



**EDISON ELECTRIC
INSTITUTE**

July 26, 2006

Dr. Bill Brennan
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for International Affairs, National Oceanic
and Atmospheric Administration
and
Acting Director, Climate Change Science Program
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Re: Comments on Second Draft of Synthesis and Assessment Product 4.3: "The Effects of Global Change on Agriculture, Biodiversity, Land, and Water Resources," 71 Fed. Reg. 35636 (June 21, 2006)

Dear Dr. Brennan:

On July 21, 2006, the National Oceanic and Atmospheric Administration (NOAA) published the above-referenced notice of the availability of the draft Prospectus of the U.S. Climate Change Science Program (CCSP) for a Synthesis and Assessment Product (SAP), titled "4.3: The Effects of Climate Change on Agriculture, Biodiversity, Land, and Water Resources" for public comment. The notice refers to "[d]etailed instructions for making comments on the Draft" and explains that "[a]fter consideration of comments received" on the Draft, "the final Prospectus along with the comments received will be published on the CCSP web site." The notice also specifies that such comments "must be received by July 21, 2006." However, a separate web document notes that the notice "incorrectly closes the review period on 21 July" and your "Dear Colleague" letter of invitation for comments states that "**Comments are due by 26 July 2006.**"

The Edison Electric Institute (EEI) appreciates the notice, the correction and the opportunity to submit comments on the draft Prospectus for SAP-4.3.

EEI is the association of U.S. shareholder-owned electric companies, international affiliates and industry associates worldwide. EEI's U.S. members serve more than 95 percent of all customers served by the shareholder-owned segment of the

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industry, generate more than 70 percent of all electricity in the country, and serve nearly 70 percent of all ultimate customers in the nation. EEI also has long been a participant in matters related to climate change science and its assessments, particularly as observers to the Framework Convention on Climate Change sessions of its Conference of the Parties and its Subsidiary Body for Scientific and Technological Advice and to the Intergovernmental Panel on Climate Change sessions.

Enclosed are EEI's comments in accordance with the CCSP Instructions. If the CCSP, NOAA or the Department of Agriculture, which is the lead agency for this SAP, have any questions about these comments, please contact me at (202) 508-5617 (bfang@eei.org); or Eric Holdsworth at (202) 508-5103 (eholdsworth@eei.org).

Sincerely,



William L. Fang
Deputy General Counsel and
Climate Issue Director

WLF:hl

Enclosure
cc (w/ enc)

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**EDISON ELECTRIC INSTITUTE COMMENTS ON
DRAFT PROSPECTUS FOR SAP 4.3, “THE EFFECTS OF
CLIMATE CHANGE ON AGRICULTURE, BIODIVERSITY,
LAND, AND WATER RESOURCES”**

July 26, 2006

I. Background Information

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II. General Comments

A. First General Comment

EEI is puzzled by the designation in the SAP title (and sometimes elsewhere in the draft) of the words “agriculture” and “biodiversity” as “resources.” In the SAP title, “agriculture,” “biodiversity,” “land” and “water” are all characterized as “resources.” Clearly “land” and

¹ EEI is the association of U.S. shareholder-owned electric companies, international affiliates and industry associates worldwide. EEI’s U.S. members serve more than 95 percent of all customers served by the shareholder-owned segment of the industry, generate more than 70 percent of all electricity in the country, and serve nearly 70 percent of all ultimate customers in the nation. EEI has long been a participant in matters related to climate change science and its assessments, particularly as observers to the Framework Convention on Climate Change sessions of its Conference of the Parties and its Subsidiary Body for Scientific and Technological Advice and to the Intergovernmental Panel on Climate Change sessions.

“water” are resources. However, we question the designation of either “agriculture” or “biodiversity” as a “resource.”²

In the draft, they are also sometimes referred to as “resources” (*e.g.*, “The resources that will be addressed in this product include;” p. 2, lines 4-5). In some cases the draft also refers to “systems,” which, in some contexts, seems also to mean agriculture, etc. However, land and water are not generally viewed as “systems.”

The draft also uses the formulation “agriculture, land resources, water resources, and biodiversity” (*e.g.*, p. 2, lines 7-17; p. 3, questions 1 and 5). This is the better formulation from both a substantive and technical standpoint.

In any event, both the SAP title and the draft need clarification.

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B. Second General Comment

According to the draft (p. 1 n. 1), the CCSP “agreed” on July 15, 2005, to “modify its SAP list to explicitly incorporate coverage of all assessment areas listed under section 106 of the Global

² Random House Webster’s College Dictionary (2^d ed. 1997) defines “agriculture” to mean “the science, art, or occupation concerned with cultivating land, raising crops, and feeding, breeding and raising livestock; farming”; and “biodiversity” to mean “diversity of plant and animal species in an environment” (pp. 21-27 and 132).

Change Research Act.” As a result, SAP 4.3 was changed from a focus “on the relationship between observed ecosystem changes and climate change” to a “focus on effects of climate change on agriculture, biodiversity, land and water resources.” The draft explains (p. 1) that “[t]hese areas are addressed under the ecosystems, land use, and water research elements of the CCSP; that “[o]ne of the primary goals these research elements had is to enhance understanding and the ability to estimate impacts of future climate change on these systems;” and that the SAP-4.3 “report will focus on our ability to identify, observe, and monitor the stresses that influence agriculture, biodiversity, land and water resources” (emphasis added).

EEI welcomes this change of “focus,” especially with respect to its emphasis on “water resources” and “water research,” as water is very important to the operation of the electric utility facilities of EEI’s members and to energy development and use generally. We fully agree that if the report is able to “be the synthesis of information on resource conditions, observation systems, and monitoring capabilities that can be used to gauge future change,” it has the potential of providing a “lasting contribution” that could be very important to our economic sector as well as others.

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C. Third General Comment

The draft explains (p. 1) that the “potential scope of the material in SAP-4.3 is very broad” and thus proposes to limit the scope first to “an assessment of the United States” and then to a

“timeframe of interest. . .weighed toward the near term (e.g., the next 20-30 years)” (emphasis added).

While we would generally agree that a limitation to the U.S. is probably more appropriate for agriculture, biodiversity and possibly land resources, we question whether it is appropriate for water resources, particularly since many of the sources of water for a wide variety of uses -- including agriculture, recreation, residential use and energy -- in the U.S. are shared by Canada, such as the Great Lakes and the Columbia River. Similarly, Mexico is important regarding the supply and use of water of the Colorado River and, of course, the Rio Grande borders the U.S. and Mexico. Indeed, it is our understanding that there are several international agreements with both Canada and Mexico regarding these and other waterways that address issues of supply, accessibility, quality and quantity of water, as well as other issues.

Regarding the proposed time frame, a “near term” focus may be more relevant and realistic, although 20-30 years is too short with respect to water resources and energy use and development, particularly since generation facilities and other energy projects generally operate economically for longer periods. Therefore, 40-50 years may be a more appropriate time frame.³

³ In discussing the challenges of separating the “effects of climate change from those due” to “human activities” regarding water, the draft states (p. 2) that they “are made all the more problematic by the current paucity of long-term monitoring data and information” (emphasis added). It is unclear whether the report with its “near term” scope would help to address that “long-term” need.

As to both the time frame and geographic application, the draft states (p. 1) that “[o]ver the past several decades, numerous scientific assessment reports have described and discussed historical and potential impacts of climate change and climate variability on managed and unmanaged systems and their constituent biota and processes” and that “[t]his report will build on recent assessment.” (emphasis added). The draft indicates (p. 1 n. 2) that “[a] description of relevant assessments and reports is included in section 7 of this Prospectus.” Indeed, section 7 states that “[t]his CCSP product will draw on” assessments of, for example, “the Intergovernmental Panel on Climate Change (IPCC)” and that it “is expected that this CCSP product will provide input to future IPCC assessments” (emphasis added).

It is unclear what it means to “build on” such assessments. Moreover, it is our understanding that the IPCC assessments cover much longer time frames than “20-30 years” or the “near-term.” Accordingly, we have some difficulty understanding how this limited scope report could “build on” and “draw on” such “recent assessments” that have a far broader scope from a time stand point. Furthermore, their geographic application is also far broader. They are not focused regionally, let alone on one country, such as the U.S. They are, in essence, global. Indeed, we question whether such assessments will be particularly helpful with respect to the focus on water resources.

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D. Fourth General Comment

The draft states (p. 2) that “[w]e do not anticipate that the report will include specific scenarios of future conditions. Rather, the report will highlight the changes in resource conditions that recent scientific studies suggest are most likely to occur in response to climate change, and when and where to look for these changes.”

While we generally agree that a report whose scope is limited to the “near term” probably should not include “specific scenarios,” the alternative – namely, reliance on “recent scientific studies” in the context of water resources – is unclear. As the draft points out, “[c]ompetition for water is driven by many factors that have little to do with climate change, including development and population growth.” While the draft states that the “availability” of water “could also be affected” by climate change and that demand “could change in response to higher temperatures and supply could change due to changes in precipitation volume and timing,” it nevertheless adds that “[i]t is difficult to separate the effects of climate change from those due to these other human factors” and that “[t]hese challenges are made all the more problematic by the current paucity of long-term monitoring data and information for most managed and unmanaged system types” (emphasis added). The draft goes on to note a number of actions that will be taken to highlight where the expected effects of climate change should be seen.⁴

⁴ One factor not highlighted in the SAP was referred to in the New York Times article “Weather Report” on July 15, 2006 (p. B11):

Focus: Asphalt Desert Phoenix had a record warm night late Wednesday and early yesterday when the temperature fell no longer than 93 degrees. On July 15, 2003, the city had its hottest night on record, when the mercury failed to fall below 96 degrees. Phoenix has grown vastly in the last 25 years. Desert terrain has been covered by concrete and asphalt, which absorbs and retains additional heat. Infrared satellite

While reliance on “recent scientific studies,” peer-reviewed literature, interpretation of data and the other actions highlighted in the draft may be useful for agriculture, biodiversity and land resources, it is unclear how they will “highlight changes” regarding water resource “conditions” because of the difficulty, as recognized by the draft, of separating the possible “effects” of climate change from those “due to” human factors. The draft needs to be expanded in this regard.

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III. Specific Comments

A. Page 4, lines 9-36

Regarding the focus on water resources, for SAP 4.3 the Department of Agriculture (USDA) has been designated as the “Lead” agency and that several other federal agencies are listed in the draft as “Supporting Agencies.” These include the Department of Energy, which we agree should have a significant role in light of its energy expertise. We agree also with the inclusion of the U.S. Geological Survey (USGS), which is a constituent agency of the Department of the Interior. However, the Interior Department’s capabilities and responsibilities, especially regarding land and water resources and their relevance to energy needs, go beyond those of the USGS. It has several other constituent agencies, such as the Bureau of Land Management, Bureau of Reclamation, U.S. Fish and Wildlife Service and Western Area Power Administration,

pictures show that the official thermometer at Sky Harbor Airport is near the hottest part of the Phoenix area, at the center of the large expanse of asphalt.
(Emphasis added.)

which have significant responsibilities and expertise regarding the management of these resources and their use and application for energy development and utilization and other purposes. Similarly, the absence of the Army Corps of Engineers, which also has significant water supply and management capabilities, is noteworthy. In short, it is unclear why the Interior Department and the Corps of Engineers are not also listed as “Supporting Agencies.” They should be.

As to the term “water resources,” the draft lists (p. 2) “Supply” and “Quality” to be “addressed.”⁵ The list could be expanded to include addressing of both the words “accessibility” and “quantity.”⁶

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B. Page 3, line 26 and page 5, line 45 to line 1, page 6

In section 1.1, the draft states that the “report will be based on an objective evaluation of the peer-reviewed literature (p. 3, line 26). However, section 3 first reiterates that the “authors will base all their writing” on “peer-reviewed literature.” It then adds the criteria that such literature

⁵ Random House Webster’s College Dictionary (2^d ed. 1997) defines (p. 1295) “supply” to mean “1. to furnish or provide. . .with what is lacking or requisite: “*supplying the poor with clothing*,” which suggests an action by someone to provide the resource to the user, while the word “accessible” is defined (p. 8) to mean “3. obtainable; attainable”, which suggests an action by the user.

⁶ The draft lists (p.2) the four “resources” to “be addressed in this product”. However, the list is preceded by the word “include” (p. 2, line 5), which suggests that the list could be expanded in preparing the SAP. We presume from the SAP title that the CCSP does not intend such an expansion and suggest that the word “include” be changed to a more limiting word such as “are:”.

must be “published” and “scientific” (p. 5, lines 45-46). Finally, it provides an exception that “[h]ighly relevant non-peer reviewed literature may be used with permission from USDA and the CCSP” (p. 5, line 46 to p. 6, line1) (emphasis added).

This appears to be a very broad exception. Indeed, the only criterion is that the literature must be “[h]ighly relevant,” which is open-ended. It is silent as to whether such literature must be both “published” and “scientific.” The requirement of permission is helpful, but with the criteria so open-ended that requirement is not likely to be very meaningful.

While the procedures for the preparation of reports of the IPCC recognize that some relevant sources “have not been published or peer-reviewed (e.g., industry journals, internal organizational publications, non-peer reviewed reports or working papers of research institutions, proceedings of workshops, etc.),” we do not know from the draft what types of sources the CCSP has in mind with this broad exception. There is a need for a better explanation of the reasons for relying on such sources as well as more objective criteria for utilizing them. In addition, the source reference sections of the report should clearly distinguish between sources that are published, peer-reviewed and scientific from other sources that are not scientific, not published and not peer-reviewed.

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C. Page 4, lines 40 through page 5, line 35

Section 3 of the draft states (p. 4) that “[g]iven the breadth of the SAP 4.3,” USDA “foresees significant benefit from cooperation between federal, academic, and private scientists and researchers in producing the report” and explains in some detail the “benefit” of the report to public and private organizations (emphasis added). It then states (p. 5):

The production of the document will be best served by an exchange of resources and substantial involvement between USDA, other federal agencies, and a cooperator (including activities such as drafting, providing reviews, financial assistance, and technical input). Based on these considerations, USDA decided to pursue the production of this report through a cooperative agreement.

Development of SAP 4.3 will require an interdisciplinary group of lead and supporting authors with expertise and experience directly related to the subject matter. The cooperator, in coordination with USDA, will select a convening lead author and lead authors for each chapter of the report, consistent with the . . . required expertise. The public may submit nominations for consideration.

* * * *

USDA will publish the biographical information for the convening lead author and lead authors in a Federal Register notice.

The convening lead author and lead authors for each chapter of the report—organized by the cooperator, will draft answers to the five key questions addressed in the product.

(Emphasis added.)

While we do not question that there could be significant benefits to a wide variety of organizations, both public and private and including business and industry, from this SAP 4.3 report, it does not follow that those “considerations” justify or support a decision by the USDA -- which from the context the draft has apparently already been made -- “to pursue the production

of the report through a cooperative agreement.” In addition, while we could agree that the “production of the document” could be well-served “by an exchange of resources and substantial involvement” of USDA and other “Federal agencies,” it does not necessarily follow that such “production” is also “best served” by a “cooperator.” To our knowledge, the several other CCSP SAPs have not engaged private contractors for the development of reports.

Moreover, the draft fails to either explain the criteria for engaging a “cooperator” by cooperative agreement or indicate when and how that person or entity was or could be selected.

Clearly, such a person or entity should not be involved in any way with drafting,” “providing reviews” or providing “technical input.” As to the reference to “financial assistance,” we do not understand what financial assistance could be provided by such cooperator or why it is needed. In short, the use of a cooperator is not sound and should be abandoned.

Further, it is our understanding from our review of other SAP prospectuses that it has normally been the role of the lead federal agency and the supporting agencies to select the lead and supporting authors; list them in the draft Prospectus with their curriculum vitas, publications, etc.; and provide an opportunity for public comment thereon. As to this SAP, it appears that the USDA and the CCSP are proposing to deviate from the normal CCSP practice and to transfer this responsibility from federal agencies to a “cooperator,” who presumably is not a federal official. It is inappropriate for a non-federal entity or person, even through a USDA contractor, to “select” any of the authors or for USDA/CCSP to circumvent public involvement in the

selection. Publication as a *Federal Register* notice of the authors after selection does not afford the public an opportunity to comment thereon, which has been the practice for most, if not all, other SAPs.

As to stakeholder interaction, the draft states (p. 6) that USDA:

will provide guidance to the cooperator regarding solicitation of additional input from a broader group of stakeholders at the beginning of the drafting process. This could involve convening a focused stakeholder workshop, soliciting stakeholder input through a structured e-mail or web-based process or survey, or other appropriate process. This input, together with other input received from sources noted above will be considered carefully in defining the scope, organization, content, and expectations for the product.

(Emphasis added.)

However, the draft is silent as to what that USDA “guidance” might be or whether it will be public. As stakeholders, EEI and our members have an interest in knowing it now. More importantly, we again do not understand why USDA wants to impose a “cooperator” between the agencies and stakeholders, particularly if the cooperator has freedom to decide who may provide “input” and when pursuant to some unstated guidance.

D. Page 7, line 45-page 8, line 1

As to the third draft of the SAP, the draft notes that “[i]f needed, the Natural Research Council (NRC) will be asked to provide additional scientific analysis to bound scientific uncertainty associated with specific issues” (emphasis added). It does not indicate what those “issues” may be or specify the time allotted for such NRC input. We understand that the third draft occurs after the second draft has been developed and peer-reviewed and has been subjected to a 45-day

public comment period, “taking into consideration the comments submitted during” the public period for the second draft.

We seriously question the need for, or the appropriateness of, any role by the NRC, particularly after the public comment period. If there is a need for NRC input, it should take place before public review of the second draft so the public may comment on the draft as affected by the NRC. However, if “scientific uncertainty” needs to be “bounded,” it should be by the SAP authors, not the NRC. Presumably, they will be selected by the USDA and supporting agencies for their scientific expertise and their capacities to perform such a function. Thus, there should not be a need for NRC input, which in addition we understand does not provide such analysis free of charge.