that powers the world. It lifts people out of poverty. That is not going to stop, no matter what the United States does.

Dr. HICE. Well, you have created a computer program that creates weather simulations. Is that correct?

Dr. CHRISTY. Not right now, no. I take output from computer models.

Dr. HICE. OK. You take output from computer models. How long has that been taking place, these models?

Dr. CHRISTY. The modeling, really, has gone on for 50 years for these global climate models. They are very expensive now, they are very complicated. I can't see a lot of improvement, though, in—

Dr. HICE. Have they been peer reviewed?

Dr. CHRISTY. OK, yes.

Dr. HICE. OK.

Dr. CHRISTY. They are peer reviewed quite often.

Dr. HICE. OK, thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you. Let me ask a few questions, if I could, here.

Ms. Goldfuss, first of all, just tell me if you agree with this statement. The National Environmental Policy Act, or NEPA, is a procedural statute that requires an environmental review regarding major Federal actions significantly affecting the quality of human environment.

Ms. GOLDFUSS. I do.

The CHAIRMAN. So, it is a procedural statute. NEPA, then, is a look-before-you-leap statute that then requires an agency to take a hard look at the environmental consequences of the qualifying action.

OK, so far?

Ms. GOLDFUSS. [Nonverbal response.]

The CHAIRMAN. The agency's scope review under NEPA is limited by the requirement that the effects or impacts of the proposed action be reasonably foreseen in statute. And for indirect effects or impacts, they must be approximate cause of the proposed action.

Ms. GOLDFUSS. Yes.

The CHAIRMAN. We are still together so far.

Ms. GOLDFUSS. Yes.

The CHAIRMAN. So you agree, then, that the scope of NEPA is not unlimited.

Ms. GOLDFUSS. Yes.

The CHAIRMAN. The rule of reason limits NEPA analysis to environmental information of use and relevance to the agency. In other words, the rule of reason, as interpreted by the courts, means that the agency cannot evaluate an environmental effect or impact where the agency has no ability to prevent a certain effect, due to its limited statutory authority over the relevant actions.

So, would you agree, then, that the draft guidance is bound by the limitations we just mentioned?

Ms. GOLDFUSS. Yes, it is bound by those limitations, and we have the ability to measure the greenhouse gas emissions of projects.

The CHAIRMAN. So that the draft guidance cannot suggest an agency go beyond the statutory jurisdiction in its NEPA analysis.

Ms. GOLDFUSS. Correct.

The CHAIRMAN. So, if the draft guidance is not withdrawn, there will be a clarification that an agency cannot perform a NEPA environmental review beyond its statutory jurisdiction limits, or the limits imposed by the courts?

Ms. GOLDFUSS. Are you—I have lost you now.

The CHAIRMAN. Obviously, the first question is—I would prefer you withdraw—

Ms. GOLDFUSS. Yes.

The CHAIRMAN [continuing]. The guidance. But, if not, there will be a clarification the agency cannot perform its NEPA environmental review beyond the statutory jurisdictional limits?

Ms. GOLDFUSS. I guess I am not sure why that would be needed. I mean the guidance does not change the underlying scope of the statute, and that would be true of any guidance that we put out. So, stating that it doesn't go beyond the underlying statute would not be necessary.

The CHAIRMAN. OK. Let me—and that, I think, is significant, where that jurisdiction becomes.

Let me ask just a couple of quick questions of individuals who are here.

Mr. Martella—well, actually, let me ask all of you. All of you mentioned talking about the downstream and upstream requirements in this guidance, that there is a need for clarification. Do I have any disagreement that what is upstream and downstream

should be clarified in some way? I think, Ms. Goldfuss, you said you would look at that.

Ms. GOLDFUSS. Correct.

The CHAIRMAN. I hope you do it.

Mr. Martella?

Mr. MARTELLA. Agree.

The CHAIRMAN. Dr. Christy?

Mr. Clark, I think you mentioned that, as well?

Mr. CLARK. I agree.

The CHAIRMAN. Mr. Martella, the social cost of carbon, is that easily definable?

Mr. MARTELLA. It is not. I don't think any one person could define it. As pointed out earlier, companies have different versions of it. The challenge here is a government has developed its own version of it, which has not been made transparent, has not gone through all the public participation processes that are so inherent in NEPA.

The CHAIRMAN. Well, as much as I have difficulty with trying to define that term, as well—maybe, Dr. Christy, I can ask you the same thing. Obviously, weather is different than climate. Is climate definable in the absolute or the historic?

Dr. CHRISTY. We have all kinds of information about what has happened in the past, so we have some sense about where we are at the present, and what changes are—how they relate to the past.

The CHAIRMAN. Well, I think many people, when they talk about climate, they actually think of weather, so that when it was raining back when I was back in Utah, and it was sunny here, in the 80s, and my friends were sending me pictures of them at the beach and I was upset about it, that is not the same thing.

Dr. CHRISTY. I think one of the real problems here is that weather events that get so much attention because of video availability, and so on, are somehow linked to this global climate change movement, when droughts, floods, all these things have always been going on.

The CHAIRMAN. But it seems, also, that this climate issue is pretty irrelevant, if there is no legal authority to act upon it, anyway.

Dr. CHRISTY. That would be up to you all to determine. I don't know about legal—

The CHAIRMAN. Let me just ask you, yes or no. I have 20 seconds left. Do you believe these guidances will produce more or less litigation in the future, based on these guidances?

Ms. Goldfuss, more or less?

Ms. GOLDFUSS. Less.

The CHAIRMAN. Mr. Martella?

Mr. MARTELLA. Significantly more, and especially while it is still hanging out there.

The CHAIRMAN. Dr. Christy?

Dr. CHRISTY. I don't know.

The CHAIRMAN. That is cheating.

[Laughter.]

The CHAIRMAN. Mr. Clark?

Mr. CLARK. There is litigation, there will be litigation now, absent this guidance. This guidance will help reduce that.

The CHAIRMAN. All right. I think, for my—he left? OK. For my final question, then—do you have any more questions, Mr. Grijalva?

Mr. GRIJALVA. One.

The CHAIRMAN. Go ahead.

Mr. GRIJALVA. Thank you, Mr. Chairman. One of the witnesses claimed that a key slide has been unchallenged, and I would like unanimous consent to enter into the record several peer-reviewed articles and reports that essentially debunk the contents and the methodology of that slide.

Those are for the record, six articles, including the Royal Society, the U.S. National Academy of Sciences, on and on and on. And I would enter those into the record, if there is no objection.

The CHAIRMAN. Without objection.

Mr. GRIJALVA. Thank you. The other is the question about the consensus around science, the 97 percent that is, the consensus deniers are saying that that is not true, that it is less than that, that it is the consensus—the information put forward is a defense of that robust number of that 97 percent that—the consensus on the basis of human-caused global warming, and basically, after continued analysis of the protocols, of the methodology, and reviewing everything that has been brought up as questions by deniers of this consensus, reaffirming that that 97 percent is correct.

In addition to that, studies—the National Academy of Science, 33 different countries, all endorsing this consensus, dozens of scientific organizations have endorsed the consensus. And only one has rejected the consensus, the American Association of Petroleum Geologists. Interesting. And even they have now shifted to neutral, when their members threatened to quit the organization if they continued to take such an unscientific position.

I mentioned those, and that, as well, into the record, with no objection.

Then my final question, Mr. Chairman, is for Ms. Goldfuss. Thank you very much for being here. Dr. Christy stated earlier that we shouldn't worry about sea-level rise caused by global warming, but scientists and economists estimated last year that sea-level rise was responsible for an additional \$2 billion in impacts to New York City. Other places across the country, like Virginia's Chesapeake Bay counties, and the Louisiana coast, are similarly at risk.

Doesn't it make sense to ensure that government at least isn't making the problem worse by buying a building, allowing a project to go forward, building flood protection where it is not going to do any good, and waste taxpayers' dollars? Isn't this the whole point of this guidance?

Ms. GOLDFUSS. Yes. All politics aside, we see local communities making these decisions on their own with the information that we can provide and that they have on their own.

As protectors of taxpayer dollars, it is our responsibility to recognize the climate is changing. This guidance will help us make smarter, more informed decisions, so that we don't waste taxpayer dollars, and that we have a stronger future.

Mr. GRIJALVA. I yield back, and thank you, Mr. Chairman.

The CHAIRMAN. Thank you. Let me ask, then, my last couple of questions, if I could. And since there was—I was going to object to the articles that were put in, because I also have three articles that discuss the 97 percent claim and the problems with it, about the consensus of the climate. So, with unanimous consent, I would like to put those in the record, as well.

This is going to be an entire magazine before we are done with this record.

Ms. Goldfuss, when do you expect these recommendations, your recommendations, to be finalized?

Ms. GOLDFUSS. I don't have an exact date. We are looking through the comments now. But we are working to do it swiftly.

The CHAIRMAN. Mr. Martella, does not having an exact date present a problem?

Mr. MARTELLA. It creates a problem, both for the agencies and for the courts. One of the risks here is, during the interim period, right now—we will go back to our hypothetical Forest Service. They are looking at this draft guidance, and they are doing work right now. If the guidance changes again in another revision, then they have already invested in something that is going to change. That is going to create more vulnerability for the courts.

The CHAIRMAN. All right. That is very helpful. There is one thing that just nags at me, though, that I would really like to do. You mentioned that you were born the year that NEPA passed.

Mr. MARTELLA. About 6 months later.

The CHAIRMAN. And signed by President Nixon?

Mr. MARTELLA. That is correct.

The CHAIRMAN. Who is doing penitence for it on the other side, already.

[Laughter.]

The CHAIRMAN. One of the things we ought to do, in all sincerity, is, instead of coming up with simple guidances, is simply reform NEPA so that we include this in statute, so it is very clear, and it goes through the congressional process, so they have input from every side in the congressional process, and we actually just fix the statute, as opposed to writing more regulations and more guidance. That is the proper approach to it. That should be the legislative approach to it. And it actually provides better opportunity for people to have input than simply providing comments.

In the future, that is one of the areas we should be looking toward, and that is one of the reasons why we will have more discussions on NEPA, as a document itself, going forward in the future. It needs to be revised in some way to fit the reality of today.

With that, I would like to thank the witnesses for coming here, and for providing the testimony that you have given. I appreciate it all. As we said, I appreciate your staying for almost 2½ hours to go through this process. Unfortunately, we did not have a chance to have every Member give questions that they had, but we will be working with that.

Those Members who may have additional questions, or were not able to ask questions, can submit them in writing for the record. And, under Rule 4(h), this hearing record will be open for 10 business days. We would ask, if those questions come forward, that we

be able to get responses from you for those particular questions in a timely manner.

And, with that, if there is no further business, with, once again, my expression of gratitude for you being here today, without objection, the committee stands adjourned.

[Whereupon, at 12:38 p.m., the committee was adjourned.]

[ADDITIONAL MATERIALS SUBMITTED FOR THE RECORD]

PREPARED STATEMENT OF THE HON. GRACE F. NAPOLITANO, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF CALIFORNIA

There is overwhelming scientific consensus on climate change. Over 97 percent of scientists that study the climate agree it is driven by human activity. Ignoring climate change will not make it go away. California's 32nd Congressional District has already experienced more severe wildfires, intense heat waves and an ongoing drought due to change in climate. It is important we work proactively to reduce the effects of climate change moving forward. I would like to introduce two articles for the record regarding climate change:

The first was published in the *New York Times* on April 28, 2015 and is titled "Air Pollution Tied to Brain Aging." It discusses the link between air pollution and the premature aging of the brain.

The second was published on *ScienceTimes.com* on April 28, 2015 and is titled "Extremely Hot Days—Why One Study Is Saying that Global Warming is to Blame." It discusses how extreme heat events will now occur in about 4 or 5 out of every 1,000 days. They used to only occur 1 out of every 1,000 days.

These articles were submitted for the record and are being retained in the Committee's official files.

PREPARED STATEMENT OF THE HON. GREGORIO KILILI CAMACHO SABLAN, A
DELEGATE IN CONGRESS FROM THE NORTHERN MARIANA ISLANDS

Mr. Chairman—Ask anyone in the Northern Mariana Islands today about the value of the National Environmental Policy Act of 1969 and I think you will find resounding support. Because today we are in the middle of reviewing a proposed expansion of activity by the U.S. military on property already leased from us on the island of Tinian and on public lands on the island of Pagan, where up until now the military has had no presence. If it were not for NEPA, the military might never have had to explain their plans to the public or estimate what the costs would be to our environment and way of life. And were it not for NEPA, the public would have had little or no opportunity to comment or criticize or question the impact of the military's plans.

Today's Natural Resources Committee hearing is intended to show that the National Environmental Policy Act is being abused by the Administration's new guidelines on inclusion of climate change effects in environmental reviews. Some members of the committee may say this is one more example of how NEPA stifles freedom.

I would disagree. It is true that NEPA review can be complex, tedious, slow. But most of the people I represent in the Northern Mariana Islands would say they appreciate the complexity and the thoroughness of the environmental impact statement that NEPA required the military to prepare for its proposed actions on Tinian and Pagan. Many of the people I represent, including the Governor of the Commonwealth and other elected officials, even argue that the process should be slower, should allow more time for the public and for technical and scientific experts to review the military's actions, which could have long-lasting and profound impact on our community.

Public meetings on Tinian and on the island of Saipan have been very well attended and the military will now have to take into consideration the comments of hundreds of residents, as well as the more formal responses from our government entities. But neither the lengthy exposition of the military's plans and the impacts of those plans contained in the draft EIS nor the opportunity for public review and comment might have occurred without the National Environmental Policy Act of

1969. This Act declaring that it is our national policy to protect our environment has stood the test of time. NEPA has proven its worth by forcing the Federal Government to explain the consequences of its actions in a way that must be thorough and transparent. And NEPA has proven its worth by empowering ordinary American—like my constituents today—to stand up to their government and say no, when government threatens to take actions that could damage our environment, or, as I call it, our home.

[LIST OF DOCUMENTS SUBMITTED FOR THE RECORD RETAINED IN THE COMMITTEE'S OFFICIAL FILES]

Submitted by Chairman Rob Bishop:

- Global Warming Alarmists Caught Doctoring '97-Percent Consensus' Claims—Forbes
- The Myth of the Climate Change '97%'—Joseph Bast & Roy Spencer
- About that overwhelming 97%–98% number of scientists that say there is a climate consensus—Anthony Watts

Submitted by Ranking Member Grijalva:

- UAH Misrepresentation Anniversary, Part 1—Overconfidence—SkepticalScience.com
- The Reproducibility of Observational Estimates of Surface and Atmospheric Temperature Change—*Science*
- Lapse in Understanding, This Week in Science—*Science*
- The Effect of Diurnal Correction on Satellite-Derived Lower Tropospheric Temperature—*Science*
- Satellite measurements of warming in the troposphere—SkepticalScience.com
- Santer et. al Catch Christy Exaggerating—SkepticalScience.com
- Fact Sheet for human and natural influences on the changing thermal structure of the atmosphere—Published in the *Proceedings of the U.S. National Academy of Sciences*
- Use of Internal Carbon Price by Companies as Incentive and Strategic Planning Tool—CDP North America
- Christy's Unconvincing Congressional Testimony—SkepticalScience.com
- The Cook et al. (2013) 97% Consensus Result is Robust—SkepticalScience.com
- Extremely Hot Days—Why One Study is Saying that Global Warming is to Blame—Sciencetimes.com
- Air Pollution Tied to Brain Aging—*The New York Times*
- Radiosonde Daytime Biases and Late-20th Century Warming—*Science*
- Climate Change Evidence & Causes—The Royal Society and the U.S. National Academy of Sciences

Submitted by Representative Lowenthal:

- Letter to CEQ Managing Director Christy Goldfuss re: GHG Guidance

Submitted by the White House Council on Environmental Quality:

- NEPA Modernization Efforts—The Last Five Years

