

Kolevar, Kevin

b(5)

**From:** Palmieri, Tom  
**Sent:** Monday, July 16, 2001 2:24 PM  
**To:** Kolevar, Kevin; Longworth, Paul  
**Subject:** PROPOSED MEETING WITH GENERAL ATOMICS

Kevin, Paul,

I would like to send the attached note, set up a meeting as described, and invite the people listed below.

Could you please advise whether you think the meeting is appropriate?

Thanks,

Tom Palmieri

b

We hope that you can attend.

Thanks,

Tom Palmieri

Attendees would be:

Troy Timmons  
Kevin Kolevar  
Paul Longworth  
Ed Siskin - NN  
Bill Magwood - NE  
Gail Marcus - NE  
Mark Joseph - CR  
Jon Rigby - CR

b(5)

Kolevar, Kevin

From: dhowell@ta.doc.gov%internet [dhowell@ta.doc.gov]  
Sent: Monday, June 18, 2001 5:11 PM  
To: Bruce.Mehman@ta.doc.gov%internet  
Cc: Kolevar, Kevin; Cesar\_Conda@ovp.eop.gov%internet; John.Sargent@ta.doc.gov%internet  
Subject: Re: Looking for Energy data



Electricity  
Consumption.htm

David Howell  
PNGV Secretariat  
Phone: (202) 482-6263  
Fax: (202) 482-6275

U.S. Department of Commerce  
Technology Administration  
Room 4845  
14th Street & Constitution Ave., NW  
Washington DC 20230

Bruce Mehman

Howell/TA/TADOC@TADOC, John  
06/18/01  
kevin.kolevar@HQ.DOE.GOV,  
01:13 PM

To: David  
Sargent/TA/TADOC@TADOC,  
Cesar\_Conda@ovp.eop.gov

Bruce P. Mehlman  
Assistant Secretary for Technology Policy  
U.S. Department of Commerce  
mehlman@ta.doc.gov  
Ph: (202) 482-5687  
Fax: (202) 482-4817

45)

**Kolevar, Kevin**

---

**From:** O'Donovan, Kevin  
**Sent:** Tuesday, June 19, 2001 7:03 PM  
**To:** "E\_Holly\_Fitter@omb.eop.gov" <SMTP:E\_Holly\_Fitter@omb.eop.gov> at DOEHQ%hq;  
"Lori\_A\_Krauss@omb.eop.gov" <SMTP:Lori\_A\_Krauss@omb.eop.gov> at DOEHQ%hq;  
O'Donovan, Kevin  
**Cc:** Whatley, Michael; Kolevar, Kevin  
**Subject:** RE: EPA Comments on DOE (Blake) testimony on Energy Policy a

I included the text on boutique fuels as written in the below email and NEP.

-----Original Message-----

**From:** E\_Holly\_Fitter@omb.eop.gov [mailto:E\_Holly\_Fitter@omb.eop.gov]  
**Sent:** Tuesday, June 19, 2001 1:30 PM  
**To:** Lori\_A\_Krauss@omb.eop.gov; O'Donovan, Kevin  
**Subject:** EPA Comments on DOE (Blake) testimony on Energy Policy and the Economy

More to come

----- Forwarded by E. Holly Fitter/OMB/EOP on  
06/19/2001  
01:30 PM -----

{Embedded  
image moved Meni.Reynold@epamail.epa.gov  
to file: 06/19/2001 01:25:53 PM  
PIC20652.PCX}

Record Type: Record

To: E. Holly Fitter/OMB/EOP

cc:

Subject: EPA Comments on DOE (Blake) testimony on Energy Policy and the

5

16329

DOE017-0952



6751

**Kolevar, Kevin**

---

**From:** deForest, Alicia  
**Sent:** Tuesday, June 12, 2001 7:16 PM  
**To:** Hutto, Chase  
**Cc:** Kolevar, Kevin  
**Subject:** RE: faca

Hi Chase,

Mr. Fygi's edits:

**NEPDG and FACA**

6751

-----Original Message-----

**From:** Hutto, Chase  
**Sent:** Tuesday, June 12, 2001 5:21 PM  
**To:** Kolevar, Kevin; Fygi, Eric  
**Subject:** faca

one more change to the staff section. Kevin-GC is taking a look, please put this in as a placeholder.

chase

**16331**

<< File: NEPDG and FACA.doc >>

6(5)

Kolevar, Kevin

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**From:** Kelliher, Joseph  
**Sent:** Tuesday, June 12, 2001 3:33 PM  
**To:** Kolevar, Kevin  
**Subject:** RE: NEP specificity

**Importance:** High



spec1.doc

—Original Message—

**From:** Kolevar, Kevin  
**Sent:** Tuesday, June 12, 2001 1:20 PM  
**To:** Kelliher, Joseph  
**Subject:** NEP specificity

Handwritten initials or mark.



b(1)

Kolevar, Kevin

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**From:** McSlarrow, Kyle  
**Sent:** Tuesday, June 05, 2001 11:11 AM  
**To:** 'Rob Goldston'; Kolevar, Kevin  
**Cc:** Decker, James; Weakley, Ben; Davies, Anne  
**Subject:** RE: Fusion Overview, Budget Needs

-----Original Message-----

**From:** Rob Goldston [mailto:rgoldston@pppl.gov]  
**Sent:** Tuesday, June 05, 2001 11:01 AM  
**To:** Kolevar, Kevin; McSlarrow, Kyle  
**Cc:** Decker, James; Weakley, Ben; Davies, Anne  
**Subject:** Fusion Overview, Budget Needs

b(5)

**Kolevar, Kevin**

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**From:** Rob Goldston [rgoldston@pppl.gov]  
**Sent:** Tuesday, June 05, 2001 11:01 AM  
**To:** Kolevar, Kevin; McStarrow, Kyle  
**Cc:** Decker, James; Weakley, Ben; Davies, Anne  
**Subject:** Fusion Overview, Budget Needs



Fusion Overview, ATTACHMENT.TXT  
June 2001.pdf...

(b)(3)



"McDonald, Sean C" <sean@pnl.gov> on 05/01/2001 03:44:28 PM

To: Jerry Dion/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE  
cc: John D Ryan/EE/DOE@DOE, John Talbott/EE/DOE@DOE, "Nicholls, Andrew K" <ak.nicholls@pnl.gov>  
Subject RE: Climate Change Technology Paper

-----Original Message-----

From: Jerry.Dion@ee.doe.gov [mailto:Jerry.Dion@ee.doe.gov]  
Sent: Tuesday, May 01, 2001 3:27 PM  
To: Darrell.Beschen@ee.doe.gov; MaryBeth.Zimmerman@ee.doe.gov  
Cc: John.D.Ryan@ee.doe.gov; John.Talbott@ee.doe.gov; McDonald, Sean C; Nicholls, Andrew K  
Subject: Re: Climate Change Technology Paper

Darrell,

Here is a shot at the assignment, thanks to Messers Nicholls and McDonald of PNNL, with minor massaging by me.

Jerry

(See attached file: Existing and Breakthrough Buildings Technology.doc)

MaryBeth Zimmerman  
04/30/2001 04:46 PM

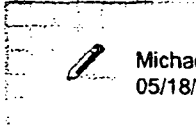
To: John D Ryan/EE/DOE@DOE, John Talbott/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE  
cc:

Subject: Climate Change Technology Paper

16349

DOE017-0972

(b)



Michael York  
05/18/2001 11:27 AM

(b)(5)

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject:

My apologies, the language below is directly out of one of the recommendations in the NEP. So, we could use this...

New language to use instead of saying

**DARRELL BESCHEN**

05/18/2001 11:30 AM

(b)(3)

To: MaryBeth Zimmerman/EE/DOE@DOE, Tom Kimbis/EE/DOE  
cc:

Subject: Revised NEP Response

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Forwarded by Darrell Beschen/EE/DOE on 05/18/2001 11:27 AM



Jerry Dion

05/18/2001 11:13 AM

---

To: Darrell Beschen/EE/DOE@DOE  
cc: Mark Ginsberg/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Edward Pollock/EE/DOE@DOE

Subject: Revised NEP Response

Darrell,

Here is BTS response with requested modifications.



NEP BTS Chart Response V2

Jerry

16352

DOE017-0975

**DARRELL BESCHEN**


05/18/2001 01:35 PM

To: MaryBeth Zimmerman/EE/DOE@DOE, Tom Kimbis/EE/DOE  
cc:

Subject: Re: National Energy Policy Recommendations of Particular Interest to EERE

i suggest we

----- Forwarded by Darrell Beschon/EE/DOE on 05/18/2001 01:33 PM -----

 Raymond LaSala  
05/18/2001 11:59 AM

To: Wendy Butler/EE/DOE@DOE, Darrell Beschon/EE/DOE@DOE  
cc: Patrick Booher/EE/DOE@DOE, Gloria Elliott/EE/DOE@DOE, Peter Goldman/EE/DOE@DOE

Subject: Re: National Energy Policy Recommendations of Particular Interest to EERE

Dear Wendy and Darrell,




Here is the requested input for the Geothermal Program: NEP OPT Chart

Please note that we have added (at the bottom of the table) some additional elements from the NEPD that were not included in Darrell's table.

Ray LaSala  
EE-12

Peter Goldman


 Peter Goldman  
05/18/2001 09:17 AM

To: Jack Cadogan, Thomas Hall/EE/DOE@DOE, Phil Dougherty/EE/DOE@DOE, Susan Norwood, Allan Jelacic/EE/DOE@DOE, Raymond LaSala/EE/DOE@DOE  
cc:

Subject: National Energy Policy Recommendations of Particular Interest to EERE

even more....

----- Forwarded by Peter Goldman/EE/DOE on 05/18/2001 09:16 AM -----

 Robert Dixon  
05/18/2001 08:45 AM

To: Peter Goldman/EE/DOE@DOE, James Rannels/EE/DOE@DOE, Don Richardson/EE/DOE@DOE, James Daley/EE/DOE@DOE, Patricia Hoffman/EE/DOE@DOE, Thomas Sacco/EE/DOE@DOE  
cc:

16353

DOE017-0976

**DARRELL BESCHEN**

05/18/2001 01:43 PM

(b)(5)

To: MaryBeth Zimmerman/EE/DOE@DOE, Tom Kimbis/EE/DOE  
cc:

Subject: biopower input for NEP

----- Forwarded by Darrell Besch/EE/DOE on 05/18/2001 01:41 PM -----

Raymond Costello on 05/18/2001 12:04:44 PM



To: Patrick Booher/EE/DOE@DOE, Gloria Elliott/EE/DOE@DOE, Darrell Besch/EE/DOE@DOE, Tom  
Kimbis/EE/DOE@DOE  
cc: Don Richardson, Paul Grabowski

Subject: biopower input for NEP

As requested, please see the attached.  
Ray

----- Forwarded by Raymond Costello/EE/DOE on 05/18/2001 12:03 PM -----

"Karen Clark" <karen5422@yahoo.com> on 05/18/2001 11:53:26 AM



To: Raymond Costello/EE/DOE@DOE  
cc:

Subject: biopower input for NEP  
:

---

Do You Yahoo!?

Yahoo! Auctions - buy the things you want at great prices  
<http://auctions.yahoo.com/>




- NEP OPT Chart\_Biopower.xls

16354

DOE017-0977



(b)(3)

 Tom Kimbis  
05/18/2001 04:21 PM


To: Darrell Beschen/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: Re: Revised NEP Response 


I switched it to 123,000 on reco 2.3  
DARRELL BESCHEN

**DARRELL BESCHEN**  
05/18/2001 03:40 PM

To: MaryBeth Zimmerman/EE/DOE@DOE, Tom Kimbis/EE/DOE  
cc:

 Gail McKinley  
05/18/2001 12:16 PM

To: Jerry Dion/EE/DOE@DOE  
cc: Darrell Beschen/EE/DOE@DOE, Mark Ginsberg/EE/DOE@DOE, Edward Pollock/EE/DOE@DOE, Ronald Shaw/EE/DOE@DOE, Faith Lambert/EE/DOE@DOE, Mark Bailey/EE/DOE@DOE, Gregory Reamy/EE/DOE@DOE

Subject: Re: Revised NEP Response 



Christina Kielich@HQMAIL on 05/21/2001 03:23:29 PM

(b)(6)

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL  
cc:

Subject: RE: Public Affairs Request -- NEP Recommendations

Mary Beth, can you please define / expand upon this phrase in the release; I'm working on this at Lisa's request.

Thanks:

-----Original Message-----

From: MaryBeth Zimmerman  
Sent: Friday, May 18, 2001 6:29 PM  
To: Cutler, Lisa; Kielich, Christina  
Cc: Haspel, Abe; Butler, Wendy; Sullivan, John; Jeffery, Nancy; McCabe, Michael; Beschen, Darrell; Kimbis, Tom  
Subject: Re: Public Affairs Request -- NEP Recommendations

Wendy Butler  
05/17/2001 05:22 PM

To: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Michael McCabe/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE, William Parks/EE/DOE@DOE, Mark Ginsberg/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Edward Pollock/EE/DOE@DOE, Denise Swink/EE/DOE@DOE, Robert Brewer/EE/DOE@DOE, Tom Gross/EE/DOE@DOE, Richard Moorer/EE/DOE@DOE, Elizabeth Shearer/EE/DOE@DOE, Joan Glickman/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE

cc:

Subject: Public Affairs Request -- NEP Recommendations

----- Forwarded by Wendy Butler/EE/DOE on 05/17/2001 05:19 PM -----

Wendy Butler  
05/17/2001 05:19 PM

To: Lisa Cutler@HQMAIL @ HQDOE

16356

DOE017-0979

(b) (3)

cc:

Subject: Re: FW: Energy Plan

Lisa--

We understand and are preparing the materials, as requested, with one exception: the ~~EERE~~

Lisa Cutler@HQMAIL on 05/17/2001 04:39:07 PM

To: Wendy Butler/EE/DOE@DOE@HQMAIL  
cc:

Subject: FW: Energy Plan

Wendy et al,

Thanks in advance for your help on this assignment.

6

<< File: ATTACHMENT.TXT >> << File: NEP EVENT CHART.xls >>

16357

DOE017-0980



Christina Kielich@HQMAIL on 05/21/2001 03:36:50 PM

(b)(5)

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, Christina Kielich@HQMAIL  
cc:

Subject: RE: Public Affairs Request - NEP Recommendations

Also, we'll need a website to refer people to for more information, in this release.

Thanks, Chris

-----Original Message-----

From: Kielich, Christina  
Sent: Monday, May 21, 2001 3:23 PM  
To: Zimmerman, MaryBeth  
Subject: RE: Public Affairs Request -- NEP Recommendations

Mary Beth, can you please define / expand upon this phrase in the release; I'm working on this at Lisa's request.

Thanks:

-----Original Message-----

From: MaryBeth Zimmerman  
Sent: Friday, May 18, 2001 6:29 PM  
To: Cutler, Lisa; Kielich, Christina  
Cc: Haspel, Abe; Butler, Wendy; Sullivan, John; Jeffery, Nancy; McCabe, Michael; Beschon, Darrell; Kimbis, Tom  
Subject: Re: Public Affairs Request -- NEP Recommendations

Attached is a *draft* response to your requests regarding EERE program activities and their relationship to the NEP recommendations.

<< OLE Object: Picture (Device Independent Bitmap) >>

Wendy Butler  
05/17/2001 05:22 PM

To: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Michael McCabe/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE, William Parks/EE/DOE@DOE, Mark Ginsberg/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Edward Pollock/EE/DOE@DOE, Denise Swink/EE/DOE@DOE, Robert Brewer/EE/DOE@DOE, Tom Gross/EE/DOE@DOE, Richard Moorer/EE/DOE@DOE, Elizabeth Shearer/EE/DOE@DOE, Joan Glickman/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE, Darrell Beschon/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE

16358

DOE017-0981

cc:

Subject: Public Affairs Request - NEP Recommendations

6/31

----- Forwarded by Wendy Butler/EE/DOE on 05/17/2001 05:19 PM -----

<< OLE Object: Picture (Device Independent Bitmap) >>

Wendy Butler  
05/17/2001 05:19 PM

To: Lisa Cutler@HQMAIL @ HQDOE  
cc:

Subject: Re: FW: Energy Plan

Lisa-

We understand and are preparing the materials, as requested, with one exception: the EERE.

<< OLE Object: Picture (Device Independent Bitmap) >>

Lisa Cutler@HQMAIL on 05/17/2001 04:39:07 PM

To: Wendy Butler/EE/DOE@DOE@HQMAIL  
cc:

Subject: FW: Energy Plan

Wendy et al,

Thanks in advance for your help on this assignment.

We are hoping to complete this task for the entire department by COB Friday; so would like to get as much information from the programs as possible by 1 p.m. Friday.

Call if there are any questions. I can be reached at 586-5806.

Many thanks,

16359

DOE017-0982

Lisa Cutler

<< File: ATTACHMENT.TXT >> << File: NEP EVENT CHART.xls >>

**16360**

DOE017-0983

b)(5)

Patricia Hoffman 05/21/2001 05:02 PM

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To: MaryBeth Zimmerman/EE/DOE@DOE, Michael McCabe/EE/DOE@DOE, Christina Kielich@HQMAIL@HQDOE

cc:

Subject: RE: Public Affairs Request – NEP Recommendations 

without knowing the context in which the statement was taken...hope this helps.

MaryBeth Zimmerman



MaryBeth Zimmerman

05/21/2001 04:22 PM

---

To: Patricia Hoffman/EE/DOE@DOE  
cc: Michael McCabe/EE/DOE@DOE

Subject: RE: Public Affairs Request – NEP Recommendations

Pat, can you provide your preferred phrase for DER & a web reference site? Please forward to Christina through Mike McCabe or I.

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 05/21/2001 04:20 PM -----

Christina Kielich@HQMAIL on 05/21/2001 03:23:29 PM



To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL  
cc:

Subject: RE: Public Affairs Request – NEP Recommendations

Mary Beth, can you please define / expand upon this phrase in the release; I'm working on this at Lisa's request.

Thanks:

16361

DOE017-0984

(b)(3)

-----Original Message-----

From: MaryBeth Zimmerman  
Sent: Friday, May 18, 2001 6:29 PM  
To: Cutler, Lisa; Kielich, Christina  
Cc: Haspel, Abe; Butler, Wendy; Sullivan, John; Jeffery, Nancy; McCabe, Michael; Beschen, Darrell; Kimbis, Tom  
Subject: Re: Public Affairs Request -- NEP Recommendations

Attached is a **draft** response to your requests regarding EERE program activities and their

Wendy Butler  
05/17/2001 05:22 PM

To: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Michael McCabe/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE, William Parks/EE/DOE@DOE, Mark Ginsberg/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Edward Pollock/EE/DOE@DOE, Denise Swink/EE/DOE@DOE, Robert Brewer/EE/DOE@DOE, Tom Gross/EE/DOE@DOE, Richard Moorer/EE/DOE@DOE, Elizabeth Shearer/EE/DOE@DOE, Joan Glickman/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE  
cc:

Subject: Public Affairs Request -- NEP Recommendations

----- Forwarded by Wendy Butler/EE/DOE on 05/17/2001 05:19 PM -----

Wendy Butler  
05/17/2001 05:19 PM

To: Lisa Cutler@HQMAIL @ HQDOE  
cc:

Subject: Re: FW: Energy Plan

Lisa-

Lisa Cutler@HQMAIL on 05/17/2001 04:39:07 PM

To: Wendy Butler/EE/DOE@DOE@HQMAIL

16362



cc:

Subject: FW: Energy Plan

Wendy et al,

Thanks in advance for your help on this assignment.

We are hoping to complete this task for the entire department by COB Friday; so would like to get as much information from the programs as possible by 1 p.m. Friday.

Call if there are any questions. I can be reached at 586-5806.

Many thanks,  
Lisa Cutler

<< File: ATTACHMENT.TXT >> << File: NEP EVENT CHART.xls >>


**16363**

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DOE017-0986



(b)(5)

 Abe Haspel  
05/23/2001 10:30 AM

To: MaryBeth Zimmerman/EE/DOE  
cc:

Zimmerman  
05/22/2001 05:49 PM


To: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE,  
Randy Steer/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, Michael  
McCabe/EE/DOE@DOE  
cc:


Subject: NEP Chart

Attached is a spreadsheet identifying each NEP recommendation and our first-cut guesses at which EERE  
offices & programs would/could have a roll in each.


I would appreciate your comments. I would like to then be able to polish it through sector discussions.

(b)(3)

 Gail McKinley  
06/06/2001 05:19 PM

To: Tom Kimbis/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE, Mark Ginsberg/EE/DOE@DOE, Gregory Reamy/EE/DOE@DOE  
Subject: Re: NEP Recommendation 

Tom Kimbis

 Tom Kimbis  
06/06/2001 03:16 PM

To: Gail McKinley/EE/DOE@DOE  
cc:

Subject: NEP Recommendation

Hi Gail

16366

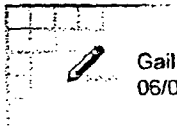
DOE017-0989

b1.)

Tom Kimbis, TMS  
EERE Office of Planning

16367

DOE017-0990



Gail McKinley  
06/07/2001 10:03 AM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc: Gregory Reamy/EE/DOE@DOE, Ronald Shaw/EE/DOE@DOE

Subject: Re: NEP Recommendation

We could elaborate upon the argument, if that's needed.

MaryBeth Zimmerman



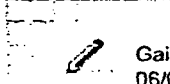
MaryBeth Zimmerman

06/07/2001 09:37 AM

To: Gail McKinley/EE/DOE@DOE  
cc:

Subject: Re: NEP Recommendation

Gail McKinley



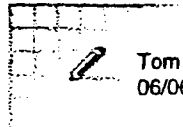
Gail McKinley  
06/06/2001 05:19 PM

To: Tom Kimbis/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE, Mark Ginsberg/EE/DOE@DOE, Gregory Reamy/EE/DOE@DOE

Subject: Re: NEP Recommendation

61-1

Tom Kimbis



Tom Kimbis  
06/06/2001 03:16 PM

To: Gail McKinley/EE/DOE@DOE  
cc:

Subject: NEP Recommendation

Hi Gail

I work in Mary Beth's shop and she asked me to contact you regarding one of the Recommendations in

Tom Kimbis, TMS  
EERE Office of Planning

16369

DOE017-0992

David Bassett 02/21/2001 10:50

(b)(5)

To: Lawrence Mansueti/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE

Subject: Re: A major typo in the renewables NEP submission to Margot

Larry,  
I was just typing the same comment when I saw your message.  
Ditto.  
-db

Lawrence Mansueti

Lawrence Mansueti 02/21/2001 08:46 AM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc: Robert Dixon/EE/DOE@DOE, David Bassett/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE

Subject: A major typo in the renewables NEP submission to Margot

Robert Dixon  
02/20/2001 04:01 PM

To: Linda Silverman/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE, David Bassett/EE/DOE@DOE  
cc:

Subject: RE: two remaining submissions

Linda, Larry and David:

Bob  
Forwarded by Robert Dixon/EE/DOE on 02/20/2001 04:00 PM

MaryBeth Zimmerman 02/20/2001 03:57 PM



To: Margot Anderson@HQMAIL @ HQDOE  
cc: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE

Subject: RE: two remaining submissions

Page 4, line 33-37  
replacement paragraph

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Forwarded by MaryBeth Zimmerman/EE/DOE on 02/20/2001 03:25 PM

Margot Anderson@HQMAIL on 02/20/2001 03:16:24 PM



To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL

16371

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DOE017-0994

cc: Abe Haspel/EE/DOE@DOE@HQMAIL, John Sullivan/EE/DOE@DOE@HQMAIL, Buddy  
Garland/EE/DOE@DOE@HQMAIL

Subject: RE:

Please call ASAP 6-2589.

-----Original Message-----  
From: MaryBeth Zimmerman  
Sent: Tuesday, February 20, 2001 3:10 PM  
To: Anderson, Margot  
Cc: Haspel, Abe; Sullivan, John; Garland, Buddy  
Subject:

Our reviewers identified a couple of points (one error) I listed at the end. << File: promised edits.doc  
>>

16372

DOE017-0995



Barry McNUTT@HQMAIL on 02/21/2001 11:32:40 AM

(b)(5)

To: David Rodgers/EE/DOE@DOE@HQMAIL, Darrell Beschen/EE/DOE@DOE@HQMAIL, Margot Anderson@HQMAIL  
cc: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, Richard Moorer/EE/DOE@DOE@HQMAIL, Barry McNutt@DOE@HQ-NOTES@HQMAIL, Thomas White@HQMAIL@HQDOE@DOE@HQ-NOTES@HQMAIL, Gerson Santos-Leon/EE/DOE@DOE@HQMAIL, Tien Nguyen/EE/DOE@DOE@HQMAIL, William Breed@HQMAIL  
Subject: RE: The Regional piece input from OTT—gasoline prices

barry

-----Original Message-----

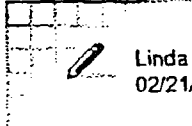
From: David Rodgers  
Sent: Tuesday, February 20, 2001 12:35 PM  
To: Beschen, Darrell  
Cc: Zimmerman, MaryBeth; Moorer, Richard; Barry McNutt@DOE@HQ-NOTES; Thomas White@HQMAIL@HQDOE@DOE@HQ-NOTES; Santos-Leon, Gerson; Nguyen, Tien  
Subject: Re: The Regional piece input from OTT

Dear Darrell and Marybeth:

David Rodgers << File: OTT NEPrep eff OFD.doc >>

16373

DOE017-0996



Linda Silverman  
02/21/2001 12:38 PM

(b)(3)

To: MaryBeth Zimmerman/EE/DOE@DOE, John Conti@HQMAIL@HQDOE, Darrell Beschier/EE/DOE@DOE,  
Michael York/EE/DOE@DOE  
cc: Robert Dixon/EE/DOE@DOE, William Parks/EE/DOE@DOE, James Daley/EE/DOE@DOE  
Subject: chapter 4 and transmission



MaryBeth Zimmerman

02/22/2001 06:50 PM

(b)3

To: William Parks/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE, Ed  
Wal/EE/DOE@DOE, Philip Patterson/EE/DOE@DOE, Tien Nguyen/EE/DOE@DOE,  
rmcguckin@energetics.com @ DOE, Douglas Kaempf/EE/DOE@DOE  
cc: Tom Gross/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE

Subject: Redraft of Renewables 5 pager

Please make your suggested changes as red-line and e-mail back to Darrell, Mike York, and me.

Please forward this to others in your office who work on this specific technologies, but please do not




circulate drafts outside of EERE. Thanks. Chapter 7 end of day 22

16375

DOE017-0998

(b)(5)

 Robert Dixon  
02/23/2001 09:39 AM

To: Lawrence Mansueti/EE/DOE@DOE, David Bassett/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE, William Parks/EE/DOE@DOE

Subject: Redraft of Renewables 5 pager

Gentlemen:

Since Linda is out today, please respond to this request. THX

Bob

----- Forwarded by Robert Dixon/EE/DOE on 02/23/2001 09:39 AM -----

 MaryBeth Zimmerman 02/22/2001 06:50 PM

To: William Parks/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE, Ed  
Wall/EE/DOE@DOE, Philip Patterson/EE/DOE@DOE, Tien Nguyen/EE/DOE@DOE,  
rmcguckin@energetics.com @ DOE, Douglas Kaempt/EE/DOE@DOE  
cc: Tom Gross/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE

Subject: Redraft of Renewables 5 pager

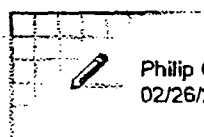
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Please forward this to others in your office who work on this specific technologies, but please do not



circulate drafts outside of EERE. Thanks. Chapter 7 end of dav 22

6/15



Philip Overholt  
02/26/2001 08:48 AM

To: Lawrence Mansueti/EE/DOE@DOE  
cc: Michael York/EE/DOE@DOE, Patricia Hoffman/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE

Subject: Electric Write-up in Section 6

Let me know how I can assist further.  
Phil



(b)(3)

Lawrence Mansueti 02/26/2001 02:31 PM

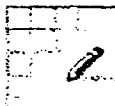
To: Michael York/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE  
cc: Philip Overholt/EE/DOE@DOE, Patricia Hoffman/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE

Subject: Feedback on DOT's Infrastructure Write-up in NEP Section 6 (10)

Here are some addtl comments besides Phil Overholt's email of this morning:

larry

Forwarded by Lawrence Mansueti/EE/DOE on 02/26/2001 01:58 PM



Phillip Overholt  
02/26/2001 08:48 AM

To: Lawrence Mansueti/EE/DOE@DOE  
cc: Michael York/EE/DOE@DOE, Patricia Hoffman/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE

Subject: Electric Write-up in Section 6

16378

DOE017-1001



(b)(5)

Section 6 should name the issues:

Let me know how I can assist further.  
Phil



NEP Transmissi



MaryBeth Zimmerman

03/02/2001 10:08 AM

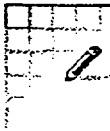
(b) =

To: David Basset/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc:

Subject: NEP Policy Formation

Please let me know if you have any thoughts. Thanks, Mary Beth (6-7249)

Forwarded by MaryBeth Zimmerman/EE/DOE on 03/02/2001 09:39 AM



Robert Dixon  
03/01/2001 06:43 PM

To: David Basset/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: NEP Policy Formation

Gentlemen:

With Linda's departure, this OPT task belongs to you based on our meeting last week where we divided-up the duties. THX

Bob

Forwarded by Robert Dixon/EE/DOE on 03/01/2001 05:58 PM



MaryBeth Zimmerman

03/01/2001 02:57 PM

To: #EE-DAS, #EE-ADAS  
cc: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Buddy Gartand/EE/DOE@DOE

Subject: NEP Policy Formation

A brief heads-up to let you know that the Vice President's energy task force is moving to policy formation. We will have an initial meeting on Monday, March 5 to get our guidance. Since the final report is due to the VP's office on March 14, however, we would like to get started now.

I've e-mailed a heads up to your analytical staffs, and we've set up meetings today with OPT and OTT. We'd be happy to do the same for the other offices later today (after 5:00) or tomorrow.

- Mary Beth (6-7249)

Forwarded by MaryBeth Zimmerman/EE/DOE on 03/01/2001 02:53 PM

Margot Anderson@HQMAIL on 03/01/2001 07:51:03 AM



16380

DOE017-1003

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, John Sullivan/EE/DOE@DOE@HQMAIL, Abe Haspel/EE/DOE@DOE@HQMAIL, TREVOR COOK@HQMAIL, Paula Scalingi@HQMAIL, jkstier@bpa.gov@internet@HQMAIL, Robert Kripowicz@HQMAIL, WILLIAM MAGWOOD@HQMAIL, Michael Whatley@HQMAIL, Jay Braitsch@HQMAIL, John Conti@HQMAIL, Douglas Carter@HQMAIL, David Pumphrey@HQMAIL, James HART@HQMAIL, William Breed@HQMAIL, LARRY PETTIS@HQMAIL, JAMES KENDELL@HQMAIL, ANDY KYDES@HQMAIL

cc: Joseph Kelliher@HQMAIL

Subject: Energy Policy Discussion

All,

On Monday at 1:00, we will be meeting in room 7B-040 to begin the discussion of energy policy options for the national energy policy (phase 2 of our efforts). Joe will be sending out guidance for our discussion (probably on Friday). We have been encouraged by the Task Force to think broadly and creatively about policy options. The Task Force is aiming for March 14 to complete this phase.

Again, thank you all for your extreme efforts over the last two weeks and extra thanks to those who provided the last round of comments on the 2/26 version. We are very close to buttoning up the "interim report" - the two chapters describing the issues that we have been working on. Special kudos to EIA for their patience on all the fact checking (it ain't over - I'll be calling for some graphic help later today).

Margot

16381

---

DOE017-1004

b(5)

David Bassett 03/02/2001 04:57

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc: Lawrence Mansueti/EE/DOE@DOE, tina.kaarsberg@hq.doe.gov, John Sullivan/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE, William Parks/EE/DOE@DOE, Patricia Hoffman/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, Michael York/EE/DOE@DOE

Subject: Re: CAA changes in context of NEP Policy Formation

**16383**

DOE017-1006

MaryBeth,

I am hopeful that Abe continues to wish to be part of the upcoming policy debate on this issue.

Best,  
-db

MaryBeth Zimmerman



MaryBeth Zimmerman

03/02/2001 10:08 AM

---

To: David Basset/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc:

Please let me know if you have any thoughts. Thanks, Mary Beth (6-7249)

---

Forwarded by MaryBeth Zimmerman/EE/DOE on 03/02/2001 09:39 AM



Robert Dixon  
03/01/2001 06:43 PM

To: David Basset/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE

16384

DOE017-1007

cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: NEP Policy Formation

Gentlemen:

With Linda's departure, this OPT task belongs to you based on our meeting last week where we divided-up the duties. THX

Bob

----- Forwarded by Robert Dixon/EE/DOE on 03/01/2001 05:58 PM -----



MaryBeth Zimmerman

03/01/2001 02:57 PM

To: #EE-DAS, #EE-ADAS

cc: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE

Subject: NEP Policy Formation

-- Mary Beth (6-7249)

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 03/01/2001 02:53 PM -----



Margot Anderson@HQMAIL on 03/01/2001 07:51:03 AM

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, John Sullivan/EE/DOE@DOE@HQMAIL, Abe Haspel/EE/DOE@DOE@HQMAIL, TREVOR COOK@HQMAIL, Paula Scalingi@HQMAIL, jkstier@bpa.gov@internet@HQMAIL, Robert Kripowicz@HQMAIL, WILLIAM MAGWOOD@HQMAIL, Michael Whatley@HQMAIL, Jay Braltsch@HQMAIL, John Conti@HQMAIL, Douglas Carter@HQMAIL, David Pumphrey@HQMAIL, James HART@HQMAIL, William Breed@HQMAIL, LARRY PETTIS@HQMAIL, JAMES KENDELL@HQMAIL, ANDY KYDES@HQMAIL

cc: Joseph Kelliher@HQMAIL

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16385

DOE017-1008

version. We are very close to buttoning up the "interim report" - the two chapters describing the issues that we have been working on. Special kudos to EIA for their patience on all the fact checking (it ain't over - I'll be calling for some graphic help later today).

Margot

---

16386

DOE017-1009



(b)(6)

Lawrence Mansueti 03/05/2001 12:48 PM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc: Michael York/EE/DOE@DOE

Subject: Re: NEP Policy Formation

MaryBeth -


 MaryBeth Zimmerman 03/02/2001 10:08 AM

To: David Bassett/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc:

Subject: NEP Policy Formation

Please let me know if you have any thoughts. Thanks, Mary Beth (6-7249)

Forwarded by MaryBeth Zimmerman/EE/DOE on 03/02/2001 09:39 AM

 Robert Dixon  
03/01/2001 06:43 PM

16387

DOE017-1010

To: David Bassett/EE/DOE@DOE, Lawrence Mansuet/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: NEP Policy Formation

Gentlemen:

With Linda's departure, this OPT task belongs to you based on our meeting last week where we divided-up the duties. THX

Bob

----- Forwarded by Robert Dixon/EE/DOE on 03/01/2001 05:58 PM -----



MaryBeth Zimmerman

03/01/2001 02:57 PM

To: #EE-DAS, #EE-ADAS  
cc: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE

Subject: NEP Policy Formation

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I've e-mailed a heads up to your analytical staffs, and we've set up meetings today with OPT and OTT. We'd be happy to do the same for the other offices later today (after 5:00) or tomorrow.

— Mary Beth (6-7249)

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 03/01/2001 02:53 PM -----

Margot Anderson@HQMAIL on 03/01/2001 07:51:03 AM



To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, John Sullivan/EE/DOE@DOE@HQMAIL, Abe Haspel/EE/DOE@DOE@HQMAIL, TREVOR COOK@HQMAIL, Paula Scalingi@HQMAIL, jkstier@bpa.gov@internet@HQMAIL, Robert Kripowicz@HQMAIL, WILLIAM MAGWOOD@HQMAIL, Michael Whatley@HQMAIL, Jay Braitsch@HQMAIL, John Conti@HQMAIL, Douglas Carter@HQMAIL, David Pumphrey@HQMAIL, James HART@HQMAIL, William Breed@HQMAIL, LARRY PETTIS@HQMAIL, JAMES KENDELL@HQMAIL, ANDY KYDES@HQMAIL  
cc: Joseph Kelliher@HQMAIL

Subject: Energy Policy Discussion

All,

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16388

DOE017-1011

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Margot



Judy Odouamy@HQMAIL on 03/05/2001 12:43:25 PM

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, David.Bassett@ee.doe.gov@internet@HQMAIL  
cc: Steven Ferguson@HQMAIL

Subject: RE: CAA changes in context of NEP Policy Formation

-----Original Message-----

From: David.Bassett@ee.doe.gov%internet  
[mailto:David.Bassett@ee.doe.gov]  
Sent: Friday, March 02, 2001 4:57 PM  
To: MaryBeth.Zimmerman@ee.doe.gov%internet  
Cc: Lawrence.Mansueti@ee.doe.gov%internet; Kaarsberg, Tina;  
John.Sullivan@ee.doe.gov%internet; Robert.Dixon@ee.doe.gov%internet;  
William.Parks@ee.doe.gov%internet; Patricia.Hoffman@ee.doe.gov%internet;  
Buddy.Garland@ee.doe.gov%internet; Michael.York@ee.doe.gov%internet  
Subject: Re: CAA changes in context of NEP Policy Formation

16390

DOE017-1013

**16391**

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DOE017-1014





Please let me know if you have any thoughts. Thanks, Mary Beth (6-7249)  
----- Forwarded by MaryBeth Zimmerman/EE/DOE on 03/02/2001  
09:39 AM -----

Robert Dixon  
03/01/2001 06:43 PM

To: David Bassett/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: NEP Policy Formation

Gentlemen:

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Bob  
----- Forwarded by Robert Dixon/EE/DOE on 03/01/2001 05:58 PM  
-----

MaryBeth Zimmerman  
03/01/2001 02:57 PM

To: #EE-DAS, #EE-ADAS  
cc: Abe Haspel/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Buddy  
Garland/EE/DOE@DOE

Subject: NEP Policy Formation

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-- Mary Beth (6-7249)

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 03/01/2001  
02:53 PM -----

Margot Anderson@HQMAIL on 03/01/2001 07:51:03 AM

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, John Sullivan/EE/DOE@DOE@HQMAIL,

16394

DOE017-1017



Abe

Haspel/EE/DOE@DOE@HQMAIL, TREVOR COOK@HQMAIL, Paula Scalingi@HQMAIL, jkstier@bpa.gov@internet@HQMAIL, Robert Kripowicz@HQMAIL, WILLIAM MAGWOOD@HQMAIL, Michael Whatley@HQMAIL, Jay Braitsch@HQMAIL, John Conti@HQMAIL, Douglas Carter@HQMAIL, David Pumphrey@HQMAIL, James HART@HQMAIL, William Breed@HQMAIL, LARRY PETTIS@HQMAIL, JAMES KENDELL@HQMAIL, ANDY KYDES@HQMAIL

cc: Joseph Kelliher@HQMAIL

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Margot

16395

DOE017-1018

Forwarded by John Sullivan/EE/DOE on 02/13/2001 02:36 PM



MaryBeth Zimmerman

02/13/2001 02:30 PM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed  
Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail  
McKinley/EE/DOE@DOE  
cc: Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Tom Kimbis/EE/DOE@DOE, Nancy  
Jeffery/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, John  
Sullivan/EE/DOE@DOE

Subject: Heads up on NEP

Thanks for all your help in yesterday's mad rush. We are still expecting to have to produce the final document by Feb. 23.

The VP Task Force is meeting at 3:00 today to review the outlines submitted yesterday. We expect to get next marching orders by 4:00 today.

16396

DOE017-1019



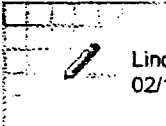
MaryBeth Zimmerman

02/14/2001 10:34 AM

(b) -

To: Linda Silverman/EE/DOE@DOE  
cc: Sam Baldwin/EE/DOE@DOE

Subject: Re: Electricity outline for the WhiteHouse 



Linda Silverman  
02/14/2001 09:59 AM

To: MaryBeth Zimmerman/EE/DOE@DOE, Michael York/EE/DOE@DOE  
cc:

Subject: Electricity outline for the WhiteHouse

fyi – request from FE. I'm going to forward him stuff we wrote for you the other day.

----- Forwarded by Linda Silverman/EE/DOE on 02/14/2001 09:59 AM -----

**Patricia Hoffman** 02/14/2001 08:01 AM

To: Debbie Haugh/EE/DOE@DOE, Ronald Fiskum/EE/DOE@DOE, Merrill Smith/EE/DOE@DOE, Joseph Galdo/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE, Tina Kaarsberg/EE/DOE@DOE, Imre Gyuk/EE/DOE@DOE, Philip Overholt/EE/DOE@DOE, David Basset/EE/DOE@DOE, Gary Burch/EE/DOE@DOE, Nita Scotland/EE/DOE@DOE, Anne-Marie Borbely-Bartis/EE/DOE@DOE, William Parks/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Patrick Booher/EE/DOE@DOE

cc:

Subject: Electricity outline for the WhiteHouse

action – heads up...

----- Forwarded by Patricia Hoffman/EE/DOE on 02/14/2001 08:00 AM -----

Douglas Carter@HQMAIL on 02/13/2001 05:16:23 PM



To: Patricia Hoffman/EE/DOE@DOE@HQMAIL  
cc:

Subject: Electricity outline for the WhiteHouse

Pat -

16397

DOE017-1020

The attached file is in WordPerfect, and uses the outline feature, which translates poorly into Word. If you cannot work with it, let me know.

Sorry for raining on your day. Call if you want to discuss this.

Doug Carter (FE-26)  
US DOE  
Washington, DC 20585  
202-586-9684

[This email uses 100% recycled electrons.]

16398

---

DOE017-1021



Electricity outline



(b)(1)

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, #EE-ADAS

Subject: FW: NEP Draft outline

Directions on NEP Assessment paper. Please read all of this very carefully before proceeding:

**Product**

- A near-final paper assessing energy needs based on the chapter outlines provided to the Vice President's Task Force on Energy earlier this week.
- The paper does not include policy options or recommendations (that exercise will follow)

**Schedule:**

- Inputs due from sectors to Planning: COB on Thursday (sorry)
- Due from EERE to Policy Office: noon on Friday
- Due to Vice President's Office: COB next Tuesday
- Comments back to DOE: next Wednesday
- Final edits on DOE chapters due to VP task force: next Thursday.

Please have someone standing by on Tuesday next week to answer questions; on Thursday next week to help with final edits.

---

Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 10:34 AM

---



MaryBeth Zimmerman

02/13/2001 05:27 PM

---

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE

Subject: FW: NEP Draft outline

Attached is a combined draft outline for the NEP Assessment Report. I believe this is the version that served as the basis for today's discussions. We are expecting further guidance later tonight, or first thing tomorrow morning.

Please remember that all of these materials are hold close.

---

16401

DOE017-1024




Draft outline.



Lawrence Mansueti

02/14/2001 12:07 PM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Re: Demand Data sources for Chapter 1 for NEP Draft outline 

Mary Beth --

Three sources of national and regional DSM/energy efficiency trends:

Chuck Goldman, LBL 510/486-4637. [cagoldman@lbl.gov](mailto:cagoldman@lbl.gov) (Chuck is VERY responsive, fast turnaround)

Marty Kushler, ACEEE [mgekushler@aol.com](mailto:mgekushler@aol.com), 517-655-7037, he has done for DOE a state-by-state and national summary analysis of how energy efficiency is faring in electric markets. (<http://www.aceee.org/briefs/mktabl.htm>)

Hope this helps.....

16403

DOE017-1026



MaryBeth Zimmerman

02/14/2001 12:24 PM

---

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed  
Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail  
McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DCE@DOE  
cc: #EE-ADAS, John Sullivan/EE/DOE@DOE

Subject: FW: NEP Draft outline

One last item (sorry for the multiple e-mails): This is quick turn-around internal assignment. Please hold  
this material & discussions close (& in house). Thanks

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 12:21 PM -----



MaryBeth Zimmerman

02/14/2001 11:08 AM

---

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed  
Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail  
McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy  
Garland/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, Sam  
Baldwin/EE/DOE@DOE, #EE-ADAS

Subject: FW: NEP Draft outline

Directions on NEP Assessment paper. Please read all of this very carefully before proceeding:

16404

DOE017-1027

---

Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 10:34 AM

---



MaryBeth Zimmerman

02/13/2001 05:27 PM

---

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed  
Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail  
McKinley/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy  
Garland/EE/DOE@DOE

Subject: FW: NEP Draft outline

Please remember that all of these materials are hold close.

**16405**

---

DOE017-1028



Draft outline.




MaryBeth Zimmerman

02/14/2001 12:27 PM

(b)(3)


To: Lawrence Mansueti/EE/DOE@DOE  
cc: Darrell Beschen/EE/DOE@DOE

Subject: Re: Demand Data sources for Chapter 1 for NEP Draft outline 

Lawrence Mansueti

02/14/2001 12:07 PM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Re: Demand Data sources for Chapter 1 for NEP Draft outline 

Three sources of national and regional DSM/energy efficiency trends:

Chuck Goldman, LBL 510/486-4637. [cagoldman@lbl.gov](mailto:cagoldman@lbl.gov) (Chuck is VERY responsive, fast turnaround)

Marty Kushler, ACEEE [mkgushler@aol.com](mailto:mkgushler@aol.com), 517-655-7037, he has done for DOE a state-by-state and national summary analysis of how energy efficiency is faring in electric markets. (<http://www.aceee.org/briefs/mktabl.htm>)

Hope this helps.....

16407


DOE017-1030

(b) (5)

---

Lawrence Mansueti 02/14/2001 12:55 PM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Re: Demand Data sources for Chapter 1 for NEP Draft outline 

Yes, I am free somewhat, of course, though I pgm work deadlines I must meet by tomorrow as well.

Thanks for the reminder that its an internal assignment. I think Darrell can get a lot of the info to craft into points from websources (as below) w/o calling.


MaryBeth Zimmerman



MaryBeth Zimmerman

02/14/2001 12:27 PM


To: Lawrence Mansueti/EE/DOE@DOE  
cc: Darrell Beschen/EE/DOE@DOE

Subject: Re: Demand Data sources for Chapter 1 for NEP Draft outline 

---

Lawrence Mansueti 02/14/2001 12:07 PM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Re: Demand Data sources for Chapter 1 for NEP Draft outline 

Mary Beth --

16408

DOE017-1031

Hope this helps.....

---

**16409**

DOE017-1032

David Rodgers 02/14/2001 02:59 PM

---

(b)(5)

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Re: FW: NEP Draft outline 

Dear Marybeth,

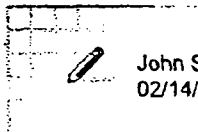
David

---

16410

DOE017-1033





John Sullivan  
02/14/2001 03:34 PM

(b) (5)

To: #RODirectors, #RODeputy\_Directors  
cc: MaryBeth Zimmerman/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE

Subject: FW: NEP Draft outline

---

Forwarded by John Sullivan/EE/DOE on 02/14/2001 12:24 PM



MaryBeth Zimmerman

02/14/2001 12:24 PM

---

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: #EE-ADAS, John Sullivan/EE/DOE@DOE

Subject: FW: NEP Draft outline

One last item (sorry for the multiple e-mails): This is quick turn-around internal assignment. Please hold this material & discussions close (& in house). Thanks

---

Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 12:21 PM



MaryBeth Zimmerman

02/14/2001 11:08 AM

---

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, #EE-ADAS

Subject: FW: NEP Draft outline

Directions on NEP Assessment paper. Please read all of this very carefully before proceeding:

16411

DOE017-1034

---

Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 10:34 AM



MaryBeth Zimmerman

02/13/2001 05:27 PM

---

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed  
Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail  
McKinley/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy  
Garland/EE/DOE@DOE

Subject: FW: NEP Draft outline

Please remember that all of these materials are hold close.

16412

---

DOE017-1035



Draft outline.



63)

To: #EE-DAS, #EE-ADAS, Kenneth Friedman/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Elynn Krevitz/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE

cc: Gail McKinley/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, William Noel/EE/DOE@DOE, Philip Overholt/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, Darrell Bescher/EE/DOE@DOE, Michael York/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Philip Patterson/EE/DOE@DOE

Subject: NEP, draft 1

Our sincere thanks to everyone for your great effort in pulling this material together so quickly. (Hard to believe, but we only got the instructions for the outline on Monday, and the guidance for the paper on Wed.) We did get our first drafts to PO in time today. My apologies for the rough nature of some of the text and for your limited time for reviewing it as it evolved (especially to OPT, who's materials we got to the latest.) **BUT PLEASE REMEMBER, we get another shot at the document on Tuesday before it goes to the VP Task Force in draft.**

Schedule:

2. **Monday at 10:00** John Sullivan and I will attend the DOE review meeting. The outcome of that meeting should be additional guidance regarding the development of the final draft. (If you get this e-mail before Monday and happen to feel like providing suggested comments for us to raise on Monday, please do so via return e-mail to me.)
3. Based on the Monday guidance, we will do whatever editing we can ourselves on Monday & provide detailed requests for the help we're sure to need on Tuesday morning. **TUESDAY IS LAST CHANCE TO REVISE OUR SECTIONS BEFORE THEY GO TO THE VP TASK FORCE**, so please take time on Tuesday morning to thoroughly review all of the EERE components of the report; otherwise, we may not have time to incorporate everything before it is due up front (probably at 3:00). I know that OIT will be offsite next week – we'll work with you there.
4. We expect to have a final crack at the document on Thursday. This final draft requires a fact-check.

So far, no deadline on this project has slipped, so let me thank you again for getting responses in quickly. (Obviously, we're hoping for the same next week.)

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 02/16/2001 06:06 PM -----

Margot Anderson@HQMAIL on 02/16/2001 05:48:00 PM



To: Abe Haspe/EE/DOE@DOE@HQMAIL, John Sullivan/EE/DOE@DOE@HQMAIL, MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, Robert Kripowicz@HQMAIL, Robert Porter@HQMAIL, WILLIAM MAGWOOD@HQMAIL, David Pumphrey@HQMAIL, James HART@HQMAIL, Paula Scalingi@HQMAIL, Michael Whatley@HQMAIL, LARRY PETTIS@HQMAIL, jkstier@bpa.gov@internet@HQMAIL, cball@bpa.gov@internet@HQMAIL

cc: Joseph Kelliher@HQMAIL

Subject: NEP, draft 1

Here are sections 1,2, 4, and 5.

Note. I do not have compiled sections 3 (Treasury), 6 (DOT), 7 (State). We contributed to all, however and have to wait and see what they did to our stuff.

I will bring the stack of graphics to the Monday meeting. They are not attached (Joe, I will bring you up a set tonight to look at )

Thank you all for pushing so hard - we have a lot of very good material here.

Attending Monday

Larry Pettis (FE)

Cook (NE)

Mary Beth Zimmerman, John Sullivan (EE)

Bob Kripowicz (FE)

Margot Anderson (PO)

Paula Scalingi (SO)

Joe Kelliher (OSEC)

Joe Stier or Crystal Ball (BPA)

What did I miss?

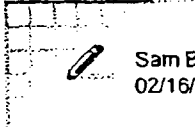
Margot

16622

DOE017-1245



section 1 draft 1 section 2 draft Section 4 draft Section 5 draft



Sam Baldwin  
02/16/2001 05:15 PM

b(5)

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: NEP Figures

MaryBeth:

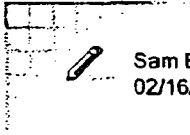
sam



NEP Chap5 EEFigures2001-2-16

16624

DOE017-1247



Sam Baldwin  
02/16/2001 04:49 PM

b(5)

To: Margot Anderson@HQMAIL @ HQDOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: RE: NEP Section 5

Margot:

Thanks

Sam

Margot Anderson@HQMAIL on 02/16/2001 03:27 03 PM



Margot Anderson@HQMAIL on 02/16/2001 03:27:03 PM

To: Douglas Carter@HQMAIL  
cc: Sam Baldwin/EE/DOE@DOE@HQMAIL, Robert Kripowicz@HQMAIL, Robert Porter@HQMAIL, George Rudins@HQMAIL, Guido DeHoratiis@HQMAIL, John Shages@HQMAIL, TREVOR COOK@HQMAIL

Subject: RE: NEP Section 5

Okay, I'll see what I can do. Thanks.

-----Original Message-----

From: Carter, Douglas  
Sent: Friday, February 16, 2001 3:23 PM  
To: Anderson, Margot  
Cc: Kripowicz, Robert; Porter, Robert; Rudins, George; DeHoratiis, Guido; Shages, John; Cook, Trevor; Baldwin, Sam  
Subject: NEP Section 5

Margot -

Attached are 4 files for Section 5 of the NEP.

16625

DOE017-1248



Please call if you have questions or instructions.

<< File: NEP Chap 5 renewables 2001-2-16.doc >> << File: SECTION 5b.doc  
>> << File: NE input to doug.doc >> << File: Section 5 Figs.ppt >>

Doug Carter (FE-26)  
US DOE  
Washington, DC 20585  
202-586-9684

---

**16626**

DOE017-1249

JOEL  
RUBIN  
02/16/2001 03:46 PM

b(5)



To: Margot Anderson@HQMAIL @ HQDOE  
cc: Abe Haspel, Buddy Garland, MaryBeth Zimmerman/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE,  
Darrell Beschen/EE/DOE@DOE

Subject: RE: National Energy Strategy: Chapter 2

Margot -

Attached are both files... apologies for the delay,

Joel



Chapter 2\_Energy Impacts\_2.16.01.d Chapter 2 Graphics.doc  
Margot Anderson@HQMAIL on 02/16/2001 03:08:45 PM

Margot Anderson@HQMAIL on 02/16/2001 03:08:45 PM



To: Joel Rubin/EE/DOE@DOE@HQMAIL  
cc: Abe Haspel@DOE@HQ-NOTES@HQMAIL, Buddy Garland@DOE@HQ-NOTES@HQMAIL, MaryBeth  
Zimmerman/EE/DOE@DOE@HQMAIL, Nancy Jeffery/EE/DOE@DOE@HQMAIL, Darrell  
Beschen/EE/DOE@DOE@HQMAIL

Subject: RE: National Energy Strategy: Chapter 2

Joel,

Please send graphics in separate file! Thanks.

Margot

-----Original Message-----

From: Joel Rubin  
Sent: Friday, February 16, 2001 3:01 PM  
To: Anderson, Margot  
Cc: Abe Haspel@DOE@HQ-NOTES; Buddy Garland@DOE@HQ-NOTES; Zimmerman, MaryBeth; Jeffery,  
Nancy; Beschen, Darrell  
Subject: National Energy Strategy: Chapter 2

Margot -

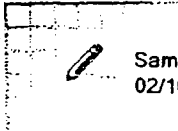
Please find chapter 2 attached... thank you!

Joel

<< File: Chapter 2\_Impacts\_2.16.01.doc >>

16627

DOE017-1250



Sam Baldwin  
02/16/2001 03:46 PM

bcs)

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: NEP Section 5

----- Forwarded by Sam Baldwin/EE/DOE on 02/16/2001 03:45 PM -----

Douglas Carter@HQMAIL on 02/16/2001 03:22:31 PM



To: Margot Anderson@HQMAIL  
cc: Sam Baldwin/EE/DOE@DOE@HQMAIL, Robert Kripowicz@HQMAIL, Robert Porter@HQMAIL, George Rudins@HQMAIL, Guido DeHoratils@HQMAIL, John Shages@HQMAIL, TREVOR COOK@HQMAIL

Subject: NEP Section 5

Margot -

Attached are 4 files for Section 5 of the NEP.

Please call if you have questions or instructions.

Doug Carter (FE-26)  
US DOE  
Washington, DC 20585  
202-586-9684

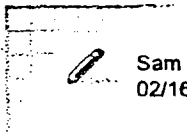
16628

DOE017-1251



NEP Chap 5 renewables 2001-2-16. SECTION 5b.doc NE input to doug.doc Section 5 Figs.ppt

b(5)



Sam Baldwin  
02/16/2001 02:59 PM

To: MaryBeth Zimmerman/EE/DOE@DOE, Douglas Carter@HQMAIL@HQDOE, Margot  
Anderson@HQMAIL@HQDOE

cc:

Subject: Renewables piece

MaryBeth, Doug, Margot:

All the best

Sam



NEP Chap 5 renewables 2001-2-16.



MaryBeth Zimmerman

02/16/2001 02:08 PM

6(5)

To: Sam Baldwin/EE/DOE@DOE  
cc:

16631

DOE017-1254

b(s)

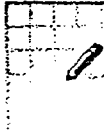
**KENNETH FRIEDMAN**

02/16/2001 12:53 PM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject:

----- Forwarded by Kenneth Friedman/EE/DOE on 02/16/2001 12:53 PM -----



Peggy Podolak  
02/16/2001 10:23 AM

To: Darrell Beschen/EE/DOE@DOE  
cc: Kenneth Friedman/EE/DOE@DOE

Subject:

16632

DOE017-1255



MaryBeth Zimmerman

02/16/2001 12:29 PM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Ed Wall/EE/DOE@DOE  
cc: Robert Brewer/EE/DOE@DOE

Subject: Desperately seeking a few checks



Chapter 4 - efficiency

16633

DOE017-1256



6/5



MaryBeth Zimmerman

02/16/2001 12:21 PM

To: Jerry Dion/EE/DOE@DOE  
cc:

Subject: Re: Chapter 4 inputs

Thanks much.  
Jerry Dion



Jerry Dion

02/16/2001 12:15 PM

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc: Mark Ginsberg/EE/DOE@DOE, Barbara Sisson/EE/DOE@DOE

Subject: Re: Chapter 4 inputs



Here is a BTS markup of your file Chapter 4 - efficiencand a backup markup by PNNL



Chapter 4 - efficiencv PNNL.

I have placed these on the P: drive in the proper subdirectory as well.

Jerry

MaryBeth Zimmerman



MaryBeth Zimmerman

02/16/2001 10:14 AM

To: Kenneth Friedman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE  
cc: Eilyn Krevitz/EE/DOE@DOE

Subject: Chapter 4 inputs

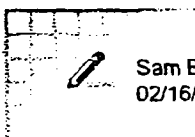
Once again, we need everything in by noon today. Thanks

P://Analysis/calls/external requests/NEP2001/Assessment Chapters/Chapter 4 - efficiency mbz

16634

DOE017-1257

bis)



Sam Baldwin  
02/16/2001 12:20 PM

To: MaryBeth Zimmerman/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Tom Kimbis/EE/DOE@DOE  
cc:

Subject: Chapter 5

Sam



cheney chap 5\_2001-2-16Sam.d

16635


DOE017-1258

5/5




**Jerry Dion**

02/16/2001 12:15 PM

To: MaryBeth Zimmerman/EE/DOE@DOE  
 cc: Mark Ginsberg/EE/DOE@DOE, Barbara Sisson/EE/DOE@DOE  
 Subject: Re: Chapter 4 inputs 



Here is a BTS markup of your file  Chapter 4 - efficiencand a backup markup by PNNL



Chapter 4 - efficiency PNNL.

I have placed these on the P: drive in the proper subdirectory as well.

Jerry

MaryBeth Zimmerman



**MaryBeth Zimmerman**

02/16/2001 10:14 AM

To: Kenneth Friedman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE  
 cc: Eilyn Krevitz/EE/DOE@DOE  
 Subject: Chapter 4 inputs

P://Analysis/calls/external requests/NEP2001/Assessment Chapters/Chapter 4 - efficiency mbz

b(5)



MaryBeth Zimmerman

02/16/2001 10:14 AM

To: Kenneth Friedman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE  
cc: Eilyn Krevitz/EE/DOE@DOE

Subject: Chapter 4 inputs

16637

DOE017-1260

b(s)



MaryBeth Zimmerman

02/16/2001 09:30 AM

To: Sam Baldwin/EE/DOE@DOE  
cc:

Subject: OTT comments

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 02/16/2001 09:29 AM -----



"One of the Zimmerman's" <czmbz@erols.com> on 02/15/2001 11:10:53 PM



To: Ed Wal/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: OTT comments  
:



- att1.htm



- comments on OTT NEP expanded section.doc

16638

DOE017-1261

b(5)



MaryBeth Zimmerman

02/16/2001 08:28 AM

To: Joel Rubin/EE/DOE@DOE  
cc:

Subject: OTT comments

Joel, note a couple of items in OTT's submission for your chapter

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 02/16/2001 08:27 AM -----



"One of the Zimmerman's" <czmbz@erols.com> on 02/15/2001 11:10:53 PM



To: Ed Wall/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: OTT comments  
:



- att1.htm



- comments on OTT NEP expanded section.doc

16639

DOE017-1262



MaryBeth Zimmerman

02/14/2001 03:38 PM

To: David Rodgers/EE/DOE@DOE  
cc: Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE  
Subject: Re: FW: NEP Draft outline

(2)

16640

DOE017-1263

b/c

From: Bill Becker/SMTP/NRELEX@NRELEXchange on 02/14/2001 06:46 PM  
To: Darrell Beschen/EE/DOE@DOE  
cc: MaryBeth Zimmerman/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, #RODirectors@DOE,  
#RODeputy\_Directors@DOE  
Subject: RE: NEP Draft outline

16641

---

DOE017-1264



Hope these are helpful. - wsb

-----Original Message-----

**From:** Sullivan, John  
**Sent:** Wednesday, February 14, 2001 1:35 PM  
**To:** #RODirectors@DOE; #RODeputy\_Directors@DOE  
**Cc:** Zimmerman, MaryBeth; Beschen, Darrell

16642

---

DOE017-1265

**Subject:** FW: NEP Draft outline

See attached. This will give you a better picture of where events on the new energy policy is headed. In addition, we would like to invite your input in general but specifically as to regional impacts. Please provide your inputs to Darrell. Thanks for your help.

----- Forwarded by John Sullivan/EE/DOE on 02/14/2001 12:24 PM -----

**MaryBeth Zimmerman**  
02/14/2001 12:24 PM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: #EE-ADAS, John Sullivan/EE/DOE@DOE

**Subject:** FW: NEP Draft outline

One last item (sorry for the multiple e-mails): This is quick turn-around internal assignment. Please hold this material & discussions close (& in house). Thanks

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 12:21 PM -----

**MaryBeth Zimmerman**  
02/14/2001 11:08 AM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, #EE-ADAS

**Subject:** FW: NEP Draft outline

Directions on NEP Assessment paper. Please read all of this very carefully before proceeding:

**16643**

DOE017-1266

5(5)

---

Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 10:34 AM

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**MaryBeth Zimmerman**  
02/13/2001 05:27 PM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE

Subject: FW: NEP Draft outline

Attached is a combined draft outline for the NEP Assessment Report. I believe this is the version that served as the basis for today's discussions. We are expecting further guidance later tonight, or first thing tomorrow morning.

Please remember that all of these materials are hold close.

16644

---

DOE017-1267

<< File: Draft outline.doc >>

**16645**

---

DOE017-1268

b(5)



Douglas Carter@HQMAIL on 02/15/2001 09:31:15 AM

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, SAMUEL BRADLEY@HQMAIL  
cc:

Subject: FW: draft NEP instructions

Sam, Mary Beth:

Doug Carter, x69684

-----Original Message-----

From: Carter, Douglas  
Sent: Wednesday, February 14, 2001 4:21 PM  
To: Hoffman, Patricia; Cook, Trevor; Miller, Lowell; York, Michael  
Subject: draft NEP instructions

Pat, Trevor, Lowell, Michael:

16646

DOE017-1269

Doug Carter, x69684

-----Original Message-----

**From:** Porter, Robert  
**Sent:** Wednesday, February 14, 2001 2:50 PM  
**To:** Anderson, Margot  
**Cc:** Kripowicz, Robert; Rudins, George; Carter, Douglas; DeHoratiis, Guido; Johnson, Nancy; Shages, John; Puriga, Richard  
**Subject:** RE: draft NEP instructions

16647

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DOE017-1270

Bob Porter  
Office of Fossil Energy

-----Original Message-----

From: Anderson, Margot  
Sent: Wednesday, February 14, 2001 12:38 PM  
To: Kripowicz, Robert; Haspel, Abe; Sullivan, John; Zimmerman, MaryBeth; Magwood, William; Pumphrey, David; Hart, Carole; Scalingi, Paula; Whatley, Michael  
Cc: Kelliher, Joseph  
Subject: draft NEP instructions

All,

Please review.

16648

DOE017-1271

**16649**

---

DOE017-1272



b(5)

Lawrence Mansueti 02/15/2001 01:43 PM

To: Linda Silverman/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Submittal of Demand Management Option text for NEP 

Linda and/or MaryBeth --

Here is some text to use for today's NEP drill on the ---

16650

DOE017-1273

h(5)

**DARRELL BESCHEN**

02/15/2001 01:48 PM

To: Sam Baldwin  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: RE: update on NEP: good pictures and graphics are desired and do not count against space limits

----- Forwarded by Darrell Beschen/EE/DOE on 02/15/2001 01:47 PM -----

From: Bill Becker/SMTP/NRELEX@NRELEXchange on 02/15/2001 11:31 AM  
To: Darrell Beschen/EE/DOE@DOE  
cc:

Subject: RE: update on NEP: good pictures and graphics are desired and do not count against space limits

Hope my verbal comments via e:mail were helpful yesterday afternoon. I've got some more suggestions I'll send shortly. Best. - wsb



----- Original Message -----

From: Beschen, Darrell  
Sent: Thursday, February 15, 2001 9:20 AM  
To: #RODeputy\_Directors@DOE; #RODirectors@DOE  
Subject: update on NEP: good pictures and graphics are desired and do not count against space limits

----- Forwarded by Darrell Beschen/EE/DOE on 02/15/2001 11:19 AM -----



02/15/2001 09:53 AM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE  
cc: John Sullivan/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, #EE-ADAS

Subject: update on NEP: good pictures and graphics are desired and do not count against space limits

16651

DOE017-1274

bcs)

David Rodgers 02/15/2001 05:29 PM

---

To: MaryBeth Zimmerman/EE/DOE@DOE, Tom Gross, richard.moorer@hq.doe.gov, John Ferrell, James Eberhard/EE/DOE@DOE, Gerson Santos-Leon/EE/DOE@DOE, Tien Nguyen/EE/DOE@DOE, Ed Wall, margaret.singh@ee.doe.gov  
cc: Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE

Subject: Re: Transportation expanded section 

Dear MaryBeth,



OTT NEP expanded :

Ed Wall will be out on Friday, 2/16, so please call me with questions at 6-8038 or 301-602-3482.

Thanks, David Rodgers

MaryBeth Zimmerman



MaryBeth Zimmerman

02/14/2001 03:38 PM

---

To: David Rodgers/EE/DOE@DOE  
cc: Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE

Subject: Re: FW: NEP Draft outline 

David Rodgers 02/14/2001 02:59 PM

David Rodgers 02/14/2001 02:59 PM

---

16652

DOE017-1275

b(5)

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Re: FW: NEP Draft outline 

Dear Marybeth,

David

**16653**

---

DOE017-1276

5 (5)

**DARRELL BESCHEN**

02/15/2001 05:32 PM


To: Sam Baldwin  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: Re: Transportation expanded section

----- Forwarded by Darrell Bescherv/EE/DOE on 02/15/2001 05:30 PM -----

**David Rodgers** 02/15/2001 05:29 PM

To: MaryBeth Zimmerman/EE/DOE@DOE, Tom Gross, richard.moorer@hq.doe.gov, John Ferrell, James Eberhardt/EE/DOE@DOE, Gerson Santos-Leon/EE/DOE@DOE, Tien Nguyen/EE/DOE@DOE, Ed Wall, margaret.singh@ee.doe.gov  
cc: Darrell Bescherv/EE/DOE@DOE, Michael York/EE/DOE@DOE

Subject: Re: Transportation expanded section 

Dear MaryBeth,



OTT NEP expanded :

Ed Wall will be out on Friday, 2/16, so please call me with questions at 6-8038 or 301-602-3482.

Thanks, David Rodgers


MaryBeth Zimmerman



**MaryBeth Zimmerman**

02/14/2001 03:38 PM

To: David Rodgers/EE/DOE@DOE  
cc: Darrell Bescherv/EE/DOE@DOE, Michael York/EE/DOE@DOE

Subject: Re: FW: NEP Draft outline 

16654


DOE017-1277

David Rodgers 02/14/2001 02:59 PM

David Rodgers 02/14/2001 02:59 PM

---

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Re: FW: NEP Draft outline 

Dear Marybeth,

**16655**

---

DOE017-1278



MaryBeth Zimmerman

02/15/2001 05:57 PM

---

To: Sam Baldwin/EE/DOE@DOE  
cc: Darrell Beschen/EE/DOE@DOE

Subject: Re: Transportation expanded section

**DARRELL BESCHEN**

02/15/2001 05:32 PM

To: Sam Baldwin  
cc: MaryBeth Zimmerman/EE/DOE@DOE

Subject: Re: Transportation expanded section

----- Forwarded by Darrell Beschen/EE/DOE on 02/15/2001 05:30 PM -----

**David Rodgers** 02/15/2001 05:29 PM

---

To: MaryBeth Zimmerman/EE/DOE@DOE, Tom Gross, richard.moorer@hq.doe.gov, John Ferrell, James Eberhardt/EE/DOE@DOE, Gerson Santos-Leon/EE/DOE@DOE, Tien Nguyen/EE/DOE@DOE, Ed Wall, margaret.singh@ee.doe.gov  
cc: Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE

Subject: Re: Transportation expanded section

Dear MaryBeth,

Ed Wall will be out on Friday, 2/16, so please call me with questions at 6-8038 or 301-602-3482.

Thanks, David Rodgers

MaryBeth Zimmerman



MaryBeth Zimmerman

02/14/2001 03:38 PM


---

16656

DOE017-1279

bcs

To: David Rodgers/EE/DOE@DOE  
cc: Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE


Subject: Re: FW: NEP Draft outline 

David Rodgers 02/14/2001 02:59 PM

David Rodgers 02/14/2001 02:59 PM

---

To: MaryBeth Zimmerman/EE/DOE@DOE  
cc:

Subject: Re: FW: NEP Draft outline 

16657

---

DOE017-1280





MaryBeth Zimmerman

02/15/2001 06:03 PM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE, Elyn Krevitz/EE/DOE@DOE

cc:

Subject: NEP Ch. 4 Draft outline

Reminder on secret location: P://Analysis/Calls/External Requests/NEP2001/Assessment Chapters

Please also feel free to post copies of the items you have already been developing for these chapters.

Note the overall DOE guidance & timetable NEP2001/Key Documents.

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 02/15/2001 05:57 PM -----



MaryBeth Zimmerman

02/14/2001 12:24 PM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE

cc: #EE-ADAS, John Sullivan/EE/DOE@DOE

Subject: FW: NEP Draft outline

One last item (sorry for the multiple e-mails): This is quick turn-around internal assignment. Please hold this material & discussions close (& in house). Thanks

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 12:21 PM -----



MaryBeth Zimmerman

02/14/2001 11:08 AM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE

cc: John Sullivan/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, #EE-ADAS

Subject: FW: NEP Draft outline

Directions on NEP Assessment paper. Please read all of this very carefully before proceeding:

16658

DOE017-1281

----- Forwarded by MaryBeth Zimmerman/EE/DOE on 02/14/2001 10:34 AM -----



**MaryBeth Zimmerman**

02/13/2001 05:27 PM

To: Kenneth Friedman/EE/DOE@DOE, Peggy Podolak/EE/DOE@DOE, Linda Silverman/EE/DOE@DOE, Ed Wall/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Gail McKinley/EE/DOE@DOE

**16659**

DOE017-1282

cc: John Sullivan/EE/DOE@DOE, Darrell Beschert/EE/DOE@DOE, Michael York/EE/DOE@DOE, Buddy  
Garland/EE/DOE@DOE

Subject: FW: NEP Draft outline

**16660**

DOE017-1283



Draft outline.

**16661**

DOE017-1284

**Martin, Adrienne**

---

**From:** KYDES, ANDY  
**Sent:** Monday, May 07, 2001 2:30 PM  
**To:** Anderson, Margot; Cook, Trevor; Breed, William; Braitsch, Jay; Carter, Douglas; Zimmerman, MaryBeth  
**Subject:** RE: citations update



CITATI-3.DOC



CHAPTE-3.WPD



CH1-EIA.DOC

Margot:

-----Original Message-----

**From:** Margot Anderson\_at\_HQ-EXCH at X400PO  
**Sent:** Monday, May 07, 2001 10:37 AM  
**To:** Kydes, Andy; TREVOR COOK\_at\_HQ-EXCH at X400PO; William Breed\_at\_HQ-EXCH at X400PO; Jay Braitsch\_at\_HQ-EXCH at X400PO; Douglas Carter\_at\_HQ-EXCH at X400PO; MaryBeth Zimmerman\_at\_HQ-NOTES at X400PO  
**Subject:** citations update

Can I get an update on how things are going and do we need to bring more folks in on this?

6(s)

Martin, Adrienne

---

**From:** Kelliher, Joseph  
**Sent:** Friday, May 04, 2001 12:32 PM  
**To:** Terry, Tracy  
**Cc:** Anderson, Margot; Conti, John  
**Subject:** RE: DAVIS conservation plan

-----Original Message-----

**From:** Terry, Tracy  
**Sent:** Monday, April 30, 2001 9:34 AM  
**To:** Kelliher, Joseph  
**Cc:** Anderson, Margot; Conti, John  
**Subject:** RE: DAVIS conservation plan

Joe,

Tracy

-----Original Message-----

**From:** Kelliher, Joseph  
**Sent:** Saturday, April 28, 2001 3:16 PM  
**To:** Anderson, Margot; Conti, John; Terry, Tracy  
**Subject:** DAVIS conservation plan

Can we assess the accuracy of his claims of success on conservation?

[http://www.governor.ca.gov/state/govsite/gov\\_htmlprint.jsp?BV\\_SessionID=@@@@1360845885.0988485257@@@&BV\\_EngineID=calkkfjmgbemfckmchcng.0&sFilePath=%2fgovsite%2fpress\\_release%2f2001\\_04%2f20010427\\_PR01176\\_fivepointPlan.html&sTitle=GOVERNOR+DAVIS+ANNOUNCES+STATE'S+SUCCESS+IN+SAVING+ENERGY&sCatTitle=Press+Release&sSubCat=null&iOID=14525](http://www.governor.ca.gov/state/govsite/gov_htmlprint.jsp?BV_SessionID=@@@@1360845885.0988485257@@@&BV_EngineID=calkkfjmgbemfckmchcng.0&sFilePath=%2fgovsite%2fpress_release%2f2001_04%2f20010427_PR01176_fivepointPlan.html&sTitle=GOVERNOR+DAVIS+ANNOUNCES+STATE'S+SUCCESS+IN+SAVING+ENERGY&sCatTitle=Press+Release&sSubCat=null&iOID=14525)

Martin, Adrienne

5(5)

From: Tom Kimbis  
Sent: Friday, May 04, 2001 12:44 PM  
To: Anderson, Margot  
Subject: RE: Revisions to Renewables Chapter



bpavd9c9

double checked it.



Margot Anderson@HQMAIL on 05/04/2001 12:12:26 PM

To: Tom Kimbis/EE/DOE@DOE@HQMAIL

cc:

Subject: RE: Revisions to Renewables Chapter

Can you call me? 6-2589

-----Original Message-----

From: Tom Kimbis  
Sent: Friday, May 04, 2001 12:04 PM  
To: Anderson, Margot  
Subject: RE: Revisions to Renewables Chapter

I'm temporarily at 586-9264 (squatting in a window office while people get shuffled).

My usual number (where my voicemail is) is 586-7055.

Tom

Margot Anderson@HQMAIL on 05/04/2001 11:57:51 AM

To: Tom Kimbis/EE/DOE@DOE@HQMAIL

cc:

Subject: RE: Revisions to Renewables Chapter

what's your phone number?

6.5)

-----Original Message-----

From: Tom Kimbis  
Sent: Friday, May 04, 2001 9:50 AM  
To: Anderson, Margot  
Subject: RE: Revisions to Renewables Chapter

Margot, sorry I didn't pick up your email until right now. I just got a new computer and just finished hooking it up. I believe it should read

Margot Anderson@HQMAIL on 05/03/2001 04:59:45 PM

To: Tom Kimbis/EE/DOE@DOE@HQMAIL  
cc:

Subject: RE: Revisions to Renewables Chapter

--Original Message-----

From: Tom Kimbis  
Sent: Thursday, May 03, 2001 2:11 PM  
To: Anderson, Margot  
Cc: Mansueti, Lawrence; York, Michael; Zimmerman, MaryBeth; Tseng, Phillip  
Subject: RE: Revisions to Renewables Chapter

No problem. This was a team effort by everyone cc'd on the email...

Margot Anderson@HQMAIL on 05/03/2001 01:53:18 PM

To: Tom Kimbis/EE/DOE@DOE@HQMAIL  
cc: Lawrence Mansueti/EE/DOE@DOE@HQMAIL, Michael York/EE/DOE@DOE@HQMAIL,  
MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, Phillip  
Tseng/EE/DOE@DOE@HQMAIL

Subject: RE: Revisions to Renewables Chapter

Thanks, Tom. Much appreciate your hard work.

-----Original Message-----

From: Tom Kimbis  
Sent: Thursday, May 03, 2001 1:50 PM  
To: Anderson, Margot  
Cc: Mansueti, Lawrence; York, Michael; Zimmerman, MaryBeth; Tseng,  
Phillip  
Subject: Revisions to Renewables Chapter  
Importance: High

Margot:



4(5)

Let me know if you have any further questions.

Tom

586-9264  
586-7055 - vm

<< File: CHP schematic.ppt >>

<< File: bpxvd66o >>

<< File: bpxvd98v >>

**Martin, Adrienne**

---

**From:** Cook, Trevor  
**Sent:** Friday, May 04, 2001 3:57 PM  
**To:** Anderson, Margot; Braitsch, Jay; Magwood, William  
**Subject:** attached is chapter 5 nuke fact check



Citation Check - NE  
CH 5.doc...

bcs)

Martin, Adrienne

---

From: Carter, Douglas  
Sent: Friday, May 04, 2001 4:12 PM  
To: Braitsch, Jay; Anderson, Margot  
Subject: fact checks on ch 5



CHAPTER 5  
Sources.doc

Doug Carter (FE-26)

b(5)

**Martin, Adrienne**

---

**From:** Cook, Trevor  
**Sent:** Friday, May 04, 2001 4:26 PM  
**To:** Anderson, Margot; Magwood, William  
**Cc:** Braitsch, Jay  
**Subject:** chapter 3 ne input...



NE - CitationsCH3.doc

b(5)

**Martin, Adrienne**

---

**From:** Braitsch, Jay  
**Sent:** Friday, May 04, 2001 4:39 PM  
**To:** Anderson, Margot  
**Subject:** RE: more on NEP citations assignment

We have a lot of citations done but will need Monday to complete, so I would prefer not to send anything now but gather them into a nice package Monday pm.

-----Original Message-----

**From:** Anderson, Margot  
**Sent:** Friday, May 04, 2001 4:27 PM  
**To:** KYDES, ANDY; Zimmerman, MaryBeth; Cook, Trevor; Breed, William; Braitsch, Jay; Carter, Douglas  
**Cc:** Haspel, Abe; PETTIS, LA; Magwood, William; Kripowicz, Robert; McSarrow, Kyle  
**Subject:** more on NEP citations assignment

All,

**Martin, Adrienne**

---

**From:** Braitsch, Jay  
**Sent:** Friday, May 04, 2001 5:13 PM  
**To:** Anderson, Margot  
**Subject:** RE: more on NEP citations assignment

Yep -- just confirming.

-----Original Message-----

**From:** Anderson, Margot  
**Sent:** Friday, May 04, 2001 4:49 PM  
**To:** Braitsch, Jay  
**Subject:** RE: more on NEP citations assignment

-----Original Message-----

**From:** Braitsch, Jay  
**Sent:** Friday, May 04, 2001 4:39 PM  
**To:** Anderson, Margot  
**Subject:** RE: more on NEP citations assignment

We have a lot of citations done but will need Monday to complete, so I would prefer not to send anything now but gather them into a nice package Monday pm.

-----Original Message-----

**From:** Anderson, Margot  
**Sent:** Friday, May 04, 2001 4:27 PM  
**To:** KYDES, ANDY; Zimmerman, MaryBeth; Cook, Trevor; Breed, William; Braitsch, Jay; Carter, Douglas  
**Cc:** Haspel, Abe; PETTIS, LA; Magwood, William; Kripowicz, Robert; McSarrow, Kyle  
**Subject:** more on NEP citations assignment

All,

Martin, Adrienne

b(5)

---

**From:** Breed, William  
**Sent:** Monday, May 07, 2001 10:41 AM  
**To:** Anderson, Margot  
**Subject:** RE: citations update

b(5)

William Breed  
Acting Director, Office of Energy Efficiency,  
Alternative Fuels, and Oil Analysis (PO-22)  
202-586-4763

-----Original Message-----

**From:** Anderson, Margot  
**Sent:** Monday, May 07, 2001 10:38 AM  
**To:** KYDES, ANDY; Zimmerman, MaryBeth; Cook, Trevor; Breed, William; Braitsch, Jay; Carter, Douglas  
**Subject:** citations update

Can I get an update on how things are going and do we need to bring more folks in on this?

6(5)

**Martin, Adrienne**

---

**From:** Breed, William  
**Sent:** Monday, May 07, 2001 10:44 AM  
**To:** Anderson, Margot  
**Subject:** RE: citations update

planning on it, hoping for earlier -- we will definitely get them all that we CAN cite well before COB --

William Breed  
Acting Director, Office of Energy Efficiency,  
Alternative Fuels, and Oil Analysis (PO-22)  
202-586-4763

-----Original Message-----

**From:** Anderson, Margot  
**Sent:** Monday, May 07, 2001 10:43 AM  
**To:** Breed, William  
**Subject:** RE: citations update

Okay. Think today COB will work for you?

-----Original Message-----

**From:** Breed, William  
**Sent:** Monday, May 07, 2001 10:41 AM  
**To:** Anderson, Margot  
**Subject:** RE: citations update

William Breed  
Acting Director, Office of Energy Efficiency,  
Alternative Fuels, and Oil Analysis (PO-22)  
202-586-4763

-----Original Message-----

**From:** Anderson, Margot  
**Sent:** Monday, May 07, 2001 10:38 AM  
**To:** KYDES, ANDY; Zimmerman, MaryBeth; Cook, Trevor; Breed, William; Braitsch, Jay; Carter, Douglas  
**Subject:** citations update

Can I get an update on how things are going and do we need to bring more folks in on this?



Martin, Adrienne

b(5)

---

**From:** KYDES, ANDY  
**Sent:** Monday, May 07, 2001 2:09 PM  
**To:** Anderson, Margot  
**Cc:** Zimmerman, MaryBeth; Braitsch, Jay  
**Subject:** RE: citations update



CITATI-2.DOC



0413CH.DOC



CITATI-1.DOC

Margot,

Andy

-----Original Message-----

**From:** Margot Anderson\_at\_HQ-EXCH at X400PO  
**Sent:** Monday, May 07, 2001 10:37 AM  
**To:** Kydes, Andy; TREVOR COOK\_at\_HQ-EXCH at X400PO; William Breed\_at\_HQ-EXCH at X400PO; Jay Braitsch\_at\_HQ-EXCH at X400PO; Douglas Carter\_at\_HQ-EXCH at X400PO; MaryBeth Zimmerman\_at\_HQ-NOTES at X400PO  
**Subject:** citations update

Can I get an update on how things are going and do we need to bring more folks in on this?

Martin, Adrienne

6052

From: MaryBeth Zimmerman  
Sent: Monday, May 07, 2001 11:25 AM  
To: Anderson, Margot  
Subject: Re: citations update

We're OK, but could use another copy of the  
mine).



Margot Anderson@HQMAIL on 05/07/2001 10:37:46 AM

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, TREVOR COOK@HQMAIL, William Breed@HQMAIL, Jay  
Braitsch@HQMAIL, Douglas Carter@HQMAIL, ANDY KYDES@HQMAIL

cc

Subject: citations update

Can I get an update on how things are going and do we need to bring more folks in on  
this?

Martin, Adrienne

b(3)

From: MaryBeth Zimmerman  
Sent: Monday, May 07, 2001 11:25 AM  
To: Anderson, Margot  
Cc: Friedrichs, Mark  
Subject: RE: bullets



Margot Anderson@HQMAIL on 05/07/2001 11:03:37 AM

To: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, Mark FRIEDRICHS@HQMAIL, Arthur Rypinski@HQMAIL  
cc:

Subject: RE: bullets

-----Original Message-----

From: Friedrichs, Mark  
Sent: Monday, May 07, 2001 10:39 AM  
To: Zimmerman, MaryBeth; Anderson, Margot; Rypinski, Arthur  
Subject: FW: bullets  
Importance: High

This is what went. It included that one bullet I added at the last second in the first section.

Let's try for something better 1 pm. Can we have a brown bag together at noon in my office or in our conference room?

-----Original Message-----

From: Friedrichs, Mark  
Sent: Monday, May 07, 2001 10:34 AM  
To: McMonigie, Joe; Kolevar, Kevin  
Subject: FW: bullets

Importance: High

-----Original Message-----

From: MaryBeth Zimmerman  
Sent: Monday, May 07, 2001 10:24 AM  
To: Friedrichs, Mark  
Subject: bullets  
Importance: High

<< File: 1 pger for WH.doc >>

Martin, Adrienne

---

From: Cook, Trevor  
Sent: Monday, May 07, 2001 3:14 PM  
To: Anderson, Margot  
Subject: here is one citation



NEinput Ch3Citations  
Needed as

691

*Handwritten mark*

**Martin, Adrienne**

---

From: Cook, Trevor  
Sent: Monday, May 07, 2001 3:26 PM  
To: Anderson, Margot  
Subject: an additional fact not checked on friday

its in bright pink... the only pink text in the file. No. 73.



Citation Check - NE  
CH 5.doc..

697

Release

**Martin, Adrienne**

---

From: Cook, Trevor  
Sent: Monday, May 07, 2001 3:30 PM  
To: Anderson, Margot  
Subject: found an error,...

made a correction in citation No. 58, shown in red and strikethrough.



NE - CitationsCH3.doc

694

(6)151

**Martin, Adrienne**

---

**From:** Carter, Douglas  
**Sent:** Monday, May 07, 2001 3:49 PM  
**To:** Braitsch, Jay  
**Cc:** Anderson, Margot  
**Subject:** Citations for Chapter 5

Jay -

Attached is a redline of the Ch 5 request for citations. Reference sources are the redline material.

Call me if you have problems or questions with this material, or if I need to do additional work.



CitationsCHAPTER 5  
carter.doc

Doug Carter (FE-26)  
US DOE  
Washington, DC 20585  
202-586-9684

[This email uses 100% recycled electrons.]



700

Release

**Martin, Adrienne**

---

From: KYDES, ANDY  
Sent: Monday, May 07, 2001 7:38 PM  
To: Anderson, Margot  
Subject: FW: More NEP



CHICITAT.DOC

Chapter 1 additions fact checked.

-----Original Message-----

From: Sitzer, Scott  
Sent: Monday, May 07, 2001 4:05 PM  
To: Margot Anderson  
Cc: Hutzler, Mary; Kydes, Andy  
Subject: RE: More NEP

Attached are citations for the two new facts indicated in Chapter 1.

Scott Sitzer  
Director, Coal and Electric Power Division  
EI-82  
Washington, DC 20585  
Phone: (202) 586-2308  
Fax: (202) 586-1876

6

Tucker, Irma

---

**From:** Squitieri, Ray  
**Sent:** Wednesday, March 28, 2001 6:30 PM  
**To:** Ellis, Dina  
**Subject:** mcnally response



NEP call question 30%  
mcnally...

36

ABE NEW NEP FOIA

CN=John Sullivan/OU=EE/O=DOE>----<CN=Abe Haspel/OU=EE/O=DOE@DOE>----<07/13/2001 12:15:08 PM>----<Re: Operational Program Review of EERE  
----- Message body -----

(b)(1)

Abe Haspel 07/13/2001 11:39 AM To: John Sullivan/EE/DOE cc: Subject: Re: Operational Program Review of EERE

From: John Sullivan on 07/13/2001 11:26 AM To: Richard Sweeney/CR/DOE@CRDOE, Thomas Fisher/CR/DOE@CRDOE, Tom Palmieri@HQMAIL@HQDOE cc: John Kersten/SMTP/NRELEX@NRELEXchange, Frank Stewart/SMTP/NRELEX@NRELEXchange, Abe Haspel, Doug Faulkner/EE/DOE@DOE, David Garman/EE/DOE@HQLNC, Bruce Carnes@HQMAIL@HQDOE Subject: Operational Program Review of EERE

(b)(1)

CN=John Sullivan/OU=EE/O=DOE>----<CN=Abe Haspel/OU=EE/O=DOE@DOE>----<07/13/2001 12:15:08 PM>----<Re: Operational Program Review of EERE  
----- Message body -----

Abe Haspel 07/13/2001 11:39 AM To: John Sullivan/EE/DOE cc: Subject: Re: Operational Program Review of EERE John: David thinks you volunteered EERE (in his presence) to be the pilot. Abe From: John Sullivan on 07/13/2001 11:26 AM To: Richard Sweeney/CR/DOE@CRDOE, Thomas Fisher/CR/DOE@CRDOE, Tom Palmieri@HQMAIL@HQDOE cc: John Kersten/SMTP/NRELEX@NRELEXchange, Frank Stewart/SMTP/NRELEX@NRELEXchange, Abe Haspel, Doug Faulkner/EE/DOE@DOE, David Garman/EE/DOE@HQLNC, Bruce Carnes@HQMAIL@HQDOE Subject: Oper

17044

ABE NEW NEP FOIA

CN=Abe Haspel/OU=EE/O=DOE>---<John Sullivan/EE/DOE>---<Re: Operational Program Review of EERE  
----- Message body -----

6:5

CN=Abe Haspel/OU=EE/O=DOE>---<John Sullivan/EE/DOE>---<Re: Operational Program Review of EERE  
----- Message body -----

(2)(c)

CN=Abe Haspel/OU=EE/O=DOE>---<david.garman@ee.doe.gov>---<Gold award  
----- Message body -----

ABE NEW NEP FOIA

CN=Abe Haspel/OU=EE/O=DOE>---<david.garman@ee.doe.gov>---<Gold award  
----- Message body -----

CN=John Sullivan/OU=EE/O=DOE>---<CN=Richard Sweeney/OU=CR/O=DOE@CRDOE;CN=Thomas Fisher/OU=CR/O=DOE@CRDOE;Tom Palmieri@HQMAIL@HQDOE>---<07/13/2001 11:26:33 AM>---<Operational Program Review of EERE  
----- Message body -----

CN=John Sullivan/OU=EE/O=DOE>---<CN=Richard Sweeney/OU=CR/O=DOE@CRDOE;CN=Thomas Fisher/OU=CR/O=DOE@CRDOE;Tom Palmieri@HQMAIL@HQDOE>---<07/13/2001 11:26:33 AM>---<Operational Program Review of EERE  
----- Message body -----

page 3

17046

DOE018-0239

CN=Michael McCabe/OU=EE/O=DOE>---<David.Garman@ee.doe.gov;Douglas Faulkner@ee\_ccmail;CN=Abe Haspel/OU=EE/O=DOE@DOE>---<07/12/2001 02:33:44 PM>---<Energy Star event opportunity

----- Message body -----  
Dave, you could do this. However, it would mean that someone would have to cover for your 1:30 NEP presentation to the field managers. I think it would be a good if either the Secretary or you could participate in the Energy Star event with EPA and Canada. If you were to do the event, I would suggest that Abe do the NEP briefing for field managers. Michael

----- Forwarded by Michael McCabe/EE/DOE on 07/12/2001 02:30 PM -----  
----- Mark Ginsberg 07/12/2001 01:08 PM To: David Garman/EE/DOE@DOE, Doug Faulkner/EE/DOE@DOE, Michael McCabe/EE/DOE@DOE cc: Steven Lee/EE/DOE, William Noel/EE/DOE@DOE Subject: Energy Star event opportunity Because of the short fuse on this, I decided to send it forward without the complete event request since we don't have all the details. I think it's important that DOE be a full and equal partner at events like this. We can prepare an event request for either the Secretary or you. Sorry for the short notice, but we just got word of this.

----- Forwarded by Mark Ginsberg/EE/DOE on 07/12/2001 01:03 PM -----  
----- William Noel 07/12/2001 01:01 PM To: Mark Ginsberg/EE/DOE@DOE cc: Gail McKinley/EE/DOE@DOE, Marsha Penhaker/EE/DOE@DOE Subject: Energy Star event opportunity The EPA Administrator is going to participate in an announcement of the Canadian government's signing an agreement to use the Energy Star symbol to promote energy efficient products in Canada. DOE and EPA both signed the letter of cooperation between the U.S. and Canada a couple months ago and Canada is now developing a program. I was asked to see whether senior DOE management would also like to participate (S-17 EE-1?). Date: Thursday, July 19th Time: 1:30 - 3:30 p.m. Location: EPA is looking for a Sears store in the DC area to host the event. Bill 66149

CN=John Sullivan/OU=EE/O=DOE>---<CN=Steven Lee/OU=EE/O=DOE@DOE;Abe Haspel>---<07/12/2001 08:03:31 AM>---<Lundquist Meeting with S-1

----- Message body -----  
----- Forwarded by John Sullivan/EE/DOE on 07/12/2001 08:02 AM -----  
----- David Garman 07/11/2001 08:43 PM To: Kyle McSlarro w@HQMAIL@HQDOE cc: (bcc: John Sullivan/EE/DOE) Subject: Lundquist Meeting

2/10/01

1/10/01

1/10/01

ABE NEW NEP FOIA

CN=Randy Steer/OU=EE/O=DOE>---<#EE-DAS;#EE-ADAS;CN=Fred Glatstein/OU=EE/O=DOE@DOE;CN=Richard Budzich/OU=EE/O=DOE@DOE;CN=John Crupi/OU=EE/O=DOE@DOE;CN=Joel Rubin/OU=EE/O=DOE@DOE;CN=David J Smith/OU=EE/O=DOE@DOE;CN=Leshawn Sutton/OU=EE/O=DOE@DOE;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE;CN=Michael York/OU=EE/O=DOE@DOE;CN=Darrell Beschen/OU=EE/O=DOE@DOE;CN=Phillip Tseng/OU=EE/O=DOE@DOE;CN=Tom Kimbis/OU=EE/O=DOE@DOE;CN=Buddy Garland/OU=EE/O=DOE@DOE;CN=Nancy Jeffery/OU=EE/O=DOE@DOE;CN=Sam Baldwin/OU=EE/O=DOE@DOE;CN=Brian Connor/OU=EE/O=DOE@DOE;CN=Michael McCabe/OU=EE/O=DOE@DOE;CN=Robert Brewer/OU=EE/O=DOE@DOE;CN=Thomas Heavey/OU=EE/O=DOE@DOE;CN=Jim Coyle/OU=EE/O=DOE@DOE;CN=Patrick Booher/OU=EE/O=DOE@DOE;CN=Gloria Elliott/OU=EE/O=DOE@DOE;CN=Noel Cole/OU=EE/O=DOE@DOE;CN=Schuyler Schell/OU=EE/O=DOE@DOE;CN=Henry Kenchington/OU=EE/O=DOE@DOE;CN=Scott Richlen/OU=EE/O=DOE@DOE;CN=Michael Mills/OU=EE/O=DOE@DOE>---<07/11/2001 10:55:13 AM>---<Re: Preparing for Garman's FY03 mtg w/ DepSec & CFO

----- Message body -----

CN=John Sullivan/OU=EE/O=DOE>---<CN=Randy Steer/OU=EE/O=DOE@DOE>---<07/11/2001 07:59:23 AM>---<Re: Preparing for Garman's FY03 mtg w/ DepSec & CFO

----- Message body -----

We need to have a presentation strategy session with the gang asap. Check Dave and Doug's calendar. From: Randy Steer on 07/10/2001 07:45 PM To: #EE-DAS, #EE-ADAS cc: Fred Glatstein/EE/DOE@DOE, Richard Budzich/EE/DOE@DOE, John Crupi/EE/DOE@DOE, Joel Rubin/EE/DOE@DOE, David J Smith/EE/DOE@DOE, Leshawn Sutton/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE, Michael York/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Phillip Tseng/EE/DOE@DOE, Tom Kimbis/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, Brian Connor/EE/DOE@DOE, Michael McCabe/EE/DOE@DOE, Robert Brewer/EE/DOE@DOE, Thomas Heavey/EE/DOE@DOE, Jim Coyle/EE/DOE@DOE, Patrick Booher/EE/DOE@DOE, Gloria Elliott/EE/DOE@DOE, Noel Cole/EE/DOE@DOE, Schuyler Schell/EE/DOE@DOE, Henry Kenchington/EE/DOE@DOE, Scott Richlen/EE/DOE@DOE, Michael Mills/EE/DOE@DOE Subject: Preparing for Garman's FY03 mtg w/ DepSec & CFO We've received some feedback from the CFO staff on how the fi

ABE NEW NEP FOIA

CN=Randy Steer/OU=EE/O=DOE>---<#EE-DAS;#EE-ADAS>---<07/10/2001 07:45:41 PM>  
---<Preparing for Garman's FY03 mtg w/ DepSec & CFO  
----- Message body -----

Page 6

17049

DOE018-0242



ABE NEW NEP FOIA

<collin\_green@nrel.gov>@internet@HQMAIL>---<CN=Abe Haspel/OU=EE/O=DOE@DOE@HQMAIL>---<07/10/2001 02:23:41 PM>---<FW: Experts workshop on cities, Fossil Fuel, health and climate

----- Message body -----

Regards, Collin > -----Original Message----- > From: Green, Collin > Sent: Wednesday, June 20, 2001 5:14 PM > To: Abe Haspel (E-mail) > Subject: Experts workshop on cities, Fossil Fuel, health and climate > > Dear Abe,

Page 7

17050

DOE018-0243

*Handwritten signature*

> e-mail: collin\_green@nrel.gov > > >

----- Attachments -----  
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CN=Doug Faulkner/OU=EE/O=DOE>---<CN=John Sullivan/OU=EE/O=DOE@DOE;CN=Abe Haspel/OU=EE/O=DOE@DOE>---<07/10/2001 01:35:53 PM>---<Questions & Answers for Town Halls

----- Message body -----  
let's talk pls asap. ----- Forwarded by Doug Faulkner/EE/D  
OE on 07/10/2001 01:35 PM ----- David Garman 07/10  
/2001 01:30 PM To: doug.faulkner@ee.doe.gov cc: subject: Questions & Ans  
wers for Town Halls ----- Forwarded by David Garman/EE/D  
OE on 07/10/2001 01:30 PM ----- Cathy Tripodi@HQMA  
IL on 07/10/2001 01:24:50 PM To: David Garman/EE/DOE@DOE@HOMAIL cc: Subi

CN=David Garman/OU=EE/O=DOE>---<buddy.garland@ee.doe.gov;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE;CN=Abe Haspel/OU=EE/O=DOE@DOE;CN=John Sullivan/OU=EE/O=DOE@DOE>---<07/09/2001 08:18:18 PM>---<NEP Dollar Impact on our budget  
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ABE NEW NEP FOIA

CN=MaryBeth Zimmerman/OU=EE/O=DOE>---<CN=Abe Haspel/OU=EE/O=DOE@DOE>---<07/09/2001 06:13:27 PM>---<Re: EERE NEP Action Plan comments needed  
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CN=Abe Haspel/OU=EE/O=DOE>---<CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE>---<Re: EERE NEP Action Plan comments needed  
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what specifically do you need me to do? MaryBeth Zimmerman 07/09/2001 04:51 PM To: #EE-DAS cc: #EE-ADAS, Nancy Jeffery/EE/DOE@DOE, Jerry Dion/EE/DOE@DOE, Philip Patterson/EE/DOE@DOE, David Rodgers/EE/DOE@DOE, Kenneth Friedman/EE/DOE@DOE, Patricia Hoffman/EE/DOE@DOE, Lawrence Mansueti/EE/DOE@DOE, Tina Kaarsberg/EE/DOE@DOE, David Bassett/EE/DOE@DOE, Nancy Jeffery/EE/DOE@DOE, Phillip Tseng/EE/DOE@DOE, Michael York/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, Sam Baldwin/EE/DOE@DOE, John Sullivan/EE/DOE@DOE, Lynn Campbell/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, Abe Haspel/EE/DOE@DOE, Randy Steer/EE/DOE@DOE, Joseph Malinovsky/EE/DOE@DOE, William Noel/EE/DOE@DOE, Edward Pollock/EE/DOE@DOE, Peter Goldman/EE/DOE@DOE, John Ferrell/EE/DOE@DOE, P  
Page 9

17052

ABE NEW NEP FOIA  
Philip Overholt/EE/DOE@DOE, Marshall Reed/EE/DOE@DOE, Stephen Goguen/EE/DOE  
@DOE, John Millhone/EE/DOE@DOE Subject: EERE NEP Action Plan comments nee  
ded

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ABE NEW NEP FOIA

"Dolf Gielen" <dolf.gielen@nies.go.jp>---<noble@abare.gov.au;denise.vanreg  
emorter@econ.kuleuven.ac.be;loulou@management.mcgill.ca;domenico.rossetti-d  
i-valdalbero@dg12.cec.be;eero.tamminen@vtt.fi;uf@ier.uni-stuttgart.de;av@ie  
r.uni-stuttgart.de;ggian@cres.gr;tosato@casaccia.enea.it;sato@ruby.tokai.ja  
eri.go.jp;leif.alm@ife.no;socrates.kypreos@psi.ch;jcl@brl.gov;phil.tseng@ee  
.doe.gov;ggoldstein@irg1td.com;tomas.ekvall@entek.chalmers.se;carmen.difigl  
io@iea.org;fridtjof.unander@iea.org;akydes@eia.doe.gov;mcnamara.Maureen@epa  
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de@worldbank.org;kenneth.friedman@ee.doe.gov;laitner.skip@epamail.epa.gov;m  
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ni-dortmund.de;t.devries@minez.nl;zhihong@dns.inet.tsinghua.edu.cn;mcdonald  
@iiasa.ac.at;mbiviano@usgs.gov;hiraishi@iges.or.jp;desullivan@usgs.gov;sal.em  
manuel@iges.or.jp;kiyoshi.ueno@hq.melco.co.jp;h.hayashi@mta.biglobe.ne.jp;k  
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enea.it;tim@avonlog.net;andreas.windspurger@noe-lak.at;niels.kilde@risoe.dk  
;citepa@compuserve.com;sudhirs@teri.res.in;gum@ornl.gov;andre.jol@eea.eu.in  
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v;sam.Baldwin@ee.doe.gov;jay.braitsch@hq.doe.gov;delachesnaye.Francois@epa  
mail;abe.haspel@ee.doe.gov;john.Houghton@science.doe.gov;hskhesh@erenj.com;  
kruger.dina@epamail.gov;william.nordhaus@yale.edu;naki@iiasa.ac.at;newell@r  
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er@hq.doe.gov;yagita.h@aist.go.jp;moriguti@nies.go.jp>---<07/09/2001 04:47:  
25 AM>---<energy and materials policies

----- Message body -----

Buddy.Garland@ee.doe.gov>---<CN=Joseph Malinovsky/OU=EE/O=DOE@DOE;CN=Abe Ha  
spel/OU=EE/O=DOE@DOE>---<07/06/2001 06:07:25 PM>---<Suggested EERE Response  
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----- Message body -----

----- Attachments -----

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CN=Abe Haspel/OU=EE/O=DOE>----<Greg Williams@HQMAIL @ HQDOE>----<RE: Brian Wilson schedule for July 10

----- Message body -----

-----Original Message----- From: Abe Haspel  
Sent: Thursday, July 05, 2001 5:58 PM To: Williams, Greg Cc: Garman, David  
Subject: Re: Brian Wilson schedule for July 10 David Garman has asked that I forward to you the email below which describes what EERE will discuss with Minister Wilson. Forwarded by Abe Haspel  
el/EE/DOE on 07/05/2001 05:55 PM Abe Haspel  
07/05/2001 02:59 PM To: David Garman/EE/DOE@DOE cc: Subject: Re: Brian Wilson schedule for July 10 We plan to discuss the role of energy efficiency

ABE NEW NEP FOIA

care of this for us? Thanks, David ----- Forwarded by David Garman/EE/DOE on 07/05/2001 12:26 PM ----- Greg Williams@HQMAIL on 07/05/2001 09:21:14 AM To: David Garman/EE/DOE@DOE@HQMAIL, George KERESTES@HQMAIL, Randa Hudome@HQMAIL, David Pumphrey@HQMAIL, Bob Coffin@HQMAIL, James Owendoff@HQMAIL, George Rudins@HQMAIL cc: Subject: Brian Wilson schedule for July 10 I hope everybody had a wonderful 4th of July. Here is the approved itinerary for the Honorable Brian Wilson, MP and Minister of Industry and Energy for the United Kingdom. The last meeting on the itinerary will be with S-1. We need an overall briefing memo for the Secretary for this meeting. Please put a synopsis of what you will respectively talk about to Minister Wilson. Please submit to the Office of Scheduling and Advance by c.o.b. Friday, July 6th. Robyn Johnson will be dropping some material off to your respective offices. Please use the attached template to complete your briefing memo for the Secretary's briefing book. Thank you Greg Williams << File: ATTACHMENT.TXT >> << File: DRAFT Brian Wilson UK Minister for Energy.doc >> << File: Meeting Memo template.doc >>

----- Attachments -----

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Greg Williams@HQMAIL>-----<CN=Abe Haspel/OU=EE/O=DOE@DOE@HQMAIL>-----<07/06/2001 09:16:39 AM>-----<RE: Brian Wilson schedule for July 10

----- Message body -----

I can't open these file. They need to be in word perfect format. Please have a hard copy delivered to me. Thank you Greg Williams -----Original Message----- From: Abe Haspel Sent: Thursday, July 05, 2001 5:58 PM To: Williams, Greg Cc: Garman, David Subject: Re: Brian Wilson schedule for July 10 David Garman has asked that I forward to you the email below which describes what EERE will discuss with Minister Wilson. -----

----- Forwarded by Abe Haspel/EE/DOE on 07/05/2001 05:55 PM -----

----- Abe Haspel 07/05/2001 02:59 PM To: David Garman/EE/DOE@DOE cc: Subject: Re: Brian Wilson schedule for July 10 We plan to discuss

----- Forwarded by David Garman/EE/DOE on 07/05/2001 12:26 PM -----

----- Greg Williams@HQMAIL on 07/05/2001 09:21:14 AM To:

David Garman/EE/DOE@DOE@HQMAIL, George KERESTES@HQMAIL, Randa Hudome@HQMAIL, David Pumphrey@HQMAIL, Bob Coffin@HQMAIL, James Owendoff@HQMAIL, George Rudins@HQMAIL cc: Subject: Brian Wilson schedule for July 10 I hope everybody had a wonderful 4th of July. Here is the approved itinerary for the Honorable Brian Wilson, MP and Minister of Industry and Energy for the United Kingdom. The last meeting on the itinerary will be with S-1. We need an overall briefing memo for the Secretary for this meeting. Please put a synopsis of what you will respectively talk about to Minister Wilson. Please submit to the Office of Scheduling and Advance by c.o.b. Friday, July 6th. Robyn Johnson will be dropping some material off to your respective offices. Please use the attached template to complete your briefing memo for the Secretary's briefing book. Thank you Greg Williams

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----- Attachments -----

ABE NEW NEP FOIA

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CN=Abe Haspel/OU=EE/O=DOE>---<Greg Williams@HQMAIL@HQDOE>---<Re: Brian Wilson schedule for July 10

----- Message body -----

David Garman has asked that I forward to you the email below which describes what EERE will discuss with Minister Wilson.

----- Forwarded by Abe Haspel/EE/DOE on 07/05/2001 05:55 PM -----

----- From: Abe Haspel 07/05/2001 02:59 PM To: David Garman/EE/DOE@DOE cc: Subject: Re: Brian Wilson schedule for July 10 We plan to discuss the rol

th a rundown of what we expect to be covering in our meeting by COB tomorrow. Can you take care of this for us? Thanks, David

----- Forwarded by David Garman/EE/DOE on 07/05/2001 12:26 PM -----

----- From: Greg Williams@HQMAIL on 07/05/2001 09:21:14 AM To: David Garman/EE/DOE@DOE@HQMAIL, George KERESTES@HQMAIL, Randa Hudome@HQMAIL, David Pumphrey@HQMAIL, Bob Coffin@HQMAIL, James Owendoff@HQMAIL, George Rudins@HQMAIL cc: Subject: Brian Wilson schedule for July 10 I hope everybody had a wonderful 4th of July. Here is the approved itinerary for the Honorable Brian Wilson, MP and Minister of Industry and Energy for the United Kingdom. The last meeting on the itinerary will be with S-1. We need an overall briefing memo for the Secretary for this meeting. Please put a synopsis of what you will respectively talk about to Minister Wilson. Please submit to the Office of Scheduling and Advance by c.o.b. Friday, July 6th. Robyn Johnson will be dropping some material off to your respective offices. Please use the attached template to complete your briefing memo for the Secretary's briefing book. Thank you Greg Williams

----- Attachments -----  
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CN=Abe Haspel/OU=EE/O=DOE>---<CN=David Garman/OU=EE/O=DOE@DOE>---<Re: Brian Wilson schedule for July 10

----- Message body -----

/DOE@DOE cc: Subject: Brian Wilson schedule for July 10 Abe, we are meeting with the British Minister of Industry and Energy on July 10. S-1 also meeting with him. We are supposed to provide S-1 with a rundown of what we expect to be covering in our meeting by COB tomorrow. Can you take care of this for us? Thanks, David

----- Forwarded by David Garman/EE/DOE on 07/05/2001 12:26 PM -----

----- From: Greg Williams@HQMAIL on 07/05/2001 09:21:14 AM To: David Garman/EE/DOE@DOE@HQMAIL, George KERESTES@HQMAIL, Randa Hudome@HQMAIL, David Pumphrey@HQMAIL, Bob Coffin@HQMAIL, James Owendoff@HQMAIL, George Rudins@HQMAIL cc: Subject

: Brian Wilson schedule for July 10 I hope everybody had a wonderful 4th



ABE NEW NEP FOIA

h of July. Here is the approved itinerary for the Honorable Brian Wilson, MP and Minister of Industry and Energy for the United Kingdom. The last meeting on the itinerary will be with 5-1. We need an overall briefing memo for the Secretary for this meeting. Please put a synopsis of what you will respectively talk about to Minister Wilson. Please submit to the Office of Scheduling and Advance by c.o.b. Friday, July 6th. Robyn Johnson will be dropping some material off to your respective offices. Please use the attached template to complete your briefing memo for the Secretary's briefing book. Thank you Greg Williams

----- Attachments -----

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Extracted Meeting Memo template.doc: 51200 bytes  
- Renamed to "Meeting Memo template0.doc" to preserve uniqueness

<melodie\_walker@nrel.gov>@internet@HQMMAIL>---<CN=John Atcheson/OU=EE/O=DOE@DOE@HQMMAIL;CN=Sam Baldwin/OU=EE/O=DOE@DOE@HQMMAIL;CN=Gary Burch/OU=EE/O=DOE@DOE@HQMMAIL;CN=Jack Cadogan/OU=EE/O=DOE@DOE@HQMMAIL;John Conti@HQMMAIL;CN=Raymond Costello/OU=EE/O=DOE@DOE@HQMMAIL;CN=Robert Dixon/OU=EE/O=DOE@DOE@HQMMAIL;CN=Raymond Fortuna/OU=EE/O=DOE@DOE@HQMMAIL;CN=Joseph Galdo/OU=EE/O=DOE@DOE@HQMMAIL;CN=Lynne Gillette/OU=EE/O=DOE@DOE@HQMMAIL;CN=Peter Goldman/OU=EE/O=DOE@DOE@HQMMAIL;CN=Sigmund Gronich/OU=EE/O=DOE@DOE@HQMMAIL;CN=Tom Gross/OU=EE/O=DOE@DOE@HQMMAIL;CN=Abe Haspel/OU=EE/O=DOE@DOE@HQMMAIL;CN=Debbie Haught/OU=EE/O=DOE@DOE@HQMMAIL;CN=Allan Hoffman/OU=EE/O=DOE@DOE@HQMMAIL;CN=Patricia Hoffman/OU=EE/O=DOE@DOE@HQMMAIL;CN=Allan Jelacic/OU=EE/O=DOE@DOE@HQMMAIL;CN=Lawrence Mansueti/OU=EE/O=DOE@DOE@HQMMAIL;aldretti@bsr.org@internet@HQMMAIL;Larry Alexander@EnvFutures.com@internet@HQMMAIL;dan\_alpert@bingaman.senate.gov@internet@HQMMAIL;aaltman@cleanair.org@internet@HQMMAIL;ABBAKER@sandia.gov@internet@HQMMAIL;David.Bassett@ee.doe.gov@internet@HQMMAIL;jbeldock@envplus.com@internet@HQMMAIL;ron\_benioff@nrel.gov@internet@HQMMAIL;sbernow@tellus.com@internet@HQMMAIL;cberry@cra.org@internet@HQMMAIL;Mark\_bernstein@rand.org@internet@HQMMAIL;bhargab@sce.com@internet@HQMMAIL;frankbishop@naseo.org@internet@HQMMAIL;ceciliab@wri.org@internet@HQMMAIL;bbteil@eesi.org@internet@HQMMAIL;rblood@appanet.org@internet@HQMMAIL;blunden@greenmountain.com@internet@HQMMAIL;angelo@hydro.org@internet@HQMMAIL;dtbradshaw@tva.gov@internet@HQMMAIL;braungw@bpsolar.com@internet@HQMMAIL;brent\_richard\_s@solarturbines.com@internet@HQMMAIL;matthew.brown@ncsl.org@internet@HQMMAIL;CoEnergyGr@aol.com@internet@HQMMAIL;png@orci.com@internet@HQMMAIL;burtraw@rff.org@internet@HQMMAIL;tgaljhc@aol.com@internet@HQMMAIL;scarter@nrdc.org@internet@HQMMAIL;trcasten@aol.com@internet@HQMMAIL;larry@massenergy.com@internet@HQMMAIL;craig\_christensen@nrel.gov@internet@HQMMAIL;sclemmer@ucsus.org@internet@HQMMAIL;jcohen@perihq.com@internet@HQMMAIL;vicki@irecusa.org@internet@HQMMAIL;bcollins@ases.org@internet@HQMMAIL;connorsr@MIT.EDU@internet@HQMMAIL;Gary.Cook@wdc.greenpeace.org@internet@HQMMAIL;LizC@wri.org@internet@HQMMAIL;counihan@greenmountain.com@internet@HQMMAIL;coxraig@att.net@internet@HQMMAIL;darmstadter@rff.org@internet@HQMMAIL;adavies@enron.com@internet@HQMMAIL;gdavis@mines.edu@internet@HQMMAIL;ddecasare@westgov.org@internet@HQMMAIL;Edemeo@earthlink.net@internet@HQMMAIL;cdemeter@antares.org@internet@HQMMAIL;billd@tellus.org@internet@HQMMAIL;susanna@sustainableenergy.org@internet@HQMMAIL;pdunbar@dnr.state.md.us@internet@HQMMAIL;roger.duncan@austinenergy.com@internet@HQMMAIL;Jae@pnl.gov@internet@HQMMAIL;rneliott@aceee.org@internet@HQMMAIL;denting@perihq.com@internet@HQMMAIL;Jonathan.Epstein@bingaman.senate.gov@internet@HQMMAIL;evans@rff.org@internet@HQMMAIL;s.fenn@irrc.org@internet@HQMMAIL;kent.Fickett@neg.pge.com@internet@HQMMAIL;jfiedler@nrdc.org@internet@HQMMAIL;fiksel@battelle.org@internet@HQMMAIL;jennifer@wri.org@internet@HQMMAIL;markfitz@isp.org@internet@HQMMAIL;cflavin@worldwatch.org@internet@HQMMAIL;sfreedman@nemw.org@internet@HQMMAIL;manion@wapa.gov@internet@HQMMAIL;wfulk@utk.edu@internet@HQMMAIL;gea@geotherm.org@internet@HQMMAIL;jcg@dwgp.com@internet@HQMMAIL;Mark.Gielecki@eia.doe.gov@internet@HQMMAIL;GleasonP@gao.gov@internet@HQMMAIL;dgoelstein@nrdc.org@internet@HQMMAIL;wgould@sunlaw.com@internet@HQMMAIL;bgrace@seadvantage.com@internet@HQMMAIL;tom\_gray@awea.org@internet@HQMMAIL;rbg2@pge.com@internet@HQMMAIL;gruenspe@rff.org@internet@HQMMAIL;e\_gumerman@bl.gov@internet@HQMMAIL;dham@ase.org@internet@HQMMAIL;jhamrin@resource-solutions.org@internet@HQMMAIL;zia.haq@eia.doe.gov@internet@HQMMAIL

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an.w@adlittle.com@internet@HQMMAIL;bthapa@icfconsulting.com@internet@HQMMAIL;  
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.com@internet@HQMMAIL;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE@HQMMAIL>---<07/04  
/2001 12:20:00 AM>---<Energy Analysis Forum

----- Message body -----

Dear Colleagues, We are re-sending you this invitation to NREL's first E  
nergy Analysis Forum to clarify a few minor points, including the dates whi  
ch are August 13 and 14, 2001. You may not have received our earlier messa  
ge since we have issued an electronic recall. If you received the earlier  
version, please discard it, and we apologize for the confusion. The Nation  
al Renewable Energy Laboratory invites you to the first Energy Analysis For  
um "The Role of Renewables in Regional Power Markets" August 13-14, 2001 in

Golden, Colorado. The Energy Analysis Forum is a critical step in establi  
shing an analytical agenda for the near- and long-term. Detailed informatio  
n regarding this seminal event is attached to this email. While the two-da  
y forum is free to all attendees, the attached registration form must be re  
turned by July 27, 2001. After looking over the attached information, plea  
se take a minute to return the registration form to Melodie Walker at NREL  
(Melodie\_walker@nrel.gov). She can help you with questions regarding the h  
otel or other logistics. Check out our website [www.nrel.gov/analysis](http://www.nrel.gov/analysis)  
for the latest updates on speakers, panel topics, and special events. We look  
forward to seeing you in Golden, Colorado! Sincerely, Eldon Boes, Director  
Energy Analysis Office Eldon\_Boes@nrel.gov <<Forum Flyer.pdf>> <<Regi  
station Form.doc>> <<Forum Outline.doc>>

----- Attachments -----

Extracted Forum Flyer.pdf: 258010 bytes  
Extracted Registration Form.doc: 47616 bytes  
Extracted Forum Outline.doc: 28672 bytes

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CN=Linda Silverman/OU=EE/O=DOE>---<CN=Robert Dixon/OU=EE/O=DOE@DOE;CN=Abe H  
aspe/OU=EE/O=DOE@DOE>---<07/03/2001 04:06:06 PM>---<RE: Consumer Informati  
on Feedback Form

----- Message body -----

ont page of energy.gov. I wonder what our constituents think of that. --  
----- Forwarded by Linda Silverman/EE/DOE on 07/03/2001 04:04  
PM -----  
"WEBMASTER, DOE" <DOE.WEBMASTER@hq.doe.gov>  
e.gov> on 07/03/2001 02:08:49 PM To: Linda Silverman/EE/DOE@DOE cc: S  
ubject: RE: Consumer Information Feedback Form The National Energy Pol  
icy was announced on May 17th by President Bush. The information was on the  
front page, but has been replaced with more recent news. The documents a  
re available at <http://www.whitehouse.gov>, [http://www.energy.gov/HQPress/releases01/maypr/energy\\_policy.htm](http://www.energy.gov/HQPress/releases01/maypr/energy_policy.htm) and <http://your.energy.gov> -----Original  
Message----- From: linda.silverman@EE.DOE.GOV%internet [mailto:linda.silv  
erman@EE.DOE.GOV] Sent: Tuesday, July 03, 2001 9:28 AM To: Consumer Informa  
tion; WEBMASTER, DOE Subject: Consumer Information Feedback Form FROM: li  
nda.silverman@ee.doe.gov SUBJECT: national energy plan PARM.1: TO: Consumer  
.Information@hq.doe.gov CC: DOE.WebMaster@hq.doe.gov SUBJECT: Consumer\_Inform  
ation\_Feedback\_Form TOPIC: No Answer SUBMIT: Send your Message MESSAGE: De  
ar DOE Web Team, no link to national energy plan that was just announced.  
should be on cover page. what is link? PURPOSE: No Answer TEXTFIELD: linda  
silverman AFFILIATION: No Answer ORGANIZATION: RELATIONSHIP:

Page 17

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CN=Linda Silverman/OU=EE/O=DOE>---<CN=Robert Dixon/OU=EE/O=DOE@DOE;CN=Abe H  
aspel/OU=EE/O=DOE@DOE>---<07/03/2001 04:06:06 PM>---<RE: Consumer Informati  
on Feedback Form

----- Message body -----

----- Forwarded by Linda Silverman/EE/DOE on 07/03/2001 04:04  
PM -----  
"WEBMASTER, DOE" <DOE.WEBMASTER@hq.doe.gov> on 07/03/2001 02:08:49 PM To: Linda Silverman/EE/DOE@DOE cc: S  
ubject: RE: Consumer Information Feedback Form The National Energy Pol  
icy was announced on May 17th by President Bush. The information was on the  
front page, but has been replaced with more recent news. The documents a  
re available at <http://www.whitehouse.gov>, [http://www.energy.gov/HQPress/re  
leases01/maypr/energy\\_policy.htm](http://www.energy.gov/HQPress/releases01/maypr/energy_policy.htm) and <http://your.energy.gov> -----Original  
Message----- From: Linda Silverman/EE/DOE.GOV%internet [mailto:linda.silv  
erman@EE.DOE.GOV] Sent: Tuesday, July 03, 2001 9:28 AM To: Consumer Informa  
tion; WEBMASTER, DOE Subject: Consumer Information Feedback Form FROM: li  
nda.silverman@ee.doe.gov SUBJECT: national energy plan PARM.1: TO: Consumer  
.Information@hq.doe.gov CC: DOE.WebMaster@hq.doe.gov SUBJECT: Consumer Inform  
ation\_Feedback\_Form TOPIC: No Answer SUBMIT: Send your Message MESSAGE: De  
ar DOE Web Team, no link to national energy plan that was just announced.  
should be on cover page. what is link? PURPOSE: No Answer TEXTFIELD: linda  
silverman AFFILIATION: No Answer ORGANIZATION: RELATIONSHIP:

CN=MaryBeth Zimmerman/OU=EE/O=DOE>---<#EE-DAS>---<07/03/2001 02:35:12 PM>--  
-<NEP Action Plan review/completion needed.

----- Message body -----

----- Attachments -----  
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CN=MaryBeth Zimmerman/OU=EE/O=DOE>---<#EE-DAS>---<07/03/2001 02:35:12 PM>--  
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----- Message body -----

----- Attachments -----  
Extracted NEP DRAFT Action Plan.xls: 130048 bytes  
- Renamed to "NEP DRAFT Action Plan0.xls" to preserve uniqueness

<melodie\_walker@nrel.gov>@internet@HQMMAIL>---<CN=Abe Haspel/OU=EE/O=DOE@DOE  
@HQMMAIL;CN=Allan Hoffman/OU=EE/O=DOE@DOE@HQMMAIL;CN=Allan Jelacic/OU=EE/O=DO  
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----- Message body -----

walker, Melodie would like to recall the message, "Energy Analysis Forum".

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/O=DOE@DOE@HQMAIL;CN=Raymond Fortuna/OU=EE/O=DOE@DOE@HQMAIL;CN=Robert Dixon/OU=EE/O=DOE@DOE@HQMAIL;CN=Sam Baldwin/OU=EE/O=DOE@DOE@HQMAIL;CN=Sigmund Gronich/OU=EE/O=DOE@DOE@HQMAIL;CN=Tom Gross/OU=EE/O=DOE@DOE@HQMAIL;CN=James Rannels/OU=EE/O=DOE@DOE@HQMAIL;Kimberly\_B\_Adams@nrel.gov@internet@HQMAIL;wanda\_addison@nrel.gov@internet@HQMAIL;Bill\_Babiuch@nrel.gov@internet@HQMAIL;Eldon\_Boes@nrel.gov@internet@HQMAIL;larry\_goldstein@nrel.gov@internet@HQMAIL;Carol\_Hammel@nrel.gov@internet@HQMAIL;marguerite\_kelly@nrel.gov@internet@HQMAIL;lawrence\_plummer@nrel.gov@internet@HQMAIL;walter\_short@nrel.gov@internet@HQMAIL;Blair\_Swezey@nrel.gov@internet@HQMAIL;Sheila\_Terry@nrel.gov@internet@HQMAIL;aaltman@cleanair.org@internet@HQMAIL;ABBAKER@sandia.gov@internet@HQMAIL;adavies@enron.com@internet@HQMAIL;ahouston@xenergy.com@internet@HQMAIL;akydes@eia.doe.gov@internet@HQMAIL;aldretti@bsr.org@internet@HQMAIL;angel@hydro.org@internet@HQMAIL;bbleil@eesi.org@internet@HQMAIL;bcollins@case.s.org@internet@HQMAIL;ron\_benioff@nrel.gov@internet@HQMAIL;bhargab@sce.com@internet@HQMAIL;billd@tellus.org@internet@HQMAIL;blunden@greenmountain.com@internet@HQMAIL;Boblaw424@aol.com@internet@HQMAIL;braungw@bpsolarex.com@internet@HQMAIL;brent\_richard\_s@solarturbines.com@internet@HQMAIL;burtraw@rff.org@internet@HQMAIL;cberry@lcra.org@internet@HQMAIL;cdemeter@antares.org@internet@HQMAIL;ceciliab@wri.org@internet@HQMAIL;cflavin@worldwatch.org@internet@HQMAIL;craig\_christensen@nrel.gov@internet@HQMAIL;CoEnergyGr@aol.com@internet@HQMAIL;connorsr@MIT.EDU@internet@HQMAIL;counihan@greenmountain.com@internet@HQMAIL;coxcraig@att.net@internet@HQMAIL;dan\_alpert@bingaman.senate.gov@internet@HQMAIL;darmstader@rff.org@internet@HQMAIL;David.Bassett@ee.doe.gov@internet@HQMAIL;ddecasare@westgov.org@internet@HQMAIL;deb1703@aol.com@internet@HQMAIL;dentingh@perihq.com@internet@HQMAIL;dgo1stein@nrdc.org@internet@HQMAIL;dhamase.org@internet@HQMAIL;dhoffman@celerityenergy.com@internet@HQMAIL;dkash@osfl.gmu.edu@internet@HQMAIL;d1ashof@nrdc.org@internet@HQMAIL;dtbradshaw@tva.gov@internet@HQMAIL;Edemeo@earthlink.net@internet@HQMAIL;ehsan.khan@science.doe.gov@internet@HQMAIL;evans@rff.org@internet@HQMAIL;EZGurman@lbl.gov@internet@HQMAIL;fiksel@battelle.org@internet@HQMAIL;frankbishop@naseo.org@internet@HQMAIL;Gary.Cook@wdc.greenpeace.org@internet@HQMAIL;gea@geotherm.org@internet@HQMAIL;GJKOLB@sandia.gov@internet@HQMAIL;gruenspe@rff.org@internet@HQMAIL;herbert\_hayden@apsc.com@internet@HQMAIL;christy\_herig@nrel.gov@internet@HQMAIL;higley@earthsys.org@internet@HQMAIL;Hillh@stanford.edu@internet@HQMAIL;Jae@pn1.gov@internet@HQMAIL;jbeldock@envplus.com@internet@HQMAIL;jcg@dwgp.com@internet@HQMAIL;jcohen@perihq.com@internet@HQMAIL;jennifer@wri.org@internet@HQMAIL;jfiedler@nrdc.org@internet@HQMAIL;jhamrin@resource-solutions.org@internet@HQMAIL;jhaydel@icfconsulting.com@internet@HQMAIL;jmkehoe@bpa.gov@internet@HQMAIL;joe@dual.com@internet@HQMAIL;johnson.kurt@epa.gov@internet@HQMAIL;Jonathan.Epstein@bingaman.senate.gov@internet@HQMAIL;jw1tch@sentech.org@internet@HQMAIL;ken.humphreys@pn1.gov@internet@HQMAIL;kent.Fickett@neg.pge.com@internet@HQMAIL;kerr.tom@epa.gov@internet@HQMAIL;kirbybj@ornl.gov@internet@HQMAIL;kk1under@sentech.org@internet@HQMAIL;david\_kline@nrel.gov@internet@HQMAIL;koskbh@in1.gov@internet@HQMAIL;Gerald\_Kotas@nrel.gov@internet@HQMAIL;laitner.skip@epa.gov@internet@HQMAIL;l1amont1@in1.gov@internet@HQMAIL;larry@massenergy.com@internet@HQMAIL;Larry\_Alexander@EnvFutures.com@internet@HQMAIL;LizC@wri.org@internet@HQMAIL;manion@wapa.gov@internet@HQMAIL;Mark.Gielecki@eia.doe.gov@internet@HQMAIL;markf1tz@ispg.org@internet@HQMAIL;matthew.brown@ncsl.org@internet@HQMAIL;MHutzel@eia.doe.gov@internet@HQMAIL;p1dunbar@dnr.state.md.us@internet@HQMAIL;pjohns06@apsc.com@internet@HQMAIL;p1ng@orci.com@internet@HQMAIL;rbg2@pge.com@internet@HQMAIL;rblood@appanet.org@internet@HQMAIL;richard.king@ee.doe.gov@internet@HQMAIL;RLKOENIGS@wnp2.com@internet@HQMAIL;rnelliott@aceee.org@internet@HQMAIL;roger.duncan@austinenergy.com@internet@HQMAIL;ronallarson@qwest.net@internet@HQMAIL;s.fenn@irrc.org@internet@HQMAIL;sbernow@tellus.com@internet@HQMAIL;scarter@nrdc.org@internet@HQMAIL;sclemmer@ucsusa.org@internet@HQMAIL;sfreedman@nemw.org@internet@HQMAIL;sholte@eia.doe.gov@internet@HQMAIL;sjananth@mines.edu@internet@HQMAIL;Steve\_Kalland@mgn.com@internet@HQMAIL;susan@ sustainableenergy.org@internet@HQMAIL;tg1jhc@aol.com@internet@HQMAIL;tina.kaarsberg@ee.doe.gov@internet@HQMAIL;tom\_gray@awea.org@internet@HQMAIL;trcasten@aol.com@internet@HQMAIL;vicki@irecusa.org@internet@HQMAIL;wfulk@utk.edu@internet@HQMAIL;wgould@sunlaw.com@internet@HQMAIL;zia.haq@eia.doe.gov@internet@HQMAIL;agmeltzer@ad.com@internet@HQMAIL;alison.silverstein@puc.sta

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te.tx.us@internet@HQMMAIL; ameyer@acsusa.org@internet@HQMMAIL; andrew.nicholls@pnl.gov@internet@HQMMAIL; aserchuk@primen.com@internet@HQMMAIL; aspahn@naruc.org@internet@HQMMAIL; bobz@electrotek.com@internet@HQMMAIL; brenda.mcguire@bchydro.bc.ca@internet@HQMMAIL; brownma@ornl.gov@internet@HQMMAIL; bshanner@celerityenergy.com@internet@HQMMAIL; bthapa@icfconsulting.com@internet@HQMMAIL; c.marnay@lbl.gov@internet@HQMMAIL; clinderman@eei.org@internet@HQMMAIL; cmcgowin@epri.com@internet@HQMMAIL; cmorris@ccap.org@internet@HQMMAIL; coloradotombaris@earthlink.net@internet@HQMMAIL; CSeiple@resdata.com@internet@HQMMAIL; dlochtef@state.ut.us@internet@HQMMAIL; dlogan@resdata.com@internet@HQMMAIL; dmorris@ilsr.org@internet@HQMMAIL; dreicher@capu.net@internet@HQMMAIL; dwooley@igc.org@internet@HQMMAIL; empainc@aol.com@internet@HQMMAIL; fred.mayes@eia.doe.gov@internet@HQMMAIL; fsissine@crs.loc.gov@internet@HQMMAIL; fwood@onlocationinc.com@internet@HQMMAIL; gepalomi@SRP.gov@internet@HQMMAIL; hugh.pitcher@pnl.gov@internet@HQMMAIL; HZAININGER@aol.com@internet@HQMMAIL; iwhite@aol.com@internet@HQMMAIL; jaimesteve@awea.org@internet@HQMMAIL; jane@irecusa.org@internet@HQMMAIL; jean.wilson@pacificorp.com@internet@HQMMAIL; jmclean@torontohydro.com@internet@HQMMAIL; john.delmonaco@pseg.com@internet@HQMMAIL; jpulaski@austin.rr.com@internet@HQMMAIL; jrcomm@getf.org@internet@HQMMAIL; jsiegel@winrock.org@internet@HQMMAIL; jszaro@fsc.ucf.edu@internet@HQMMAIL; karend@ep.cted.wa.gov@internet@HQMMAIL; kelsostarrs@home.com@internet@HQMMAIL; kmalloy@caem.org@internet@HQMMAIL; knichols@barber-nichols.com@internet@HQMMAIL; krabago@ch2m.com@internet@HQMMAIL; krackstraw@compuserve.com@internet@HQMMAIL; larry.shirley@ncmail.net@internet@HQMMAIL; CN=Lawrence Mansueti/OU=EE/O=DOE@DOE@HQMMAIL; CN=Linda Silverman/OU=EE/O=DOE@DOE@HQMMAIL; Marvin Singer@HQMMAIL; CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE@HQMMAIL; Matt hias\_Ruth@umail.umd.edu@internet@HQMMAIL; CN=Michael York/OU=EE/O=DOE@DOE@HQMMAIL; Mlaz@tellus.org@internet@HQMMAIL; mmarvin@bcse.org@internet@HQMMAIL; mmasri@energy.state.ca.us@internet@HQMMAIL; Morgan.Rick@epamail.epa.gov@internet@HQMMAIL; msmith@erols.com@internet@HQMMAIL; mwalls@mines.edu@internet@HQMMAIL; nemtzow@ase.org@internet@HQMMAIL; nep@spratley.com@internet@HQMMAIL; ogden@princeton.edu@internet@HQMMAIL; jim\_ohi@nrel.gov@internet@HQMMAIL; orans@ethree.com@internet@HQMMAIL; Brian\_Parsons@nrel.gov@internet@HQMMAIL; perez@asrc.cesm.albany.edu@internet@HQMMAIL; philpott@wri.org@internet@HQMMAIL; m.placet@pnl.gov@internet@HQMMAIL; pll@rdcnet.com@internet@HQMMAIL; poppacarl@aol.com@internet@HQMMAIL; henry\_price@nrel.gov@internet@HQMMAIL; ramakum@okstate.edu@internet@HQMMAIL; randy\_swisher@awea.org@internet@HQMMAIL; rawls@greenmountain.com@internet@HQMMAIL; rhwiser@lal.gov@internet@HQMMAIL; richard@rand.org@internet@HQMMAIL; rivest.m@adlittle.com@internet@HQMMAIL; rlegassie@tms-hq.com@internet@HQMMAIL; rlsanmar@mindspring.com@internet@HQMMAIL; RobinRodensky@icfconsulting.com@internet@HQMMAIL; rpoore@globalenergyconcepts.com@internet@HQMMAIL; rscheer@energeticsinc.com@internet@HQMMAIL; rwilliam@princeton.edu@internet@HQMMAIL; sahley@aol.com@internet@HQMMAIL; schafers2@patriot.net@internet@HQMMAIL; shaine\_tyson@nrel.gov@internet@HQMMAIL; shross@tva.gov@internet@HQMMAIL; sjodingd@energy.wsu.edu@internet@HQMMAIL; solarsklar@aol.com@internet@HQMMAIL; south@energyresources.com@internet@HQMMAIL; SRISolar@aol.com@internet@HQMMAIL; ssitzer@eia.doe.gov@internet@HQMMAIL; roya\_stanley@nrel.gov@internet@HQMMAIL; stantonm@NiagaraMohawk.com@internet@HQMMAIL; thomas\_stoffel@nrel.gov@internet@HQMMAIL; CN=Thomas Rueckert/OU=EE/O=DOE@DOE@HQMMAIL; CN=Thomas Sacco/OU=EE/O=DOE@DOE@HQMMAIL; tocchionero@agcc.org@internet@HQMMAIL; toliiver@bpa.gov@internet@HQMMAIL; toman@rff.org@internet@HQMMAIL; TPetersi@eia.doe.gov@internet@HQMMAIL; tpeterson@epri.com@internet@HQMMAIL; tschweizer@perihq.com@internet@HQMMAIL; TuckerRE@aol.com@internet@HQMMAIL; virinders@repp.org@internet@HQMMAIL; walshme@ornl.gov@internet@HQMMAIL; robert\_westby@nrel.gov@internet@HQMMAIL; weyant@stanford.edu@internet@HQMMAIL; CN=William Parks/OU=EE/O=DOE@DOE@HQMMAIL; wsaylor@rmii.com@internet@HQMMAIL>---<07/03/2001 11:35:25 AM>---<Energy Analysis Forum

----- Message body -----

Dear Colleagues, The National Renewable Energy Laboratory invites you the first Energy Analysis Forum "The Role of Renewables in Regional Power Markets" August 14-15, 2001 in Golden, Colorado. The Energy Analysis Forum is a critical step in establishing an analytical agenda for the near- and long-term. Detailed information regarding this seminal event is attached to this email. While the two-day forum is free to all attendees, the attached registration form must be returned by July 27, 2001. After looking over the attached information, please take a minute to return the registration form t



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o Melodie walker at NREL (melodie\_walker@nrel.gov). She can help you with questions regarding the hotel or other logistics. Check out our website www.nrel.gov/analysis for the latest updates on speakers, panel topics, and special events. We look forward to seeing you in Golden, Colorado! Sincerely, Eldon Boes, Director Energy Analysis Office Eldon\_boes@nrel.gov <<EAO Forum Flyer.pdf>> <<EAO Forum Registration Form.doc>> <<EAO Forum Outline.doc>> Melodie Walker National Renewable Energy Laboratory Conference Department (303) 275-4326 Phone (303) 275-4320 Fax melodie\_walker@nrel.gov

----- Attachments -----

Extracted EAO Forum Flyer.pdf: 410658 bytes  
Extracted EAO Forum Registration Form.doc: 44032 bytes  
Extracted EAO Forum Outline.doc: 24576 bytes

CN=Dreda Perry/OU=EE/O=DOE>---<CN=Abe Haspel/OU=EE/O=DOE@DOE>---<07/02/2001 04:56:46 PM>---<Return Call/OMR Research  
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CN=MaryBeth Zimmerman/OU=EE/O=DOE>---<CN=Abe Haspel/OU=EE/O=DOE@DOE>---<07/02/2001 04:26:45 PM>---<FW: Request and Possible Agenda for Briefings for Chinese Delegation on UNIDO Study Tour

----- Message body -----

Do you have a preference on who goes to this for us? -----  
Forwarded by MaryBeth Zimmerman/EE/DOE on 07/02/2001 04:26 PM -----

----- Denise Dwyer@HQMAIL on 07/02/2001 03:43:47 PM TO: MaryBeth Zimmerman/EE/DOE@DOE@HQMAIL, Michael York/EE/DOE@DOE@HQMAIL, Darrell Beschen/EE/DOE@DOE@HQMAIL, Margot Anderson@HQMAIL, William Breed@HQMAIL, Peter Karpoff@HQMAIL cc: Subject: FW: Request and Possible Agenda for Briefings for Chinese Delegation on UNIDO Study Tour We have a Chinese delegation coming under a UNIDO study tour. They have requested briefings on August 8 at DOE on a variety of topics. Please see a draft agenda below. Would any of you mentioned by Mark below be available to do overviews of the NEP and of energy efficiency; this will probably be in the morning of August 8. Many thanks. Denise Dwyer -----Original Message----- From: Friedrichs, Mark Sent: Thursday, June 21, 2001 8:17 PM To: Dwyer, Denise Cc: Anderson, Margot; Breed, William; Zimmerman, MaryBeth Subject: RE: Request and Possible Agenda for Briefings for Chinese Delegation on UNIDO Study Tour

I always enjoy talking with the Chinese, but I will be out of town at that time. Maybe someone else from PO could do the overview of the NEP (Margot Anderson? Bill Breed? Peter Karpoff?) and someone from EE can do the overview of energy efficiency policy (Mary Beth Zimmerman? Michael York? Darrel Beschen?) -----Original Message----- From: Dwyer, Denise Sent: Thursday, June 21, 2001 4:33 PM To: Braitsch, Jay; Juckett, Donald; Chun, Sun; Rudins, George; Sacco, Thomas; Swink, Denise; Salmon-Cox, Peter; Friedrichs, Mark; Anderson, Margot; Gebert, Lee; Jodoin, Peter; Millhone, John; Conti, John; DeLaTorre, Gene; 'fritzjd@state.gov'; Price, Robert S; Gale, Barry; 'Bailey.marianne@epamail.epa.gov'; 'ed.ciampa@exim.gov' Subject: Request and Possible Agenda for Briefings for Chinese Delegation on UNIDO Study Tour

We have received a request for a briefing on various topics for a Chinese Delegation arriving in Washington on August 6 and departing for Canada on August 15. This is an energy and environment study tour under a project being sponsored by UNIDO. Below please find background and a possible agenda. Will have to pin down the specific date between August 7 and 14 in contact with the UNIDO organizer, but perhaps we could plan tentatively on August 9 for planning purposes. Can you please, in reviewing the agenda below, provide an indication of whether your organization c

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ould provide a representative to address these topics and their availability on these dates. Many thanks for your cooperation. Note: can Gene DeLaTorre suggest someone in water resource management from water workshop with China that we could contact? Many thanks. << File: UNIDOSTudyTour.wpd >>

----- Attachments -----  
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Margot Anderson@HQMAIL>---<CN=Abe Haspel/OU=EE/O=DOE@DOE@HQMAIL>---<07/02/2001 02:05:20 PM>---<RE: FW: 3-Pollutants  
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CN=Abe Haspel/OU=EE/O=DOE>---<Margot Anderson@HQMAIL @ HQDOE>---<Re: FW: 3-Pollutants  
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a DOE strategy? Thanks. Margot

Margot Anderson@HQMAIL>---<CN=Abe Haspel/OU=EE/O=DOE@DOE@HQMAIL>---<07/02/2001 12:49:06 PM>---<FW: 3-Pollutants  
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CN=David Garman/OU=EE/O=DOE>----<DL-ALLEE>----<06/30/2001 07:45:37 PM>----<Principal Deputy Assistant Secretary  
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15

CN=David Garman/OU=EE/O=DOE>----<CN=Michael York/OU=EE/O=DOE@DOE;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE;CN=Abe Haspel/OU=EE/O=DOE@DOE>----<06/30/2001 06:14:45 PM>----<NEP Implementation  
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25

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Abe, Thoughts on who we should offer up? David ----- For  
warded by David Garman/EE/DOE on 06/30/2001 05:44 PM -----  
----- Margot Anderson@HQMAIL on 06/29/2001 08:50:04 AM To: David Garman/  
EE/DOE@DOE@HQMAIL, MARY HUTZLER@HQMAIL cc: Abe Haspel/EE/DOE@DOE@HQMAIL S  
ubject: 3-Pollutants

3

CN=Randy Steer/OU=EE/O=DOE>----<CN=David Garman/OU=EE/O=DOE@DOE;#EE-DAS;#EE-ADAS>----<06/29/2001 08:25:32 PM>----<FY03 CRB & Beyond Look-Ahead  
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15

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CN=John Millhone/OU=EE/O=DOE>---<CN=Abe Haspel/OU=EE/O=DOE@DOE;CN=Robert Dixon/OU=EE/O=DOE@DOE;CN=Thomas Sacco/OU=EE/O=DOE@DOE>---<06/29/2001 05:30:14 PM>---<Draft EE International Plan  
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document for our planning purposes and to call this the completion of this exercise. - John Millhone

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----- Forwarded by Abe Haspel/EE/DOE on 06/29/2001 02:29 PM  
----- Patrick Booher 06/29/2001 02:03 PM To: Abe Haspel/EE/DOE@DOE, Robert Dixon/EE/DOE@DOE, William Parks/EE/DOE@DOE cc:  
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Page 26

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nts

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CN=Adrienne Moss/OU=CR/O=DOE>---<CN=John Sullivan/OU=EE/O=DOE@DOE;CN=Abe Haspel/OU=EE/O=DOE@DOE>---<09/26/2001 09:53:12 AM>---<EE's Internal Review  
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Extracted PBM suggestions.doc: 34816 bytes  
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----- Attachments -----  
Extracted PBM suggestions.doc: 34816 bytes  
- Renamed to "PBM suggestions4.doc" to preserve uniqueness  
Extracted R&D Criteria Tracking - OMB Struct.xls: 17920 bytes  
- Renamed to "R&D Criteria Tracking - OMB Struct2.xls" to preserve uniqueness  
CN=Abe Haspel/OU=EE/O=DOE>---<CN=David Garman/OU=EE/O=DOE@DOE>---<Re: NEP D  
eliverable  
----- Message body -----

ABE NEW NEP FOIA

CN=David Garman/OU=EE/O=DOE>----<Michael.York@ee.doe.gov;CN=MaryBeth Zimmermann/OU=EE/O=DOE@DOE;abe.haspel@ee.doe.gov@DOE>----<09/24/2001 10:34:21 AM>----  
<NEP Deliverable  
----- Message body -----

CN=David Garman/OU=EE/O=DOE>----<Robert Card@HQMAIL@HQDOE>----<09/23/2001 08:05:27 PM>----<Delegation of Authority  
----- Message body -----

I will be in Chicago on Monday, September 24, appearing before a Brownfields Conference. (Promoting DER and combined heat and power at Brownfields sites pursuant to the NEP) Doug Faulkner will be acting in my absence. He can be reached at 586-9220. Thank you.

CN=Abe Haspel/OU=EE/O=DOE>----<CN=Michael York/OU=EE/O=DOE@DOE>----<Re: OPT's environmental barriers report for the NEP  
----- Message body -----

ABE NEW NEP FOIA

CN=Michael York/OU=EE/O=DOE>----<Abe Haspel>----<09/21/2001 03:49:58 PM>----<O  
PT's environmental barriers report for the NEP  
----- Message body -----

CN=John Sullivan/OU=EE/O=DOE>----<CN=Abe Haspel/OU=EE/O=DOE@HQLNC>----<09/20/  
2001 12:40:48 PM>----<Re: Update on the NEP  
----- Message body -----

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CN=Abe Haspel/OU=EE/O=DOE>---<david.garman@ee.doe.gov;doug.faulkner@ee.doe.gov;Karen.Kimball@mail.house.gov;michael.mccabe@ee.doe.gov>---<Update on the NEP

----- Message body -----

CN=Michael York/OU=EE/O=DOE>---<Abe Haspel>---<09/20/2001 10:50:01 AM>---<Update on the NEP

----- Message body -----

CN=James Fremont/OU=EE/O=DOE>---<DL-ALLEE>---<09/17/2001 11:49:16 AM>---<Oct. 11 lecture - Slaying the Electricity Vampires in Your Home

----- Message body -----

The October 11 Buildings for the 21st Century lecture -- to which you are cordially invited -- will feature Alan Meier of Lawrence Berkeley National Laboratory (LBNL) discussing electricity vampires, household appliances which continuously draw power even when they are switched off, and collectively cost American households about \$4 billion every year. Mr. Meier will



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explain which appliances consume standby power, how you can reduce standby power consumption, large-scale measures to reduce standby power use, new technologies that cut standby power by 90 percent, and LBNL's international proposal for reducing standby power requirements. Date: Thursday, October 11, 2001 Time: 12:30 - 1:30 p.m. Location: The National Building Museum, 401 F Street NW, Washington, DC (Judiciary Square Metro Station on the Red Line) Speaker: Alan Meier, Lawrence Berkeley National Laboratory Topic: Slaying the Electricity Vampires in Your Home The Buildings for the 21st Century lectures, sponsored by the Department of Energy and the National Building Museum, are free and no registration is necessary. AIA members receive one hour of continuing education credit for attending. Future lectures: November 15, 2001 - David Garman, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy - What do Buildings Have to do with The National Energy Policy? No lecture is scheduled for December. Lectures will resume in January 2002. Information on DOE's efficient buildings programs is posted on: www.eren.doe.gov/buildings. For information on the National Building Museum, visit: www.nbm.org. To add someone to the lecture e-mail or flyer mailing list, contact Jim Fremont at james.fremont@ee.doe.gov or at 202-586-5735.

CN=Steven VonVital/OU=EE/O=DOE>---<#EE-DAS;#EE-ADAS>---<09/14/2001 04:20:29 PM>---<Controlled Correspondence Information requested/ Numbers for the past 7 months

----- Message body -----  
In the interest of helping the Controlled Correspondence office correctly direct documents to the appropriate offices we are asking for your help. It is our understanding that some of the items that are transferred or returned between sectors are cross-cutting and may be creating a delay in getting the appropriate action done. Because of this, we are asking that you provide this office with a detailed functional directory for all of your programs and/or services. A precise list that can help us accurately determine the appropriate location of information. Currently our major source of information has been EREN. We are moving to include the latest transition book along with the weekly status report and any and all information provided by you. Any information that you deem necessary to assist in assigning correspondence to its proper location would be helpful. There are certain subjects that come up often that are cross-cutting because staff and/or functions have been transferred to another office. Or another office is doing similar functions. Please draw our attention to these items so that they will not be misdirected. These include: grants, inventions, solid citations, fuel cells, combustion, turbines, biomass, National Energy Policy (NEP) Thanks for your help Steve PS If it feels like you are getting hit by large numbers of CC this year you are. For your own enjoyment some numbers for you.: Total number of ES items controlled to EE from Feb 1 to Aug 31: 2,600 Average per month: 371 Total assigned to EE in February 2001: 306 Total assigned to EE in March 2001: 455 Total assigned to EE in April 2001: 249 Total assigned to EE in May 2001: 219 Total assigned to EE in June 2001: 207 Total assigned to EE in July 2001: 648 Total assigned to EE in August 2001: 516

CN=Steven VonVital/OU=EE/O=DOE>---<#EE-DAS;#EE-ADAS>---<09/14/2001 04:20:29 PM>---<Controlled Correspondence Information requested/ Numbers for the past 7 months

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ABE NEW NEP FOIA

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"Mark Bernstein" <markb@rand.org>-----<Jeff.Dowd@EE.DOE.GOV;Abe.Haspel@EE.DOE.GOV>-----<09/13/2001 05:10:21 PM>-----<RE: meeting with DOE/OPBM on NEP 4-14 project

----- Message body -----  
Jeff: I will be on the phone. If it is ok, Steve Rattien out of our DC office would like to attend in person (he has a meeting with Abe just prior to this so it makes sense). Look forward to the discussions. Mark -----Original Message----- From: Jeff.Dowd@EE.DOE.GOV [mailto:Jeff.Dowd@EE.DOE.GOV] Sent: Thursday, September 13, 2001 12:36 PM To: markb@rand.org; Abe.Haspel@EE.DOE.GOV; Buddy.Garland@EE.DOE.GOV; MaryBeth.Zimmerman@EE.DOE.GOV; Phillip.Tseng@EE.DOE.GOV; Darrell.Beschen@EE.DOE.GOV; joe.roop@pnl.gov Subject: RE: meeting with DOE/OPBM on NEP 4-14 project To all, The meeting with Mark Bernstein and others from RAND will be on Wednesday September 19. Meeting room 4E-069 is reserved from 1:30pm-3:00pm. In attendance will be Abe Haspel, Buddy Garland, Mary Beth Zimmerman, Jeff Dowd, Phil Tseng, Darrell Beschen, and possible Joe Roop, PNL (Joe may call in). Mark and Joe: The following is the telephone number for call-in: 202-287-1042. The main purpose of the meeting is to discuss potential areas for, and levels of, RAND involvement in the NEP 4-14 implementation project (i.e., ENERGY INTENSITY INDICATORS TRACKING & NATIONAL GOAL ANALYSIS), such as the planned Stakeholder Conference. Jeff

CN=Abe Haspel/OU=EE/O=DOE>-----<pauline.perando@ee.doe.gov>-----<RE: meeting with DOE/OPBM on NEP 4-14 project

----- Message body -----  
thanks Abraham E. Haspel, Ph.D. Deputy Assistant Secretary for Planning, Budget and Management (EE-3) Office of Energy Efficiency and Renewable Energy U.S. Department of Energy 1000 Independence Avenue, S.W. Washington, D.C. 20585 (202) 586-6518 : Voice (202) 586-8177 : Fax ----- Forwarded by Abe Haspel/EE/DOE on 09/13/01 03:37 PM ----- Jeff Dowd 09/13/01 03:36 PM To: markb@rand.org, Abe Haspel/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE, Phillip Tseng/EE/DOE@DOE, Darrell Beschen/EE/DOE@DOE, joe.roop@pnl.gov cc: Subject: RE: meeting with DOE/OPBM on NEP 4-14 project To all, The meeting with Mark Bernstein and others from RAND will be on Wednesday September 19. Meeting room 4E-069 is reserved from 1:30pm-3:00pm. In attendance will be Abe Haspel, Buddy Garland, Mary Beth Zimmerman, Jeff Dowd, Phil Tseng, Darrell Beschen, and possible Joe Roop, PNL (Joe may call in). Mark and Joe: The following is the telephone number for call-in: 202-287-1042. The main purpose of the meeting is to discuss potential areas for, and levels of, RAND involvement in the NEP 4-14 implementation project (i.e., ENERGY INTENSITY INDICATORS TRACKING & NATIONAL GOAL ANALYSIS), such as the planned Stakeholder Conference. Jeff

CN=Jeff Dowd/OU=EE/O=DOE>-----<markb@rand.org;CN=Abe Haspel/OU=EE/O=DOE@DOE;CN=Buddy Garland/OU=EE/O=DOE@DOE;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE;CN=Ph  
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ABE NEW NEP FOIA

Phillip Tseng/OU=EE/O=DOE@DOE;CN=Darrell Beschon/OU=EE/O=DOE@DOE;joe.roop@pnl.gov>---<09/13/2001 03:36:27 PM>---<RE: meeting with DOE/OPBM on NEP 4-14 project

----- Message body -----  
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CN=Buddy Garland/OU=EE/O=DOE>---<CN=Jeff Dowd/OU=EE/O=DOE@DOE>---<09/13/2001 10:11:22 AM>---<RE: meeting with Mark Bernstein (RAND) to discuss their involvement in the NEP-4-14 implementation project

----- Message body -----  
Wednesday works for me. I want to be there. Thank you for setting this up. Thanks, Buddy Jeff Dowd 09/12/2001 01:55 PM To: Abe Haspel/EE/DOE@DOE, MaryBeth Zimmerman/EE/DOE@DOE, Buddy Garland/EE/DOE@DOE cc: Phillip Tseng/EE/DOE@DOE Subject: RE: meeting with Mark Bernstein (RAND) to discuss their involvement in the NEP-4-14 implementation project Abe, Mary Beth and Buddy, Mark Bernstein is willing to come to DC next wed. to discuss a possible role for RAND in the NEP 4-14 project --i.e., the INDICATORS TRACKING SYSTEM. RAND involvement would include, - managing the Stakeholders conference next spring - possible participation in preparing the methodology paper Oct.-Nov. 2001 - other Please let me know, asap if you are interested and available to participate in this meeting. Let me know what times would be good for you (less than 1 hour of your time for the meeting, although I will likely continue discussion with Mark afterwards). Please, let me know today, if possible, so I can confirm the meeting with Mark. Thanks. Jeff

CN=Abe Haspel/OU=EE/O=DOE>---<CN=Jeff Dowd/OU=EE/O=DOE@DOE@HQLNC>---<RE: meeting with Mark Bernstein (RAND) to discuss their involvement in the NEP-4-14 implementation project

----- Message body -----  
Either way is OK ----- Sent from Abe's BlackBerry wireless Handheld (www.BlackBerry.net)

CN=Jeff Dowd/OU=EE/O=DOE>---<CN=Abe Haspel/OU=EE/O=DOE@HQLNC>---<09/12/2001 03:47:50 PM>---<RE: meeting with Mark Bernstein (RAND) to discuss their involvement in the NEP-4-14 implementation project

----- Message body -----  
Great. I will set up a meeting time. However, let me ask you. If Mark prefers not to travel to California to Washington DC in this uncertain times, would you mind considering the option of simply having Mark telephone into the meeting? Mark has not expressed any concern, but just to be a little sensitive to travel issues right now, I was just wondering if we could accommodate Mark via a telephone conference call -- in case he prefers that. Please let me know. Then I can inquire about how Mark prefers to handle the meeting arrangements. Thanks. Jeff Abe Haspel@HQLNC 09/12/2001 02:52 PM To: Jeff Dowd/EE/DOE@HQLNC cc: Subject: RE: meeting with Mark Bernstein (RAND) to discuss their involvement in the NEP-4-14 implementation project I'm available except for lunch ----- Sent from Abe's BlackBerry wireless Handheld (www.BlackBerry.net)

CN=Abe Haspel/OU=EE/O=DOE>---<CN=Jeff Dowd/OU=EE/O=DOE@HQLNC>---<RE: meeting with Mark Bernstein (RAND) to discuss their involvement in the NEP-4-14 implementation project

----- Message body -----  
I'm available except for lunch ----- Sent from Abe's

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BlackBerry Wireless Handheld (www.BlackBerry.net)

CN=Jeff Dowd/OU=EE/O=DOE>---<CN=Abe Haspel/OU=EE/O=DOE@DOE;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE;CN=Buddy Garland/OU=EE/O=DOE@DOE>---<09/12/2001 01:55:42 PM>---<RE: meeting with Mark Bernstein (RAND) to discuss their involvement in the NEP-4-14 implementation project

----- Message body -----

Abe, Mary Beth and Buddy, Mark Bernstein is willing to come to DC next week to discuss a possible role for RAND in the NEP 4-14 project --i.e., the INDICATORS TRACKING SYSTEM. RAND involvement would include, - managing the Stakeholders conference next spring - possible participation in preparing the methodology paper Oct.-Nov. 2001 - other Please let me know, asap if you are interested and available to participate in this meeting. Let me know what times would be good for you (less than 1 hour of your time for the meeting, although I will likely continue discussion with Mark afterwards). Please, let me know today, if possible, so I can confirm the meeting with Mark. Thanks. Jeff

<wanda\_addison@nrel.gov>@internet@HQMMAIL>---<09/12/2001 11:27:02 AM>---<THE NREL SEMINAR ON SEPTEMBER 13 HAS BEEN CANCELED

----- Message body -----

THE NREL SEMINAR ON SEPTEMBER 13 HAS BEEN CANCELED You are invited to a seminar on EERE Strategic Program Review by Buddy Garland. The speaker, Buddy Garland, is Director of EERE's Office of Planning, Budget and Outreach and is leading the Strategic Program Review. In September, the Office of Energy Efficiency and Renewable Energy (EERE) will complete a Strategic Program Review of all current EERE programs to assess past and present program strategies, performance, and benefits. The brown-bag seminar will take place at 12:00 p.m. on Thursday, September 13, 2001 in Conference Rooms A&B at the NREL Washington DC office. Please see below for an abstract of the talk. Our office is located in the Aerospace Center at 901 D Street, SW, Suite 930, Washington, DC 20024. We are across D Street from L'Enfant Plaza. We are accessible on the Blue, Orange, Yellow, and Green Metro lines through the L'Enfant Plaza Metro station. Parking is also available in the Aerospace Center. Soft drinks will be provided. We hope you will be able to attend this talk. Please feel free to pass this invitation on to a colleague who might be interested in attending. PLEASE LET US KNOW IF YOU WILL BE ATTENDING. Please RSVP to wanda\_addison@nrel.gov, or call 202-646-5278 by Wednesday, September 12, 2001. If you previously responded, no action is required. Abstract In September, the Office of Energy Efficiency and Renewable Energy (EERE) will complete a Strategic Program Review of all current EERE programs to assess past and present program strategies, performance, and benefits. The review will identify any programmatic activities that will need to be conducted to carry out the National Energy Policy (NEP). In addition to fulfilling NEP recommendations 4-2 and 6-3 as well as the direction of Secretary Abraham, the Strategic Program Review is an integral part of the evaluation, planning, budget formulation, and budget execution processes outlined in the EERE Strategic Management System. The review findings will serve as an integral part of an integrated baseline to produce the new EERE Strategic Plan, scheduled to be completed this fall, and the FY04 Budget request to Congress.

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<wanda\_addison@nrel.gov>@internet@HQMMAIL>---<09/10/2001 10:36:50 AM>---<Reminder: NREL Brown Bag Seminar and Golden Videoconference

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<coxrcraig@att.net>@internet@HOMAIL>---<coxrcraig@att.net@internet@HOMAIL>---  
<09/05/2001 06:21:14 PM>---<Superconductivity News Update, 5 September 2001

----- Message body -----

HIGH-TEMPERATURE SUPERCONDUCTIVITY Bringing New Power to Electricity  
===== NEWS UPDATE 5 September 2001 ===== Your privacy is important to us. To be removed from this mailing list, please reply with "REMOVE" in subject line.

----- Contents: a.. Intermagnetics General Announces New Utility Project in Albany Power Grid b.. Capital Hill Briefing on Superconductivity Draws Large Crowd c.. Update on Detroit Edison Project d.. 2001 Superconductivity Peer Review Sets Another Attendance Record e.. Coated Conductor Roadmap and Cryogenics Implementation Plan Now Available f.. New Superconducting Cable Project Launched in Denmark g.. Draft Report Issued on Superconductivity Technology Assumptions h.. ISIS-10 to be Held in November in Santa Fe

----- INTERMAGNETICS ANNOUNCES PROJECT TO INSTALL HTS POWER CABLE IN NIAGARA MOHAWK'S ALBANY GRID -Design Intended to Demonstrate Evolution of Key Technology In Standard Urban Right-of-way Intermagnetics General Corporation announced on 14 August that its IGC-SuperPower subsidiary will lead a \$20 million project to install an underground, high-temperature superconducting (HTS) power cable in Albany, N.Y. The cable, to be installed in Niagara Mohawk Power Corporation's power grid and to incorporate components manufactured by Nexans, is designed to demonstrate enhanced capacity, reliability and power quality of HTS cables. New York Governor George E. Pataki (R) announced separately that the New York State Energy Research and Development Authority (NYSERDA) will award IGC-SuperPower \$6 million for the project. The company will assume responsibility for the majority of the remaining cost during the next three years. "High-temperature superconducting power cables hold the promise of increasing the state's electricity supply without increasing power plant emissions or expanding the transmission network," said NYSERDA President William M. Flynn. "A successful demonstration with IGC-SuperPower will mean tremendous economic development opportunities for this upstate company and, ultimately, even greater reliability and service in New York City and other urban areas where these cables have the greatest future

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potential." "The one-quarter-mile cable, believed to be four times the length of any previously installed HTS cable, will be designed to provide more power and operate at significantly lower loss levels than other HTS installations," said Glenn H. Epstein, president and chief executive officer of Intermagnetics. "It also is targeted to be the first HTS cable installation within a standard underground urban right-of-way. We believe the participation of Niagara Mohawk and Nexans, both leaders in their respective fields, will help ensure the ultimate success of the project." Epstein noted that previous installations of HTS demonstration cables were either located within an industrial site or in an electric power substation. The project is expected to be completed in about three years. James B. Howe, regional manager for Niagara Mohawk, added "This technology holds exciting potential for increasing the capacity of our infrastructure and lowering energy delivery costs. In the long term, successful completion of this Albany-based project could have an impact not only on the local economy, but also on the national - and even international - power transmission cable industry." IGC-SuperPower named Nexans of Paris, France, as a designer and supplier of certain components for this project. Jean-Maxime Saugrain, superconductor activity manager for Nexans, commented: "HTS has the potential to revolutionize the distribution of energy and Nexans is committed to participation in the development of this exciting technology. We are delighted to have this opportunity to work with Intermagnetics - an internationally renowned leader in the commercialization of products based on applied superconductivity." Project To Include Testing Of Second Generation HTS Technology Although first-generation HTS material will be used for this particular project, IGC-SuperPower intends to separately build a laboratory scale section of HTS cable using second-generation conductor in order to test its properties. Second-generation materials employ less labor-intensive methods and less expensive materials. SuperPower is working to develop a commercial-level manufacturing process for second-generation HTS conductor, which is believed to be necessary to achieve the cost-performance levels required for commercialization of HTS cables and devices. [from IGC-SuperPower press release]

CAPITAL HILL BRIEFING ON SUPERCONDUCTIVITY - Large Turnout on Eve of Month-long Congressional Recess More than 75 congressional staff members, as well as representatives from state and federal governments, the media and other stakeholder groups packed a committee hearing room on the morning of August 3rd to listen to a briefing on the progress of superconducting power applications in the United States. This briefing was conducted under the auspices of the Environmental and Energy Study Institute (EESI), a Washington-based non-profit organization. Following the 90-minute briefing, audience members asked questions of the speakers for nearly a half-hour. One of the speakers commented on the audience members' impressive knowledge of electric power technologies and issues, while another observer pointed out that such a high turnout on the day before the month-long congressional recess indicated strong interest in using innovative new power technologies to modernize and streamline our nation's entire energy infrastructure. Speakers at the briefing included: Bill Parks, Associate Deputy Assistant Secretary for Power Technologies, U.S. Department of Energy, Washington Parks described DOE's Superconductivity Program goals and noted the "window of opportunity" for implementing the technology into the national electric grid. He added that results of the recent Superconductivity Partnership Initiative solicitation (see "Superconductivity News Update" of March 2001) will soon be announced, providing new opportunities for the advancement and commercialization of superconductivity in this country. David Lindsay, Development Engineer, Southwire Company, Carrollton, Georgia Southwire was the world's first company to provide electricity utilizing high-temperature superconductivity for an industrial use, with HTS cables providing 25 Megawatts of power to two of Southwire's plants and its machinery division. Jon E. Jipping, Principal Engineer, Power Delivery Planning, Detroit Edison, Detroit Michigan Detroit Edison will ribbon-cut a project this fall, in which HTS power cables are being installed at its Frisbie Substation, one of the oldest locations on the Detroit Edison system to carry 100 MW of power to 14,000 urban customers. Shirish Meh

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ta, Vice President of Technology and Development, Waukesha Electric Systems, Waukesha, Wisconsin. Waukesha Electric Systems is constructing an HTS power transformer, which will be installed on the Wisconsin Electric Power utility grid next year. David Driscoll, Research Manager of the Superconducting Motor Lab, Rockwell Automation, Euclid, Ohio. Rockwell Automation has demonstrated a 200 horsepower (hp) HTS motor and a 1,000 hp HTS motor and is working to develop a 5,000 hp HTS motor. John Howe, Vice President, Electric Industry Affairs, American Superconductor, Westborough, Massachusetts. American Superconductor is a partner in the Detroit Edison cable project and is the major U.S. manufacturer of HTS wire. For more information on this briefing, visit the Environmental and Energy Study Institute's web site.

DETROIT EDISON PROJECT UPDATE Personnel involved in the Detroit Edison cable pilot project report that "following the delivery of the cable, accessories, and installation hardware, installation activity at Detroit Edison's Frisbie Station commenced in early May 2001. These tasks include:

- a.. Pulling the cables comprising the three phases of the circuit,
- b.. Installing support equipment for the cable terminations and cryogenic components and
- c.. Mechanical and electrical installation of the refrigeration plant. Cable commissioning is anticipated to take place before the end of October and energization is scheduled before the end of the year. For a complete summary of activities carried out by this project's engineering and technical teams, please contact Craig Cox.

2001 ANNUAL SUPERCONDUCTIVITY PEER REVIEW -Another New Attendance Record Set at August Event DOE's annual Superconductivity Peer Review set a new attendance record during its 2001 meeting which took place from 1-3 August. Over 180 participants from 27 states and ten countries took part in the Peer Review's proceedings in Washington, D.C. Opening remarks were made by Douglas Faulkner, DOE Principal Deputy Assistant Secretary, Energy Efficiency and Renewable Energy. Faulkner noted the administration's support for superconductivity as expressed in the report of the National Energy Policy Development Group (see "Superconductivity News Update" of May 2001) and saluted researchers who are working to make the technology a reality in the nation's electric infrastructure. Dr. Marshall Reed, DOE Office of Hydrogen and Superconductivity, was introduced as the new Team Leader of the Superconductivity program and spoke on his expectations for the review. The review program included public presentations by industry, national laboratory, and university teams followed by a workshop on "Analysis and Concepts to Address Electric Infrastructure Needs." This workshop provided an in-depth discussion of what analysis activities are needed to recognize opportunities for applications of superconductivity as a transmission congestion and delivery solution. Workshop panelists included experts from utilities, utility "think tanks," national laboratories and manufacturers, and provided a valuable discussion of issues surrounding implementation of superconductivity during this critical period in transmission policy planning. DOE's Director of the Office of Hydrogen and Superconductivity, Jim Daley, has noted that "the annual Peer Review is an experiment in openness and accountability. The review is public and we put a much stronger emphasis on evaluating management than is typical of technical reviews. Reviewers score each project with half the score determined by how well the work has been managed. The other half is determined by productivity - whether world class results were produced in the past year." Reviewers also provide extensive written evaluations of each project and overall DOE program management. Results from the 2001 Superconductivity Peer Review are being compiled and will be included in an upcoming issue of Superconductivity News Update.

COATED CONDUCTOR ROADMAP AND CRYOGENICS IMPLEMENTATION PLAN NOW AVAILABLE FOR DOWNLOADING Coated Conductor Roadmap Earlier this year, the U.S. Department of Energy's Superconductivity for Electric Systems Program sponsored a workshop that brought together a broad range of experts from industry, universities, and the national laboratories (see "Superconductivity News Update," January 2001). Now, conference organizers have just issued a "Coated Conductor Technology Development Roadmap," which summarizes the insights of 90 workshop participants and sets forth the research and development agenda and specific near-term activities needed to advance techniques for continuous process



sing of high-quality, low-cost coated conductors that will lead to industrial-scale commercial manufacturing. The roadmap's authors note that "[a]chievement of this agenda will enable the availability of the quality and quantity of high-temperature superconducting coated conductors that meet the application requirements of electric power systems." This 47-page roadmap is available at <http://www.ornl.gov/HTSC/pdf/CCRoadmap8-23.PDF>. Cryogenic Roadmap Cryogenic systems providing 100-1000 watts of cooling power at 65-80 K are required if devices utilizing high-temperature superconductors (HTS) are to become a part of the national electric power delivery and utilization system. These systems must have lower capital costs and operate more efficiently and reliably than present-day off-the-shelf cryogenic systems. To achieve these goals, the U.S. Department of Energy Superconductivity for Electric Systems Program assembled a team of utility, industry and national lab researchers to study this issue further. These researchers believe that "now is the right time to develop cryogenic systems that will allow HTS devices to become standard components of electric power systems," and have compiled a technology roadmap addressing the various pathways for the development of cryogenic systems that will enable these systems to advance to meet these desired characteristics. The roadmap provides goals and objectives along with the desired outcomes that may result if these goals and objectives are completed. In addition, the editors have provided a list of technology drivers together with the anticipated impacts on the desired outcomes. The suggested research goals and objectives with resulting outcomes or impacts on the cryogenic systems needed to support HTS power systems apparatus are shown in the roadmap. To download a copy of "Cryogenic Roadmap," visit <http://www.ornl.gov/HTSC/roadreports.htm>. COPENHAGEN PROJECT LAUNCHED On 28 May Copenhagen Energy began supplying electricity to its consumers through superconducting electric cables from its Amager Substation, which serves some 50,000 households in the Danish capital. "We have focused exclusively on becoming one of the five best producers of superconducting cables - not specifically on being first past the post. Because although we believe the market will be huge, we also believe it will take a number of years to develop," says Dag Willén, Project Manager of NKT Research, which has participated in this project. The new superconducting cable is 30 meters long, and is intended for practical full-scale testing in the public electricity grid over the next 18 months to two years. "The cable has the capacity to supply the whole of the Amager district, but we are soft-starting. We have conventional technology in reserve, but when we feel more confident we will switch it out and up the load to gain experience under all operating conditions," says Svend Kvorning, Project Manager, Copenhagen Energy. The new superconducting cable is three-phase, which means it consists of three separate superconducting cables, each 30 meters long, spliced into the grid where the voltage is 30 kV. The cable has a current rating of 2000 Amps. NKT notes that "[f]or the partners behind the project one criteria of the supercable's success will be the failure of any of the 150,000 residents of Amager to notice that Copenhagen Energy has passed a landmark in electricity supply history. The supercable was manufactured by NKT Cables in Brøndby, developed by NKT Research and NST (Nordic Superconductor Technologies) in partnership with research scientists from the Technical University of Denmark, Risø-National Laboratory and the electricity companies Elkraft, Eltra, NESA and Copenhagen Energy, with support from the Danish Energy Agency. The actual costs of the supercable project amount to some DKK 55 million (U.S. \$6.7 million), but in social terms the investment is greater by virtue of the broad research effort made in the superconductivity field." [from NKT press release] NEW REPORT ON SUPERCONDUCTIVITY TECHNOLOGY ASSUMPTIONS Bob Lawrence & Associates (BL&A) of Alexandria, Virginia, has released an advance copy of "Foundations for Superconductivity Analysis." BL&A has done various analyses of superconducting power technologies, primarily "Products and Benefits," available at <http://www.ornl.gov/HTSC/pdf/prodben.pdf> and "Pollutant Emissions Reduction Potential," available at <http://www.ornl.gov/HTSC/pdf/perpst.pdf>. The purpose of this new report is to assemble facts and assumptions from these reports and to "present them in a way which allows the most consistent

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nt analysis possible of this very important, evolving technology." For a review copy of this report, contact Craig Cox. ISIS-10 TO BE HELD IN NOVEMBER IN SANTA FE The U.S. Council on Superconductivity for American Competitiveness (CSAC) will be hosting the 10th International Superconductivity Industry Summit from 15-17 November 2001 at the La Posada de Santa Fe Resort & Spa in Santa Fe, New Mexico. Three international organizations -CSAC, ISTECH [Japan's International Superconductivity Technology Center] and CONECTUS [Consortium of European Companies Determined to Use Superconductivity]- will be represented by industry leaders and will discuss issues affecting the superconductor business, focusing on applications and markets. More details on this conference will be provided in upcoming issues of Superconductivity News Update.

----- ABOUT THIS UPDATE ----- The High-Temperature Superconductivity News Update is compiled by Bob Lawrence & Associates, Inc. on behalf of the superconductivity program and is issued periodically as events warrant. Past issues are available on the U.S. Department of Energy's website at [www.eren.doe.gov/superconductivity/pubs.html](http://www.eren.doe.gov/superconductivity/pubs.html). Please let me know if you would like more information or story ideas on any of these news items involving high-temperature superconductivity---a clean and capable new electricity technology for the 21st century. If you have any other comments or questions, please let me know. Thank you very much. Craig Cox Bob Lawrence & Associates, Inc. 303-679-9331

----- Attachments -----  
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CN=Abe Haspel/OU=EE/O=DOE>---<buddy.garland@ee.doe.gov>---<House Science Committee Questions on NEP Report

----- Message body -----

please coordinate accordingly. thanks. abe ----- Forwarded by Abe Haspel/EE/DOE on 09/04/2001 03:26 PM ----- From: Doug Faulkner on 09/04/2001 02:31 PM To: Abe Haspel@DOE cc: john.sullivan@ee.doe.gov, Buddy Garland@DOE, Nancy Jeffery@DOE, david.garman@ee.doe.gov Subject: House Science Committee Questions on NEP Report abe: looks like we need to answer from EERE standpoint the questions under #1 below and submit to mr. novitsky. could you pls assign someone from your staff to be lead for us in developing the answers? pls run them by dave and/or me before submitting. note deadline. thx. ----- Forwarded by Doug Faulkner/EE/DOE on 09/04/2001 02:27 PM ----- Les Novitsky@HQMAIL 08/31/2001 03:13 PM To: Doug Faulkner/EE/DOE@DOE@HQMAIL, Vicky Bailey@HQMAIL, Robert Kripowicz@HQMAIL, Chase Hutto@HQMAIL cc: David Garman/EE/DOE@DOE@HQMAIL, Bruce Carnes@HQMAIL Subject: House Science Committee Questions on NEP Report Following are questions from the Committee which require input from multiple sources. We will take the lead and produce the coordinated responses, but need your responses) to craft the answers. The tasking memorandum from CI (dated 8/30) has a required completion date of 9/7 at 11:00 a.m. Your help in getting responses to us by COB on Thursday, 9/6 would be greatly appreciated. 1. Responsibility-CFO/EE/Hutto Q11.1 with respect to the FY 2002 budget: Q11.1.1 How did you determine "core R&D efforts"? Will "core R&D efforts" be reduced or cut back in any way compared to the previous year's activities? Q11.1.2 which specific efforts were deemed non-core? Please provide a specific list of projects, grants, or programs you would terminate or reduce in level of effort to accommodate this 37% cut. 2. Responsibility-FE/PI/CFO Congressman Jerry Costello I support the President's Clean Power Initiative -however even after you add the \$150 million down payment of the President's proposed \$2 billion initiative to this year's fossil fuel budget - the budget is cut by 17%. This trend continues over the next few years. How can the Administration support increased funding for clean coal technologies then turn around and slash the fossil fuel budget? Many thanks, Les 6-7780

CN=Doug Faulkner/OU=EE/O=DOE>---<Abe Haspel@DOE>---<09/04/2001 02:31:03 PM>---<House Science Committee Questions on NEP Report

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----- Message body -----  
abe: looks like we need to answer from EERE standpoint the questions under #1 belows and submit to mr. novitsky. could you pls assign someone from your staff to be lead for us in developing the answers? pls run them by dave and/or me before submitting. note deadline. thx. ----- Forwarded by Doug Faulkner/EE/DOE on 09/04/2001 02:27 PM ----- Les Novitsky@HQMAIL L 08/31/2001 03:13 PM To: Doug Faulkner/EE/DOE@DOE@HQMAIL, Vicky Bailey@HQMAIL, Robert Kripowicz@HQMAIL, Chase Hutto@HQMAIL cc: David Garmann/EE/DOE@DOE@HQMAIL, Bruce Carnes@HQMAIL Subject: House Science Committee Questions on NEP Report Following are questions from the Committee which require input from multiple sources. We will take the lead and produce the coordinated responses, but need your responses) to craft the answers.  
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<wanda\_addison@nrel.gov>@internet@HQMAIL>---<09/04/2001 11:10:30 AM>---<NREL Brown Bag Seminar and Golden Videoconference

----- Message body -----  
You are invited to a seminar on EERE Strategic Program Review by Buddy Garland. The speaker, Buddy Garland, is Director of EERE's Office of Planning, Budget and Outreach and is leading the Strategic Program Review. In September, the Office of Energy Efficiency and Renewable Energy (EERE) will complete a Strategic Program Review of all current EERE programs to assess past and present program strategies, performance, and benefits. The brown-bag seminar will take place at 12:00 p.m. on Thursday, September 13, 2001 in Conference Rooms A&B at the NREL Washington DC office. Please see below for an abstract of the talk. Our office is located in the Aerospace Center at 901 D Street, SW, Suite 930, Washington, DC 20024. We are across D Street from L'Enfant Plaza. We are accessible on the Blue, Orange, Yellow, and Green Metro lines through the L'Enfant Plaza Metro station. Parking is also available in the Aerospace Center. Soft drinks will be provided. We hope you will be able to attend this talk. Please feel free to pass this invitation on to a colleague who might be interested in attending. PLEASE LET US KNOW IF YOU WILL BE ATTENDING. Please RSVP to wanda\_addison@nrel.gov, or call 202-646-5278 by Wednesday, September 12, 2001. If you previously responded, no action is required. Abstract In September, the Office of Energy Efficiency and Renewable Energy (EERE) will complete a Strategic Program Review of all current EERE programs to assess past and present program strategies, performance, and benefits. The review will identify any programmatic activities that will need to be conducted to carry out the National Energy Policy (NEP). In addition to fulfilling NEP recommendations 4-2 and 6-3 as well as the direction of Secretary Abraham, the Strategic Program Review is an integral part of the evaluation, planning, budget formulation, and budget execution processes outlined in the EERE Strategic Management System. The review findings will serve as an integral part of an integrated baseline to produce the new EERE Strategic Plan, scheduled to be completed this fall, and the FY04 Budget request to Congress.

<wanda\_addison@nrel.gov>@internet@HQMAIL>---<09/04/2001 11:10:30 AM>---<NREL  
Page 49

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L Brown Bag Seminar and Golden Videoconference

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CN=David Garman/OU=EE/O=DOE>---<doug.faulkner@ee.doe.gov;abe.haspel@ee.doe.gov@DOE;JOHN.SULLIVAN@EE.DOE.GOV;buddy.garland@ee.doe.gov>---<08/31/2001 05:23:38 PM>---<FYI... my "cover" memorandum

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MEMORANDUM FROM: DAVID K. GARMAN Assistant Secretary, Energy Efficiency and Renewable Energy (EERE) SUBJECT: FY 2003 OMB Budget Request The a

CN=Robert Dixon/OU=EE/O=DOE>---<CN=David Garman/OU=EE/O=DOE@DOE;Doug Faulkner>---<08/28/2001 07:48:22 PM>---<FY03 budget appeals from OPT

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Margot Anderson@HQMAIL>---<William Breed@HQMAIL>---<08/28/2001 08:47:52 AM>  
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William Breed@HQMAIL>---<Margot Anderson@HQMAIL>---<08/28/2001 08:28:28 AM>  
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CN=MaryBeth Zimmerman/OU=EE/O=DOE>---<CN=Buddy Garland/OU=EE/O=DOE@DOE;CN=A  
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ort

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Following is the (sometimes) weekly Status Report for Planning, Analysis &  
Evaluation (PAE). Sector analysts: Please note that I would like to arra  
nge a weekly session for the next 2 months ("meeting" is such an ugly word  
) to work on development of the EERE Strategic Plan & implementation of pe  
nding OMB/CFO guidance on performance criteria. I don't expect that everyo  
ne will be able to make every meeting, but please let Mary Washington know  
as soon as possible what times during the week do NOT work for you. Than  
ks. PLANNING, ANALYSIS, & EVALUATION STATUS REPORT Week of August 27, 2001

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CN=Randy Steer/OU=EE/O=DOE>----<CN=Abe Haspel/OU=EE/O=DOE@DOE;CN=John Sullivan/OU=EE/O=DOE@DOE;CN=Buddy Garland/OU=EE/O=DOE@DOE;CN=Sam Baldwin/OU=EE/O=DOE@DOE>----<08/24/2001 02:24:31 PM>----<R&D Review  
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/EE/DOE on 08/24/01 02:14 PM ----- Robert\_Sandoli@omb.eop.gov 08/24/01 0  
1:14 PM To: Randy.Steer@ee.doe.gov cc: Mark\_A.Weatherly@omb.eop.  
gov, Lori\_A.Krauss@omb.eop.gov, Kevin\_Carroll@omb.eop.gov Subject: R&D

CN=David Garman/OU=EE/O=DOE>----<CN=Robert Dixon/OU=EE/O=DOE@DOE;CN=Tom Gros  
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CN=Brian Connor/OU=EE/O=DOE>---<CN=Michael McCabe/OU=EE/O=DOE@DOE>---<08/23  
/2001 10:53:04 AM>---<FW: Your Invitation for the October 15th Conference  
----- Message body -----

http://www.ctcfoundation.org Dear Brian, On Monday, October 15th, 2001, the CTC Foundation's Inaugural Pennsylvania Energy Leadership Council Conference will take place in Pittsburgh, Pennsylvania, on the campus of Carnegie-Mellon University (CMU). Since the location for the Conference has been finalized, a formal Invitation to deliver a Keynote Address is being extended to the Lieutenant Governor. We would welcome your involvement in this event as I indicated during my conversation with you. I have taken the liberty of identifying the role that you might wish to accept. I hope that you will want to participate in this event that will be broadcast throughout the Commonwealth by Greenworks. Students as well as leaders in the energy community will attend the Conference. The single fact that Vice President Cheney appeared in Monroeville, Pennsylvania to present the Administration's Energy Plan underscores that Pennsylvania is an Energy Leader. I have also attached the Commonwealth's recently released Energy Plan.

Most sincerely yours,

Howard

Howard G. McClintic

Executive

Executive Director <<The Pennsylvania Energy Council.doc>> <<FINAL PA ENERGY LEADER. COUNCIL.doc>> <<CTC Fdn Quickie.doc>> <http://www.state.pa.us/PAPower/pressreleases/view.asp?Q=23005> <http://www.post-gazette.com/headlines/20010717cheney0717p2.asp> <http://www.nytimes.com/2001/04/24/business/24NUKE.html> <http://www.post-gazette.com/forum/20010504edcheney1.asp> <http://www.washingtonpost.com/wp-dyn/articles/A50222-2001Apr22.html> <http://www.post-gazette.com/forum/20010422berkey7.asp> (See attached file: The Pennsylvania Energy Council.doc) (See attached file: FINAL PA ENERGY LEADER. COUNCIL.doc) (See attached file: CTC Fdn Quickie.doc)

Kevin O'Donovan@HQMMAIL>---<CN=Michael York/OU=EE/O=DOE@DOE@HQMMAIL;CN=Lawrence Mansueti/OU=EE/O=DOE@DOE@HQMMAIL;CN=Abe Haspel/OU=EE/O=DOE@DOE@HQMMAIL;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE@HQMMAIL;CN=David Garman/OU=EE/O=DOE@DOE@HQMMAIL;CN=Douglas Carter@HQMMAIL;CN=Larisa Dobriansky@HQMMAIL;CN=Lee Otis@HQMMAIL;CN=Vicky Bailey@HQMMAIL;CN=Thomas Grahame@HQMMAIL;CN=Michael Whatley@HQMMAIL;CN=John Conti@HQMMAIL;CN=Tracy Terry@HQMMAIL;CN=Jean Vernet@HQMMAIL;CN=Eric Burgeson@HQMMAIL;CN=Vincent Devito@HQMMAIL;CN=JOHN STAMOS@HQMMAIL;CN=Kevin Kolevar@HQMMAIL;CN=WILLIAM MAGWOOD@HQMMAIL;CN=GAIL MARCUS@HQMMAIL;CN=Margot Anderson@HQMMAIL;CN=MARY HUTZLER@HQMMAIL;CN=JOSEPH BEAMON@HQMMAIL>---<08/22/2001 12:59:43 PM>---<RE: Allocation principles

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ABE NEW NEP FOIA

sday, August 22, 2001 10:06 AM To: Hutzler, Mary; Beamon, Joseph; O'Donovan, Kevin; Lawrence Mansueti\_at\_HQ-NOTES at X400PO; Abe Haspel\_at\_HQ-NOTES at X400PO; MaryBeth Zimmerman\_at\_HQ-NOTES at X400PO; Michael York\_at\_HQ-NOTES at X400PO; David Garman\_at\_HQ-NOTES at X400PO; Douglas Carter\_at\_HQ-EXCH at X400PO; Larisa Dobriansky\_at\_HQ-EXCH at X400PO; Lee Otis\_at\_HQ-EXCH at X400PO; Vicky Bailey\_at\_HQ-EXCH at X400PO; Thomas Grahame\_at\_HQ-EXCH at X400PO; Michael Whatley\_at\_HQ-EXCH at X400PO; John Conti\_at\_HQ-EXCH at X400PO; Tracy Terry\_at\_HQ-EXCH at X400PO; Jean Vernet\_at\_HQ-EXCH at X400PO; Eric Burgeson\_at\_HQ-EXCH at X400PO; Vincent DeVito\_at\_HQ-EXCH at X400PO; JOHN STAMOS\_at\_HQ-EXCH at X400PO; Kevin Kolevar\_at\_HQ-EXCH at X400PO; WILLIAM MAGWOOD\_at\_HQ-EXCH at X400PO; GAIL MARCUS\_at\_HQ-EXCH at X400PO; Margot Anderson\_at\_HQ-EXCH at X400PO Subject: Allocation principles Attached is the EERE set

Margot Anderson@HQMAIL>---<CN=Michael York/OU=EE/O=DOE@DOE@HQMAIL;CN=Lawrence Mansueti/OU=EE/O=DOE@DOE@HQMAIL;CN=Abe Haspel/OU=EE/O=DOE@DOE@HQMAIL;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE@HQMAIL;CN=David Garman/OU=EE/O=DOE@DOE@HQMAIL;Douglas Carter@HQMAIL;Larisa Dobriansky@HQMAIL;Lee Otis@HQMAIL;Vicky Bailey@HQMAIL;Thomas Grahame@HQMAIL;Michael Whatley@HQMAIL;John Conti@HQMAIL;Tracy Terry@HQMAIL;Jean Vernet@HQMAIL;Eric Burgeson@HQMAIL;Vincent DeVito@HQMAIL;JOHN STAMOS@HQMAIL;Kevin Kolevar@HQMAIL;WILLIAM MAGWOOD@HQMAIL;GAIL MARCUS@HQMAIL;MARY HUTZLER@HQMAIL;JOSEPH BEAMON@HQMAIL;Kevin O'Donovan@HQMAIL>---<08/22/2001 11:35:23 AM>---<RE: Allocation principles

----- Message body -----  
Thanks. Much better. Anybody else going to weigh in? -----Original Message  
----- From: Michael York Sent: Wednesday, August 22, 2001 10:06 AM To: Mansueti, Lawrence; Haspel, Abe; Zimmerman, MaryBeth; York, Michael; Garman, David; Carter, Douglas; Dobriansky, Larisa; Otis, Lee; Bailey, Vicky; Grahame, Thomas; Whatley, Michael; Conti, John; Terry, Tracy; Vernet, Jean; Burgeson, Eric; DeVito, Vincent; Stamos, John; Kolevar, Kevin; Magwood, William; Marcus, Gail; HUTZLER, MARY; BEAMON, JOSEPH; O'Donovan, Kevin; Anderson, Margot Subject: Allocation principles Attached is the EERE set of s

CN=Michael York/OU=EE/O=DOE@DOE@HQMAIL>---<CN=Lawrence Mansueti/OU=EE/O=DOE@DOE@HQMAIL;CN=Abe Haspel/OU=EE/O=DOE@DOE@HQMAIL;CN=MaryBeth Zimmerman/OU=EE/O=DOE@DOE@HQMAIL;CN=Michael York/OU=EE/O=DOE@DOE@HQMAIL;CN=David Garman/OU=EE/O=DOE@DOE@HQMAIL;Douglas Carter@HQMAIL;Larisa Dobriansky@HQMAIL;Lee Otis@HQMAIL;Vicky Bailey@HQMAIL;Thomas Grahame@HQMAIL;Michael Whatley@HQMAIL;John Conti@HQMAIL;Tracy Terry@HQMAIL;Jean Vernet@HQMAIL;Eric Burgeson@HQMAIL;Vincent DeVito@HQMAIL;JOHN STAMOS@HQMAIL;Kevin Kolevar@HQMAIL;WILLIAM MAGWOOD@HQMAIL;GAIL MARCUS@HQMAIL;MARY HUTZLER@HQMAIL;JOSEPH BEAMON@HQMAIL;Kevin O'Donovan@HQMAIL;Margot Anderson@HQMAIL>---<08/22/2001 10:08:52 AM>---<Allocation principles  
----- Message body -----

----- Attachments -----  
Extracted Allocation Principles.doc: 22528 bytes

A List of Email  
Attachments

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Address: New NEP FOIA

Name	Size	Type
UNIDO Study Tour Agenda Revised	10 KB	Corel WordPerfect 8 Document
Support for Experts HE meeting	23 KB	Microsoft Word Document
Scorecard	768 KB	Microsoft Access Application
Response	11 KB	Corel WordPerfect 8 Document
Registration Form	47 KB	Microsoft Word Document
R&D Criteria Tracking - OMB Struct	18 KB	Microsoft Excel Worksheet
PBM suggestions	34 KB	Microsoft Word Document
OMB R & D Criteria Guidance letter to S-1	1,061 KB	Corel WordPerfect 8 Document
NEP DRAFT Action Plan 8.23.01	185 KB	Microsoft Excel Worksheet
NEP DRAFT Action Plan 70501	183 KB	Microsoft Excel Worksheet
NEP DRAFT Action Plan	127 KB	Microsoft Excel Worksheet
Meeting Memo template	50 KB	Microsoft Word Document
intplan	44 KB	Corel WordPerfect 8 Document
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German FY03 budget presentation notes 8-22-01	21 KB	Microsoft Word Document
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Forum Flyer	252 KB	Adobe Acrobat Document
electricity restructuring pgm one pager	13 KB	Corel WordPerfect 8 Document
EERE FY03 ASEE mark 8-22-01	310 KB	Microsoft Excel Worksheet
EAO Forum Registration Form	43 KB	Microsoft Word Document
EAO Forum Outline	24 KB	Microsoft Word Document
EAO Forum Flyer	402 KB	Adobe Acrobat Document
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concept one-pager.WB	34 KB	Microsoft Word Document
CFO Guidance red criteria	70 KB	Microsoft Word Document
bp2yb0hx	4 KB	File
appeal	50 KB	Microsoft Word Document
Allocation Principles	22 KB	Microsoft Word Document
	252 KB	Text Document

Type: Text Document Size: 251 KB

Start | DCS Open | Robbie Dooms - Mail - L... | Document - WordPz

July 27, 2001

TO: John Sullivan

FROM: Mary Beth Zimmerman

THRU: Buddy Garland

RE: My response to NEP-related FOIA requests

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DOE018-0659

**17467**

DOE018-0660

- d. All documents based on the versions of the DOE task force reports used to brief the Secretary of DOE. We were not involved in any briefings of the Secretary, do not know which versions of reports would have been used for these briefings, and have not received any information from other DOE offices who were involved in briefings as to the need to identify material related to a briefing.
  - e. All documents to the VP Task Force. See attachments 3 & 4
  - f. All meeting notes. None received.
  - g. All e-mails from Secretary of DOE. None identified.
6. Associated Press (as of May 9)
- a. Records on any discussions related to final decisions made by the task force. Not applicable.
7. ABC, Inc. (as of May 24)
- a. Last & next to last draft chapters of NEP. Not applicable.
  - b. Anything relating to coal or nuclear. Not applicable.
8. Holzer (as of May 30)
- a. Draft chapters received and sent by DOE to other cabinet agencies and the WH. Not applicable.
  - b. Any items related to nuclear power. Not applicable.
9. Holzer (as of June 7)
- a. Any items to and from Margot Anderson (Our understanding is that Margot has provided) and Joe Kelliher. See attachment 5.



b ( )

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Hutto, Chase

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From: Adrienne Moss  
Sent: Thursday, April 26, 2001 11:56 AM  
To: Hutto, Chase  
Subject: PNGV Blurb



Hutto, Chase

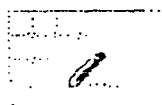
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From: Doug Faulkner  
Sent: Wednesday, July 18, 2001 1:52 PM  
To: Glotfelty, Jimmy; Hutto, Chase  
Subject: Interior's Proposed Renewable Energy Summit

(76)

update. fyi.

----- Forwarded by Doug Faulkner/EE/DOE on 07/18/2001 01:51 PM -----



David Garman  
07/18/2001 12:28 PM

To: Joe McMonigle@HQMAIL@HQDOE, Jeanne Lopatto@HQMAIL@HQDOE, Kyle McStarrow@HQMAIL@HQDOE, Majida Dandy@HQMAIL@HQDOE, doug.faulkner@ee.doe.gov  
cc: Craig Reed@HQMAIL@HQDOE, MaryBeth Zimmerman/EE/DOE@DOE

Subject: Interior's Proposed Renewable Energy Summit

Just want to keep this on your radar screen.

We will stay engaged.

- Garman

----- Forwarded by David Garman/EE/DOE on 07/18/2001 12:20 PM -----



Robert Dixon  
07/18/2001 08:19 AM

To: David Garman/EE/DOE@DOE  
cc: Doug Faulkner/EE/DOE@DOE, William Parks/EE/DOE@DOE, Peter Goldman/EE/DOE@DOE, Allan Jelacic/EE/DOE@DOE

Subject: Dept. of Interior meeting: proposed Renewable Energy Summit

Dave:

18023

DOE018-1271

Bob

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(17)



# digital power report

Powering the Telecosm

SPECIAL REPORT

Published by Gilder Publishing, LLC

## The National Energy Policy Development Plan: A Technology Investment Perspective

*Nearly \$500 billion per year are invested annually in U.S. power and energy technologies*

Two weeks after the inauguration, the Bush administration established the National Energy Policy Development Group (NEPD) with a mandate to develop a statement of national energy plans and priorities. The group's 200-page report was issued in May 2001 and has generated weekly, if not daily, commentary and reaction. If there was

any remaining doubt before, there is none now: energy is front and center on the national agenda.

Clearly, energy has become an important political issue. More importantly, however, this is not a made-in-Washington crisis, here today but probably gone tomorrow. There are fundamental economic and technological challenges to be addressed. They are going to be at the center of a lot economic activity for the foreseeable future.

Why now? First, because energy in general, and electric power in particular, have been ignored (at best) or undermined by wishful thinking and short-sighted policy for most of the last decade. Policy makers have been indifferent or foolish; investors have been indifferent or hostile. As a result, we've managed to dig some deep holes, most notably in California.

Second, because the character of electric demand has changed. As we have been emphasizing now for two years—the digital world has created a new kind of demand for a different kind of power—high-9s power, power available more than 99.9999 percent of the time, good enough for microprocessors and packet switches, not just toasters and light bulbs. But at the same time, a separate cluster of demands, from environmental regulators, place increasingly tight constraints on the fuels and technologies we use to supply power.

And third, because there have been recent, remarkable advances in power technologies. Though they emerged two decades later, and remain overshadowed (at least in the public eye) by the technologies of bits, the technologies of electrons—of power—are now advancing as fast. Power technologies that have been quietly incubating for a decade or more are now coming of age and bursting into the marketplace. We have not seen anything quite so fundamental or exciting since the rise of telecom and datacom technologies nearly two decades ago.

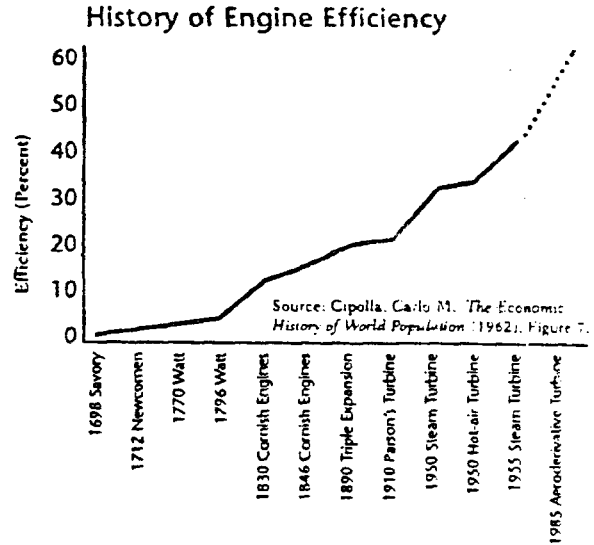
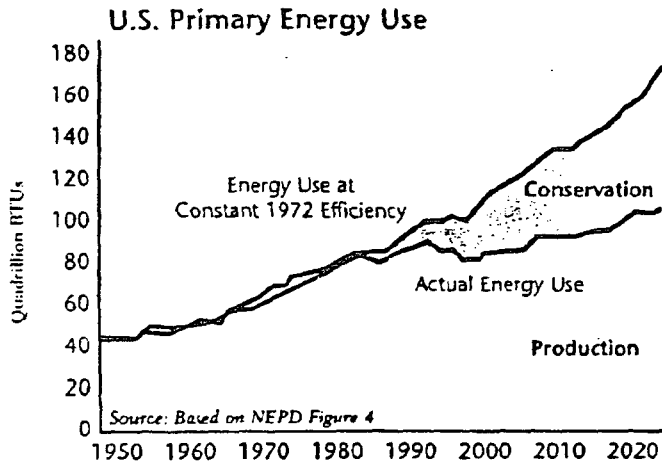
### Produce and Conserve

The early pages of the NEPD include a graph (NEPD fig. 4) that encapsulates the challenges, and the two basic responses, that lie ahead. If energy consumption continues to rise in proportion to GDP, it will rise fast (the upper curve). However, if we continue to get more efficient in our use of energy—as we have done since the dawn of the industrial age—then energy consumption will still rise, just not as fast as GDP (the lower curve).

Debate pivots around the ostensibly conflicting imperatives of producing more energy, and encouraging more conservation.

We will in fact do both. Both tracks present a wide range of new opportunities in technology, and consequently new investment opportunities.

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### Production

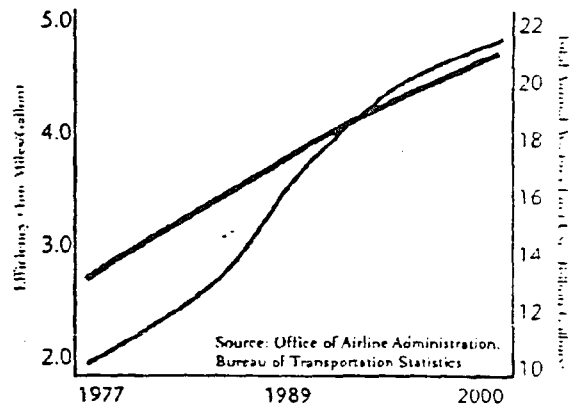
Our consumption of primary thermal fuels rises. It has risen throughout human history, and it will continue to rise for the foreseeable future, however clever and diligent we may be with efficiency and conservation. We know of no serious mainstream observer who believes otherwise.

Energy consumption *per capita* may grow more slowly, particularly as demographic changes shift us toward a more elderly population. Energy *per unit of GDP* has declined throughout human history, and will continue to decline. But total energy consumption has nonetheless risen, and will continue to rise. Consider just one, clear example of this seeming contradiction; the history of efficiency gains in engines compared to total commercial aviation fuel consumed (passenger plus freight).

This reality points inevitably to the continued importance of production technologies, all of which can be grouped into three classes: extraction being the largest (e.g., oil wells and pipelines), followed by fuels chemistry (e.g., refineries), and then the so-called renewables—primarily solar and wind.

The production portion of the story centers mainly on large established players in heavy industries—the likes of Exxon-Mobil (oil and gas), Massey (coal), Louis Dreyfuss NG (natural gas), Cameco (uranium), and other large companies such as Sunoco that are engaged in refining, and players such as DuPont, which are in the corollary activity, emissions control.

### Jet Engine: Efficiency & Fuel Use



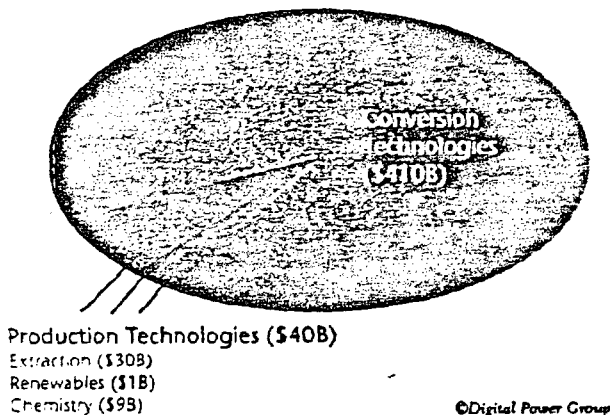
The space also includes a number of smaller companies developing technologies that are powered by wind, solar, and other "renewables."

There has been and will continue to be a tremendous technological opportunity across the board in the production and extraction of raw fuels. Twenty years ago, for example, an article in *Science* predicted that by now we would have to be drilling so many wells so deep into the ground that it would take more energy to get out a barrel of oil than is contained in

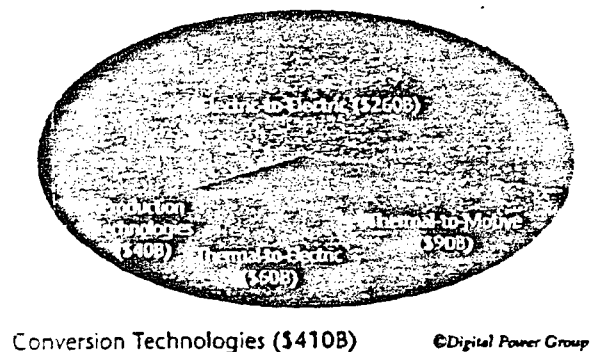
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## Annual Capital Spending on Energy Technologies



## Annual Capital Spending on Energy Technologies



the barrel of oil itself. ("Petroleum Drilling and Production in the United States," *Science*, 6 February 1981, p 576-578.) That prophecy has not been fulfilled. Because our ability to locate oil and drill efficiently for it has improved dramatically (including horizontal drilling, just one of many possibilities simply not considered by earlier pessimists).

Within the \$40 billion annual capital spent in the production sector itself, we estimate that roughly 75 percent of investment will go into what we call the extractive industries, with the chemistry piece attracting a little over 20 percent, and renewables accounting for a remaining few percent. But more important than our estimates of investment activity in each sub-sector is our estimate of the production sector's contribution to the entire energy sphere. To our minds,

production represents only a little less than 10 percent of the entire technology and capital investment story in power. So where is the rest?

## Conversion and Conservation

Almost everything that is in the nature of energy conversion technology will henceforth be renamed "conservation." Political imperatives certainly favor cynical semantic gamesmanship here, but the most important "conservation" and "efficiency" opportunities are indeed to be found at the interfaces, where energy is converted from one basic form to another. And happily for politician and investor alike, the technologies of energy conversion are now changing fundamentally, and advancing rapidly.

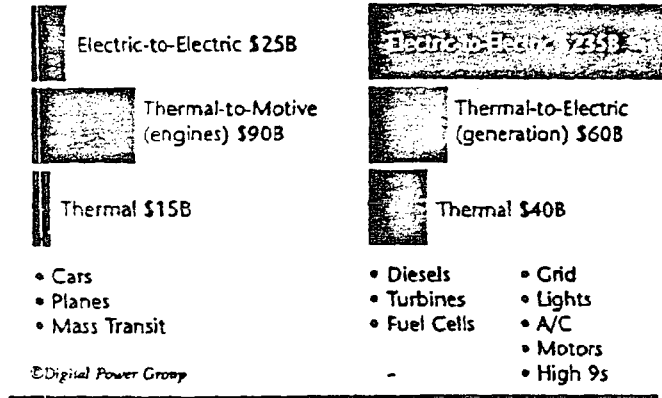
There are three main types of conversion: *Thermal-to-motive*—in a car engine, for example, or the gas turbine under the wing of a jumbo jet. *Thermal-to-electric*—in an electric power plant, or in the integrated alternator/starter motor of a hybrid electric car. And *electric-to-electric*—in the length of the grid, and throughout the end-user technologies, in motors, light bulbs, and toasters, for example, where the final conversion moves things back down the staircase, to motion and ultimately to waste heat. "High-9s" power conversion technologies also land in this group (the technologies that add reliability to electron supply from motherboard to manufacturing plant).

Most of the investment (over \$400 billion/year) and innovation of our energy economy happens at these three interfaces. However efficient they may be, conversions are not in fact long-run substitutes for more primary production. But they are often perceived to be in the short run, on the theory that more efficient conversion means less waste, and thus less demand for primary energy. The fallacy is that more efficient conversion effectively lowers the perceived price of energy, which historically at least, has always translated into more consumption, not less, over the long term. But this is beside the point; for both political and economic purposes, more efficiency is better than less.

Within the conversion sectors, the first step up the energy staircase is the conversion of thermal energy into motion—moving planes, trains and autos, or moving shafts to spin electric generators in power plants. The annual investment in converting thermal energy to motive power dwarfs capital spent in extracting (refining, moving) the primary thermal energy.

Cars represent an enormous investment in thermal energy conversion technology—bigger in fact than just about anything else on the scene. The electric power infrastructure (thermal-to-electric conversion) is also

## Annual Investment in Energy Conversion Technologies



very large and represents a great deal of new investment. But this segment, though large, is actually smaller than annual investment (thermal-to-motive) in the power systems for cars, trucks, and aircraft.

Although not usually expressed in these terms, the U.S. auto industry alone annually installs more thermal-to-motive conversion capacity in its engines than is represented by the entire installed base of thermal electric generators in the U.S. electric grid. The automotive sector presents a concomitantly large opportunity for investment.

**Thermal-to-Motive Conversions.** The thermal-to-motive conversion is the first half of almost all electricity generation, and represents almost the entirety of the energy conversion process (as opposed to capi-

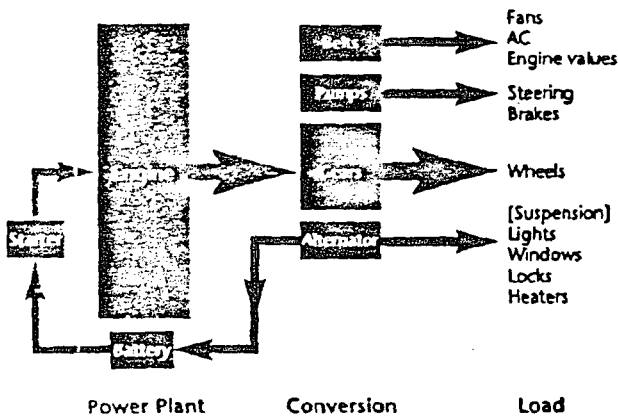
tal spending) in transportation. In both areas, there is now rapid innovation, and aggressive investment, in new silicon technologies.

The innovation is centered on two technologies, both of them rooted in silicon: the silicon micro-processor—which has received much attention—and which of course spawned the revolution in information. And the silicon powerchip, which has received far less attention, but has spawned an equally important revolution in power electronics.

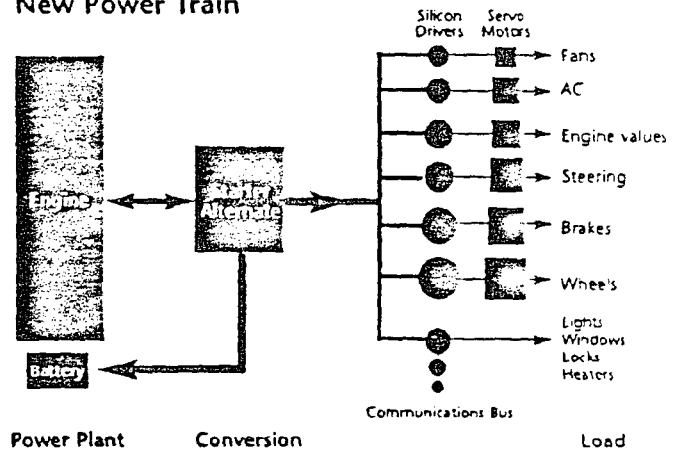
The rise of power electronics is best illustrated in the transportation sector. Until now, the thermal-to-motive conversion under the hood of a car has been largely a click-click, bang-bang process, centered on mechanical transformations: pulleys, belts, gears, drive systems, and the other inefficient devices needed to convert the thermal energy inside the engine into motion. The \$90 billion of capital invested in the hardware of transportation power (engines, transmission, drive train) greatly exceeds \$260 billion in capital spending on electric power related hardware under the hood. This is about to change.

The fundamental change that's occurring under the hood of a car is not the replacement of the internal combustion engine itself with something else (fuel cells or flywheels or batteries, for example). The change is occurring just south of the engine, in what we have called the silicon power drive train. It is a revolution in which a rapidly rising fraction of the power of the spinning crankshaft is converted directly into electricity, and the electricity is used not only to supply a proliferating number of (highly visible) comforts and digital conveniences in the pas-

### Old Power Train



### New Power Train



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senger cabin, but also to power a broad range of new, less visible but more important devices that drive, steer, suspend, brake, heat, and cool the car (DPR Special Report, December 2000, *Powerchip Paradigm II: Broadband Power*).

This is the "hybrid" automobile. Hybrid because it is a largely seamless combination of the old internal combustion with the new silicon-controlled electric drive train. It delivers not only more efficiency than what it replaces, which makes it attractive to green regulators, but also far better performance. For example, a single \$100 module containing the electronics to allow a car to be steered electrically—as some aircraft are flown now—can deliver far more responsive, accurate steering than existing hydraulic systems, and also add a half a mile per gallon of fuel efficiency per car. An electromagnetically activated valve train (as opposed to the standard mechanical systems) will deliver more performance in less space and will radically boost fuel efficiency. Shafts and chains will give way to silicon and wires. The hybrid car responds to green imperatives—but it is being developed now because it is profoundly better: it is more reliable, steers easier, rides more smoothly and stops more safely, and it will soon be cheaper too. Today's relatively small capital investment in automotive electrical systems is poised to grow rapidly and become the dominant place for technology progress and investment opportunity (December 2000 DPR).

The same fundamental changes are now occurring in factories. The old gear and pulley drives are rapidly being replaced with silicon driven power devices that allow manufacturers to cut more sharply, paint more finely and run a more reliable, more productive assembly line. Here again, energy efficiency will undoubtedly improve, so the transformation can be called conservation. But the change is a conversion, and it is impelled, first and foremost, by a quest for better performance up front, not greener objectives at the tail.

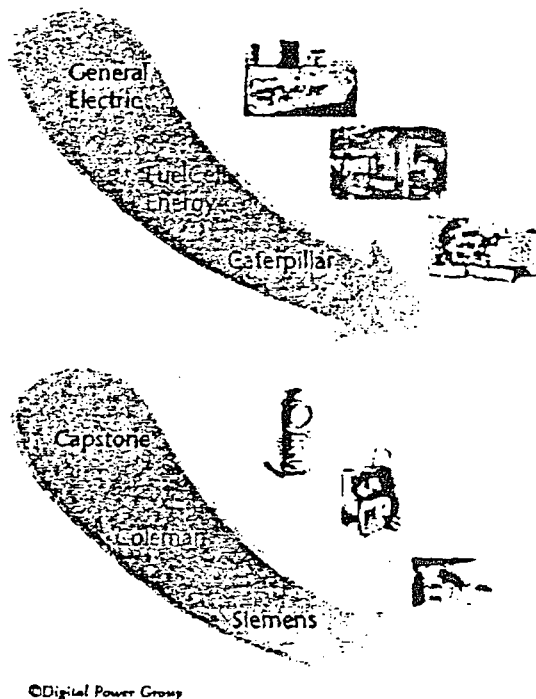
*Thermal-to-Electric Conversions.* The next paradigmatic energy conversion process centers on the transformation of thermal energy to electric. This is the more familiar space, of course, and it too is fundamentally a thermal-to-motive process (spinning shafts turning generators). In California, for example, the energy crisis that has dominated so much news has not been a "gas-lines" shortage affecting thermal-to-motive conversion in cars and trucks, but a "power-lines" shortage affecting thermal-to-electric conversion (albeit by way of moving generators) in electric power plants.

The technologies of thermal-to-electric conversions can be divided into two broad categories: central power stations, and distributed generation. The central-power sector includes large turbines (from companies like GE), utilities (AEP), large independent generators (Calpine), and companies like Enron that are essentially market makers (October 2000 DPR). The distributed generation sector includes both large and small companies, the makers of the relatively smaller reciprocating engines (e.g., Caterpillar), microturbines (e.g., Capstone), fuel cells (e.g., FuelCell Energy), and photovoltaic cells (e.g., Evergreen), that generate electricity. Distributed generation is the segment where most renewables are found (with the one exception of hydro power, the largest source of renewable energy, and the domain of big central utilities).

Firms operating in these two sectors do not typically compete against each other. Contrary to much that has been written, this is not, in the main, a zero-sum power game. Although they both generate electricity through the conversion of thermal energy, they mainly address two quite separate markets. Central station power plants generate low-cost and

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### Thermal-to-Electric: Electron Supply



relatively low "quality" wholesale electrons. Low cost because they are generated in very large, very efficient central stations; low quality because they are then delivered over very long, and thus relatively vulnerable power lines, and shared (often unpredictably and arbitrarily) within a large community.

Distributed generation technologies address a new imperative—the demand for reliability, i.e. power quality (July 2000 DPR). And the digital economy, for reasons tied to the sharp rise of datacom and telecom technologies that are ubiquitous from factory to silicon fab as well as communications systems, demands ever increasing levels of power reliability.

*Electric-to-Electric Conversions.* The broad range of technologies that we categorize as electric-to-electric can be grouped into two main sectors: the grid on the one hand, and all end-user electrically-powered technologies on the other. The grid distributes and shapes and moves the electrons from the generating source to the systems that use them. End-user devices include the refrigerators, lights, motors, and computers that run on electric power along with a broad class of related power conditioning technologies in everything from medical equipment to satellites, from factory motor controls to uninterruptible power systems. This broad category of power

conversion markets represents the mother lode for investors (\$260 billion in annual capital spending), and for those seeking to improve efficiency since this is where most power conversion occurs, and thus where the greatest opportunity for conversion efficiency resides. The former category—the grid from long wires to local neighborhoods—is a substantial capital and energy conversion sector. Power is converted up and down various voltage levels, routed, shaped and controlled, every step of which entails hardware with defined (and improvable) efficiency. Here annual capital spending has languished in recent years, but is still a substantial \$40 billion annually (from city-level to building-level grids), and is poised to increase for practical and political reasons: much of the growth will occur in the new generation of high-power, silicon-based power electronics.

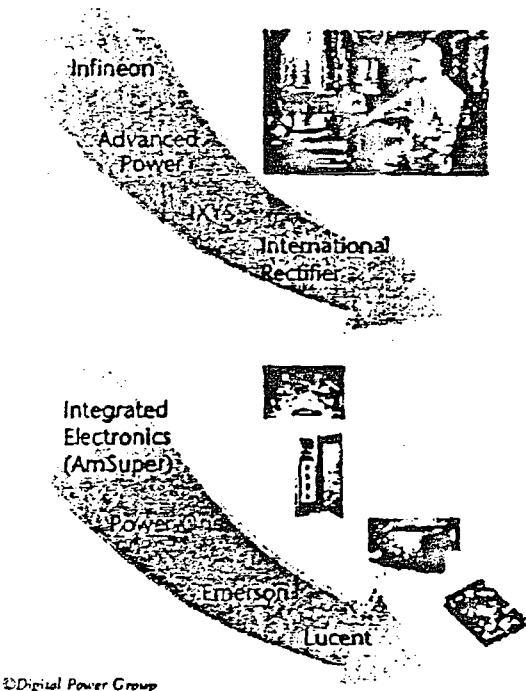
One of the most intriguing features of today's energy debate is its over-appreciation of the importance of end-user devices and its under-appreciation of the grid. A great deal of effort and investment has focused on making refrigerators and lights and motors more efficient. But the path of least resistance to making a significant and dramatic difference in the capacity and reliability of the electric supply resides within this vast, sprawling grid of wires (October 2000 DPR).

Our grid was built mainly with mid-twentieth-century technologies; we now have in hand technologies that can dramatically improve both its control and its throughput. By investing heavily in substations—the "gates in the grid"—and distribution plants, one adds control. One also adds headroom. Much has been said about how the grid is stressed, and operating at the limit of its capacity. But the grid currently has to operate with a broad margin of safety, because its control systems remain primitive—just as a car has to drive more slowly when it has poor steering, suspension, and brakes. Technologies that could deliver even 5 percent more capacity in the existing wires, on the existing rights of way, would dramatically improve things, in California and neighboring states, and across the country. And changes of that order are now readily possible, with the technologies of high-power electronics and powerchips.

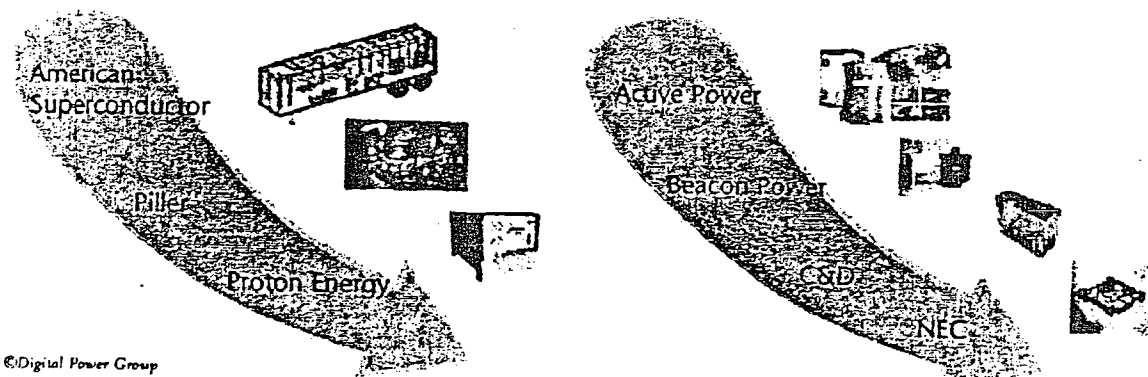
Digital power control systems can of course extend right down to the end of the line, and into (comparatively) low-power end-user devices—refrigerators, air conditioners, and lighting systems. Here too, they deliver—first and foremost—superior performance: performance that is faster, more responsive, and more reliable, systems that occupy less space, and that are ultimately cheaper, too.

As noted, a second tier of distributed generating systems located around the periphery of the grid can boost reliability. But to provide the high-9s power that digital

### Electric-to-Electric: Electron Control



## Electric-to-Electric: Electron Storage



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technologies demand, distributed generators require yet another tier of technology—storage or “ride through” systems—without which there cannot be seamless, transparent switching from grid to off-grid sources power.

Here again we find a hierarchy of devices that perform this function; from American Superconductor’s megawatt-level, trailer-sized superconducting magnetic energy storage system (SMES), all the way down through Active Power’s and Beacon’s flywheels and Proton Energy’s hydrogen storage devices to the very smallest batteries and capacitors (*August 2000 DPR*). The technology here is driven once more by the imperatives of a 24-7 economy that requires much higher levels of reliability. Demand is therefore likely to continue to grow for the foreseeable future.

**Powerchips and Power Electronics.** Powerchips and power electronics can be found at the center of every conversion that involves electrons, which is to say everywhere since 40 percent of all U.S. energy is converted to electricity, and then frequently re-converted multiple times. There has been a rather recent, and largely ignored, revolution in the development of silicon devices including chips and small power equipment that can handle enormous amounts of power on single wafers and on devices that are the size of your finger.

The capabilities that are now in place to switch power with microprocessor-like speeds, but with power capabilities that are a million-fold higher, portends a profound revolution in how power will be managed at all levels (*April 2000 DPR and January 2001 DPR*). Control technologies span all the major sectors discussed earlier—the automotive platform and thermal-to-motive conversions, the high-power sector and every aspect of thermal-to-electric, and the high-9s sector, centered not on power itself, but on power reliability.

Today, for example, there exists a new class of product which could be termed the “silicon power plant”—its architecture is easily recognized by most power engineers (*June 2000 DPR*). Hardware that takes power from multiple sources—from batteries, from the grid, from flywheels—and uses silicon power chips to blend them together to produce a seamless, perfect, down to the microsecond level supply of electrons through microprocessors and microprocessor-driven equipment. These are products of companies like Emerson (a firm whose roots date back to Thomas Edison), Power One, MGE, and Powerware.

In total, there are hundreds of companies involved in the business of making the interface devices, the conversion equipment for electrons that lie at the center of all progress—from low-grade fuel to high-grade power—that a modern society depends upon. Most such companies are under-recognized by analysts. All will play a critical role in advance power conversion effectiveness and efficiency, and many represent the most fecund opportunity for both investors and policy makers alike.

Two decades ago (the last period of pervasive talk of an “energy crisis”), talk of using silicon to switch megawatts in microseconds would be almost inconceivable. Semiconductor technology for power has merely lagged in its use for logic, in part because of the enormous material and engineering challenges in handling power flows millions of times greater than required for bits. Companies from the very large International Rectifier and Fairchild, to the smaller ones such as IXYS and Advanced Power, now routinely sell powerchips that are enabling radical new capabilities (and efficiencies) in everything from implantable pacemakers to refrigerators, from factory robots to grid substations (*April 2001 DPR*).

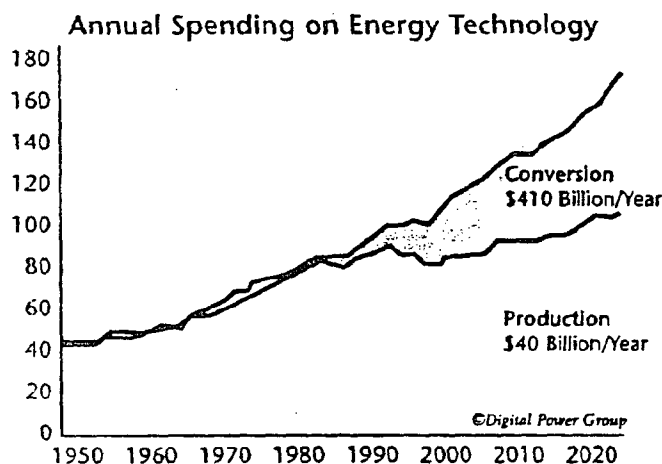
We should emphasize again that in all of these categories—from the automotive and the mass transit to the lighting sector to manufacturing—the transformation to powerchip-conversion technologies is driven, not primarily by their efficiencies, although that's an important metric, but by a desire to produce a better product. It is thus grounded in market imperatives, not political ones.

### Conclusion

The vision set forth by the National Energy Policy Development Group can easily be modified to reflect investment opportunities, instead of a debate over

whether production or conservation is more important (we'll need both). We still have the two curves that we examined in the beginning. One curve shows what energy growth would be if we don't improve efficiency while the other curve shows modest net growth in primary energy demand even as we do drive for more efficiency.

The bottom curve represents the production—businesses producing energy and more of it. The nation purchases about \$300 billion dollars per year of raw fuels of various kinds. To keep the raw fuel flow going, we spend some \$40 billion per year of capital in the technologies of energy extraction and primary production. These are vast markets, and they are growing, largely because of technological changes. The \$9 trillion economy, however, is almost entirely dependant on energy that has been converted first into more useful, reliable, pure and flexible forms of power, from the electrons in the wall socket to those that make it to a Pentium, from the spinning shaft in an auto engine to the one connected to a high-tech "pick-and-place" robotic assembly motor. For all this, nearly \$500 billion in capital is invested each year on power conversion technologies. Although we find both the production and conversion/conservation markets dramatically exciting in terms of the investment opportunities they offer, we find the conversion market particularly so.



by Peter Huber and Mark Mills.  
Co-authors, *The Huber Mills Digital Power Report*  
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# Energy-Efficient Technologies and Climate Change Policies Issues and Evidence

Adam B. Jaffe, Richard G. Newell, and Robert N. Stavins

Enhanced energy efficiency occupies a central role in evaluating the efficacy and cost of climate change policies. Ultimately, total greenhouse gas (GHG) emissions are the product of population, economic activity per capita, energy use per unit of economic activity, and the carbon intensity of energy used. Although GHG emissions can be limited by reducing economic activity, this option obviously has little appeal even to rich countries, let alone poor ones. As a result, much attention has been placed on the role that technological improvements can play in reducing carbon emissions and lowering the cost of those reductions. In addition, the influence of technological changes on the emission, concentration, and cost of reducing GHGs will tend to overwhelm other factors, especially in the long term. Therefore, understanding the process of technological change is of utmost importance. Nonetheless, the task of measuring, modeling, and ultimately influencing the path of technological development is fraught with complexity and uncertainty—as are the technologies themselves.

The carbon intensity of energy can be reduced by substituting renewable or nuclear sources for fossil fuels (and by substituting lower-carbon natural gas for coal) or by increasing energy efficiency. Recognizing this, recent policy proposals have included tax credits for residential and commercial purchasers of new energy-efficient homes and energy-efficient

equipment such as electric and natural gas heat pumps, natural gas water heaters, advanced central air conditioners, and fuel cells as well as an investment tax credit for industrial combined heat and power systems. Extensions have also been proposed for existing tax credits for fuel-efficient vehicles powered by electricity, fuel cells, and hybrid power. In addition to tax incentives, other proposals include direct spending on research, development, and deployment of energy-efficient products.

Public-private partnerships have been created or proposed with the aim of developing and deploying energy-efficient technologies for houses (Partnership for Advancing Technology in Housing); appliances (Energy Star program, Golden Carrot Super Efficient Refrigerator Program); schools (Energy Smart Schools); commercial buildings (Energy Star Buildings, Green Lights); vehicles (Partnership for a New Generation of Vehicles); and industrial processes (Motor Challenge, Climate-Wise). Energy efficiency standards for many products have been established and in some cases revised since 1988 (Table 1). Many of these policies target technologies that embody a mix of improved energy efficiency and decreased carbon intensity (such as credits for natural gas heat pumps).

Although the importance of energy efficiency in limiting GHG emissions incites little debate, intense debate ensues regarding its cost-effectiveness and

**Table 1. Effective Dates of Appliance Efficiency Standards, 1988–2001.**

Technology	1988	1990	1992	1993	1994	1995	2000	2001
Clothes dryers	X				X			
Clothes washers	X				X			
Dishwashers	X				X			
Refrigerators and freezers		X		X				X
Kitchen ranges and ovens		X						
Room air conditioners		X					X	
Direct heating equipment		X						
Fluorescent lamp ballasts		X						
Water heaters		X						
Pool heaters		X						
Central air conditioning and heat pumps			X					
Furnaces								
Central and small			X					
Mobile home		X						
Boilers			X					
Fluorescent lamps								
8 ft					X			
2 ft. – 8 ft						X		

Source: U.S. DOE EIA (see Suggested Reading)

about the government policies that should be pursued to enhance energy efficiency. At the risk of excessive simplification, we can characterize technologists as believing that there are plentiful opportunities for low-cost or even “negative-cost” improvements in energy efficiency and that realizing these opportunities will require active intervention in markets for energy-using equipment to help overcome barriers to the use of more efficient technologies. These interventions would guide choices that purchasers would presumably welcome and the fact, although they have difficulty identifying these choices on their own. This view implies that with the appropriate technology and market creation policies, significant GHG reduction can be achieved at very low cost.

In contrast, most economists acknowledge the existence of market barriers to the penetration of various technologies that enhance energy efficiency and that only some of these barriers represent real market failures that reduce economic efficiency. This view emphasizes that there are trade-offs between

economic efficiency and energy efficiency—it is possible to get more of the latter, but typically only at the cost of less of the former. The economic perspective suggests that GHG reduction is more costly than the technologists argue, and it puts relatively more emphasis on market-based GHG control policies such as carbon taxes or tradable carbon permit systems to encourage the least costly means of carbon efficiency (not necessarily energy efficiency) enhancement available to individual energy users.

In this chapter, we first examine what lies behind this dichotomy in perspectives. Ultimately, the veracity of different perspectives is an empirical question, and reliable empirical evidence on the issues identified above is surprisingly limited. We review the evidence that is available and find that although energy and technology markets certainly are not perfect (no markets are), the balance of evidence supports the view that there is not as much “free lunch” in energy efficiency as advocates would suggest. On the other hand, a case can be made for the existence of certain inefficiencies in energy technology mar-

kets, thus raising the possibility of some inexpensive GHG control through energy efficiency enhancement. We conclude with some reflections on the role of appropriate energy efficiency policy in climate change mitigation.

### Understanding the Energy Efficiency Gap

Analysts have pointed out for years that there is an "energy efficiency gap" between the most energy-efficient technologies available at some point in time and those that are actually in use. On this basis, debate has raged about the extent to which there are low-cost or no-cost options for reducing fossil energy use through improved energy efficiency. It turns out that technologists and economists have very different views of this gap and of whether and to what degree it is the result of market failures that might be amenable to policy intervention or simply market barriers that would be surmountable only at relatively high cost. This debate is illustrated in the 1995 report from the Intergovernmental Panel on Climate Change (IPCC, see Hourcade and others in Suggested Reading). One part of this report states that energy efficiency improvements on the order of 10–30% might be possible at little cost or even with net benefits (ignoring climate benefits), whereas another part highlights the fact that most economic models indicate a significant cost for stabilizing or cutting OECD emissions below 1990 levels.

The basic dimensions of this debate are the subject of many studies. To understand the basic elements of the debate, it is helpful to first distinguish between energy efficiency and economic efficiency (Figure 1). The vertical axis measures increased energy efficiency (as decreased energy use per unit of economic activity), and the horizontal axis measures increased economic efficiency (as decreased overall economic cost per unit of economic activity, taking into account energy and other opportunity costs of economic goods and services). Different points in the diagram represent the possible energy-using technologies available to the economy as indicated by their energy and economic efficiency.

Consider two air conditioners that are identical except that one has higher energy efficiency and, as a re-

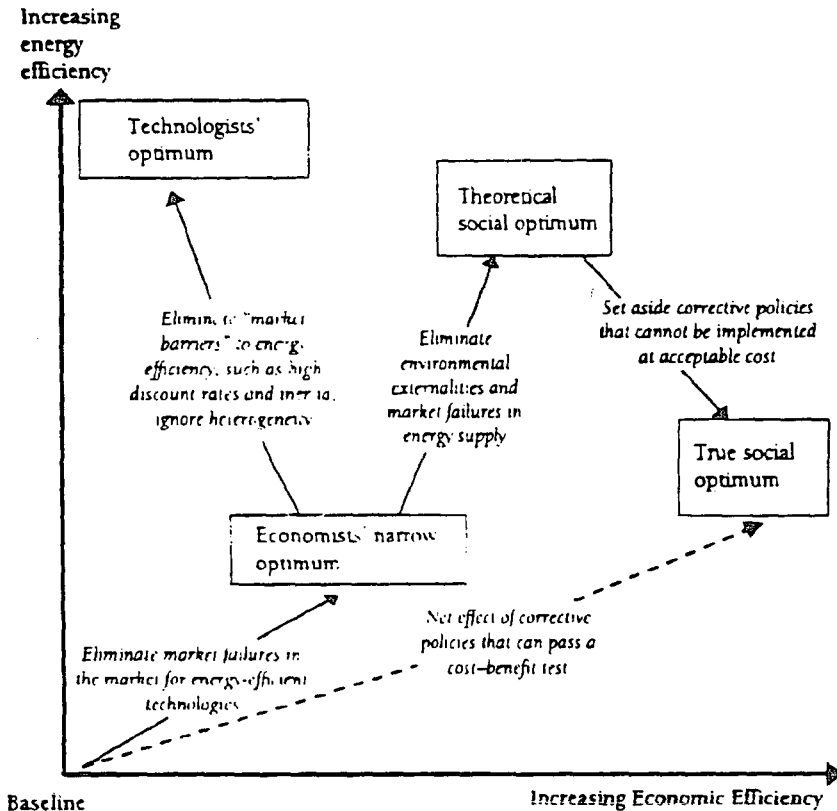
sult, is more costly to manufacture—high-efficiency units require more cooling coils, a larger evaporator, and a larger condenser as well as a research and development effort. Whether it makes sense for an individual consumer to invest in greater energy efficiency depends on balancing the value of energy that will be saved against the increased purchase price, which depends on the value of the additional materials and labor that were spent to manufacture the high-efficiency unit. As we discuss below, the value to society of saving energy should also include the value of reducing any associated environmental externalities, but again, it must be weighed against the costs.

Adoption of more energy-efficient technology is represented in Figure 1 as an upward movement. But not all such movements will also enhance economic efficiency. In some cases, it is possible to simultaneously increase energy efficiency and economic efficiency. This will be the case if market failures impede the most efficient allocation of society's energy, capital, and knowledge resources in ways that also reduce energy efficiency. These are examples of what economists and others refer to as "win-win" or "no regrets" measures.

In Figure 1, the economist's notion of a "narrow" optimum is where failures in the market for energy-efficient technologies have been corrected, increasing both economic efficiency and energy efficiency. This optimum is narrow in the sense that it focuses solely on energy technology markets and does not consider possible failures in energy supply markets (such as underpriced energy as a result of subsidies or regulated markets) or, more important, environmental externalities associated with energy use (such as global climate change). When analysts speak of no-cost climate policies based on energy efficiency enhancement, they often implicitly or explicitly assume the presence of market failures in energy efficiency.

Market failures in the choice of energy-efficient technologies could arise from various sources. Some of these are relatively uncontroversial, at least in principle, such as inadequate private-sector incentives for research and development and information shortages for purchasers regarding the benefits and costs of adopting technologies. Other potential mar-

Figure 1. Alternative Notions of the Energy Efficiency Gap.



ket failures are more controversial. To what extent is small-scale investment in energy efficiency limited because of financing constraints (a failure of capital markets to efficiently allocate financial resources)? To what extent are there market failures because landlords (rather than tenants) pay utility bills, and landlords are not adequately rewarded in rental markets for providing energy-efficient dwellings (so-called principal agent problems)? To what extent are businesses not pursuing potentially rewarding energy efficiency investments because managers are not adequately rewarded (and capital markets do not adequately punish such inefficiency)? We discuss some evidence on these questions below.

Eliminating broader market failures takes us to what we call the *theoretical social optimum* in Figure 1, which represents both increased economic efficiency and energy efficiency compared with the economists' narrow optimum. But not all market failures can be eliminated at acceptable costs. In cases where implementation costs outweigh the gains from corrective government intervention, it will be more efficient not to attempt to overcome particular market failures; this level is what we refer to as the *true social optimum*. Market failures have been eliminated, but only those whose elimination can pass a reasonable benefit-cost test. The result is the highest possible level of economic efficiency, but



a level of energy efficiency that is intermediate compared with what would be technologically possible.

In contrast to the economist's perspective, technologists have focused their interest on another notion of an optimum, which typically is based on a very simple engineering-economic model. The *technologists' optimal energy efficiency* is found by minimizing the total purchase and operating costs of an investment, where energy operating costs are discounted at a rate the analyst (not necessarily the purchaser) feels is appropriate.

The problem with this approach is that it does not accurately describe all the factors affecting investment decisions regarding energy efficiency. First, it typically does not account for changes over time in the savings that purchasers might enjoy from an extra investment in energy efficiency, which depends on trends and uncertainties in the prices of energy and conservation technologies. When making irreversible investments that can be delayed, the presence of this uncertainty can lead to an investment hurdle rate that is larger than the discount rate used by an analyst who ignores this uncertainty. The magnitude of this option-to-wait effect depends on project-specific factors, such as the degree of volatility in energy prices, the degree of uncertainty in the cost of the investment, and the rate of change in the prices of energy and conservation technologies over time. Under the conditions that characterize most energy conservation investments, this effect could raise the hurdle rate by up to 10 percentage points. The effect is magnified when energy and technology price uncertainty is increased, and when energy prices are rising and technology costs are falling more quickly. On the other hand, if there is no opportunity to wait, this effect can be ignored.

Second, the magnitude of important variables used in such engineering-economic analysis can vary considerably among purchasers—variables such as the purchaser's discount rate, the investment lifetime, the price of energy, the purchase price, and other costs. Heterogeneity in these and other factors leads to differences in the expected value that individual purchasers will attach to more energy-efficient or carbon-efficient products. As a result, only purchasers for whom it is especially valu-

able may purchase a product. For example, it may not make sense for someone who will only rarely use an air conditioner to spend significantly more purchasing an energy-efficient model—they simply may not have adequate opportunity to recoup their investment through energy savings. Analysis based on single estimates for the important factors listed above—unless they are all very conservative—will inevitably lead to an optimal level of energy efficiency that is too high for some portion of purchasers. The size of this group, and the magnitude of the resulting inefficiency should they be constrained to choose products that are not right for them, will of course depend on the extent of heterogeneity in the population and the assumptions made by the analyst.

Finally, evidence suggests that analysts have substantially overestimated the energy savings that higher efficiency levels will bring, partly because projections often are based on highly controlled studies that do not necessarily apply to actual savings realized in a particular situation. For example, studies have found that actual savings from utility-sponsored programs typically achieve 50–80% of predicted savings (see Sebold and Fox, as well as Hirst, in Suggested Reading). Metcalf and Hassett (see Suggested Reading) draw a similar conclusion based on an analysis of residential energy consumption data, in which they found that the actual internal rate of return to energy conservation investments in insulation was about 10%, which is substantially below typical engineering estimates that the returns were 50% or more.

This is not to say that profitable energy efficiency investments do not exist, rather, attempts to determine optimal or minimum energy efficiency levels for particular investments—as is done, for example, during the process of setting minimum energy efficiency standards—need to account for all costs, not overstate realizable benefits, and use appropriate discount rates.

An important implication of this perspective is that comparisons of an engineering ideal for a particular energy use with average practice for existing technology are inherently misleading, because the former does not incorporate all the real-world factors

influencing energy technology decisionmaking. The overall economic costs of switching to more energy-efficient technology constitute what can be thought of as a market barrier to their use in that individual consumers and producers will not have incentives to use more costly technologies unless policy measures (such as technology standards or carbon taxes) compel or induce behavioral changes. Unlike market failures, however, market barriers cannot be lowered in a win-win fashion.

Constraining consumers to purchase appliances with a higher level of efficiency based on simplistic analysis will in effect impose extra costs on consumers. The result is higher energy efficiency but decreased economic efficiency, because consumers are forced to bear costs that they had otherwise avoided. Although it is possible that this effect may be justified by some larger societal goal to address certain environmental externalities associated with energy consumption, the problem should be approached from that broader perspective rather than from the narrow perspective of constraining energy efficiency decisions. Taking this broader perspective leads to a more direct focus on the real problem—climate change associated with CO<sub>2</sub> emissions—rather than constraining available technology options.

### Technology Invention, Innovation, and Diffusion

To understand the potential for public policy to affect energy efficiency, we also need to understand the process through which technology evolves: invention, innovation, diffusion, and product use. Policies can affect each stage in specific and different ways. *Invention* involves the development of a new idea, process, or piece of equipment. This activity takes place inside the laboratory. The second stage is commercialization, or technology *innovation*, in which new processes or products are brought to market. The third stage is *diffusion*, the gradual adoption of new processes or products by firms and individuals who then decide how intensively to use new products or processes. From this perspective, we can now think of the energy efficiency gap discussed ear-

lier as a debate mainly about the gradual diffusion of energy-saving technologies that appear to be cost-effective.

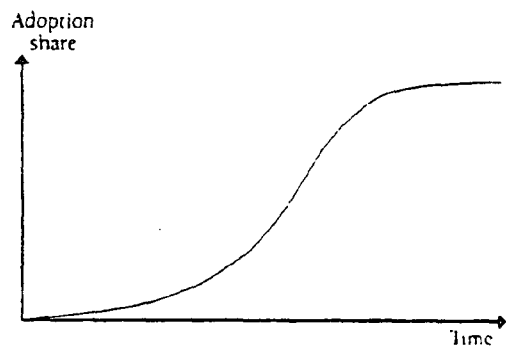
Tying this all together, we could, for example, think of a fundamentally new kind of automobile engine being invented. It might be an alternative to the internal combustion engine, such as a system that depends on fuel cells. The innovation step would be the work carried out by automobile manufacturers or others to commercialize this new engine, that is, bring it to market and offer it for sale. The diffusion process would be the purchase by firms and individuals of automobiles with this new engine. Finally, the degree of use of these new automobiles will be of great significance to demand for particular types of energy. The reason it is so important to distinguish carefully among these different conceptual steps—*invention*, *innovation*, *diffusion*, and *use*—is that public policies can be designed to affect various stages and will have very specific and differential effects. Both economic incentives and conventional regulations can be targeted to any of these stages, but with greatly varying likelihood of success.

### Diffusion

The S-shaped diffusion path has typically been used to describe the progress of new technologies making their way into the marketplace. Figure 2 portrays how a new technology is adopted at first gradually and then with increasing rapidity, until at some point, its saturation in the economy is reached. Some natural questions are what generates this typically observed gradual path of diffusion, how can public policy affect it, and how might public policy accelerate it?

The explanation for this typical path of diffusion that has most relevance for energy-conservation investments is related to differences in the characteristics of adopters and potential adopters. They include differences in the kind and vintage of their existing equipment, other elements of the cost structure (such as access to and cost of labor, material, and energy), and their access to technical information. Such heterogeneity leads to differences in the expected returns to adoption, and as a result, only potential adopters for whom it is especially profitable

**Figure 2. The Gradual S-Shaped Path of Technology Diffusion.**



will adopt at first. Over time, however, more and more will find it profitable as the cost of the technology falls, its quality improves, information about the technology becomes more widely available, and existing equipment stocks depreciate.

Jaffe and Stavins (see Suggested Reading) investigated technology diffusion in the context of energy efficiency by carrying out econometric analyses of the factors affecting the adoption of thermal insulation technologies in new residential construction in the United States between 1979 and 1988. They examined the dynamic effects of energy prices and technology adoption costs on average residential energy efficiency technologies (that is, average R-values) in new home construction. The effects of energy prices can be interpreted as suggesting what the likely effects of taxes on energy use would be, and the effects of changes in adoption costs can be interpreted as indicating what the effects of technology adoption subsidies would be. The researchers found that the response of mean energy efficiency to energy price changes is positive and significant, both statistically and economically.

Interestingly, they also found that equivalent percentage cost subsidies would have been about three times as effective as taxes in encouraging adoption, although standard financial analysis would suggest that they ought to be about equal in percentage terms. However, this finding confirms the conven-

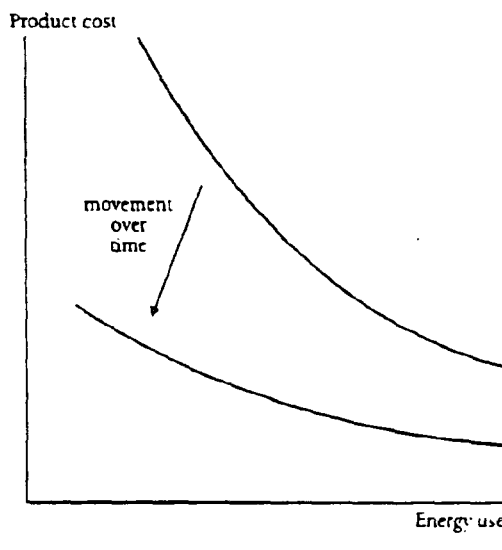
tional wisdom that technology adoption decisions are much more sensitive to up-front cost considerations than to longer-term operating expenses. In a study of residential conservation investment tax credits, Hassett and Metcalf (see Suggested Reading) also found that tax credits or deductions are many times more effective than "equivalent" changes in energy prices—about eight times as effective in their study. They speculate that one reason for this difference is that energy price movements may be perceived as temporary. One downside to efficiency subsidies, however, is that they do not provide incentives to reduce use, as energy price increases do. In addition, technology subsidies and tax credits can require large public expenditures per unit of effect, because consumers who would have purchased the product even in the absence of the subsidy will still receive it. In a time of fiscal constraints on public spending, this speculation raises questions about the feasibility of subsidies that would be sizable enough to have the desired effect.

Jaffe and Stavins also examined the effects of more conventional command-and-control regulations on technology diffusion, in the form of state building codes. However, they found no discernable effect. It is possible, of course, that stricter codes (that were more often binding relative to typical practice) might have an effect. However, proponents of conventional regulatory approaches should remember that although energy taxes, for example, will always have some effect, typical command-and-control approaches can have little actual effect if they are set below existing standards of practice.

#### **Innovation and Invention**

Now we can move back in the process of technological change from diffusion to innovation. In the area of energy efficiency, it is helpful to think of the innovation process as affecting improvements in the characteristics of products. In Figure 3, we represent this process as the shifting inward over time of a curve that represents the trade-offs between different product characteristics for the range of products available on the market. On one axis is the cost of the product, and on the other axis is the energy flow associated with a product—that is, its energy inten-

**Figure 3. Innovation in Product Characteristics.**



sity. The downward slope of the curves indicates the trade-off between equipment cost and energy efficiency. Innovation means an inward shift of the curve—greater energy efficiency at the same cost, or lower cost for a given energy efficiency.

Using data from 1960–90, Newell and others (see Suggested Reading) statistically estimated these characteristic transformation curves for a number of energy-consuming durables. By constructing a series of simulations, we can examine the effects of energy price changes and efficiency standards on average efficiency of the menu of products over time. As shown in Figure 4, which illustrates the findings for room air conditioners, a substantial amount of the improvement is what we would describe as autonomous (that is, associated with the passage of time), however, significant amounts are attributable to changes in energy prices and changes in energy efficiency standards. Energy price changes induced both the commercialization of new models and the elimination of old models. Regulation, however, works largely through dropping energy-inefficient models, because that is the intended effect of the energy efficiency standards (in other words, models

below a certain energy efficiency simply may not be offered for sale).

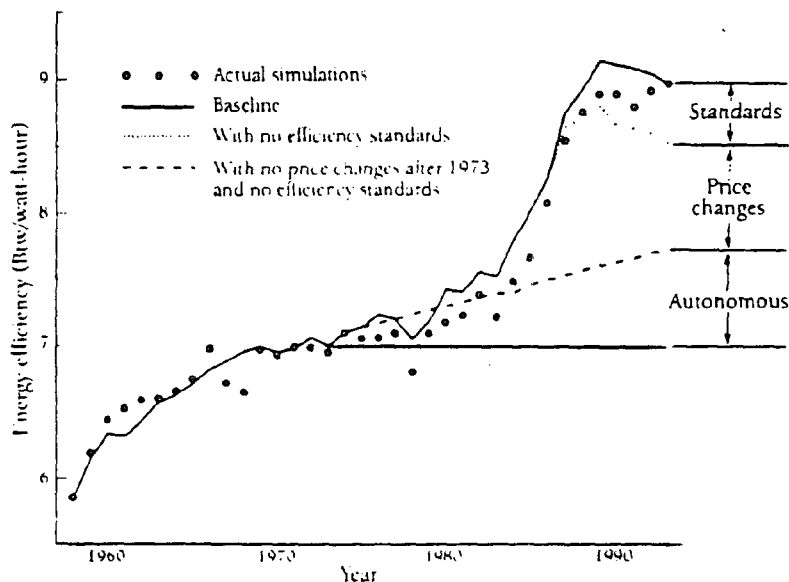
Invention is even farther back in the process of technological change. Popp (see Suggested Reading) analyzed U.S. patent application data from 19 energy-related technology groups from 1970 to 1994 and found that the rate of energy-related patent applications was significantly and positively associated with the price of energy.

All of these studies suggest that the response of innovation to energy price changes can be surprisingly swift, typically less than five years for much of the response in terms of patenting activity and introduction of new model offerings. Substantial diffusion can take significantly longer, depending on the rate of retirement of previously installed equipment. The longevity of much energy-using equipment reinforces the importance of taking a long-term view toward energy efficiency improvements—on the order of decades (see the box on page 180).

### **Energy, Technology, and Market Reform Policies**

Aside from market influences, public policies also can affect the diffusion of more energy-efficient technologies. Policies that raise the cost of energy will induce the diffusion of extant energy-efficient technology as well as the development of new technology. Are additional nonprice policies needed to promote energy-efficient, climate-friendly technology advances and investment? Here, the debate mirrors that over the energy efficiency gap discussed above. Proponents of such policies argue that economic incentives are not adequate to change behavior. They advocate public education and demonstration programs, subsidies for the development and introduction of new technologies, institutional reforms, such as changes in building codes and utility regulations, and technology mandates, such as fuel economy standards for automobiles and the use of renewable energy sources for power generation.

No one doubts that such approaches might eventually increase energy efficiency and reduce GHG emissions. At issue is the cost-effectiveness of such programs. Advocates of technology mandates often

**Figure 4. Historical Simulations of Energy Efficiency: Room Air Conditioners.**

argue that the subsequent costs are negligible because the realized energy cost savings more than offset the initial investment costs. But as we noted earlier, this view ignores several factors that impinge on technology choices. Most economic analyses recognize that energy use suffers from inefficiencies but remain skeptical that large no-regret gains exist. They also acknowledge a role for government when consumers have inadequate access to information and if existing regulatory institutions are poorly designed. This role can include subsidies to basic research and development to compensate for an imperfect patent system, reform of energy sector regulation and reduction of subsidies that encourage uneconomic energy use, and provision of information about new technological opportunities.

### Conclusions and Implications for Climate Policy

We have presented an overview of how to address the question of the appropriate role for government

in energy conservation. In doing so, it is essential to decide first on the objective of government policy in this area: economic efficiency or energy efficiency. We find that market signals are effective for advancing the diffusion process, whereas minimum standards may not be unless they mandate certain technologies. We also find that market signals can have effects on the direction of innovation and invention, promoting increased energy efficiency when energy prices are rising. The bottom line is that technological studies that demonstrate the existence on the laboratory shelf of particular energy-efficient technologies are a useful first step. But such studies are not sufficient to address important policy questions. It is necessary to examine whether and how specific policies will affect the processes of invention, innovation, diffusion, and use intensity of products—and how much they will cost.

Although continued research is needed to pin down the precise magnitudes, it seems clear that economic motivations—operating directly through higher energy prices and indirectly through falling

### Technology Diffusion and the Rate of Capital Stock Turnover

Technology diffusion is closely related to the concept of capital stock turnover, which describes the rate at which old equipment is replaced and augmented by new. New equipment can be purchased either to replace worn out and obsolete units, or as a first-time purchase. A primary driver of replacement purchases for durable energy-using goods is the product's useful lifetime. The rate of economic growth is also important, especially for first-time purchases of durable goods; the rate of home construction is particularly relevant for residential equipment.

The typical lifetimes for a range of energy-using assets are given here, illustrating that the appropriate time frame for thinking about the diffusion of many energy-intensive goods is on the order of decades.

Type of asset	Typical useful life (years)
Household appliances	8-12
Automobiles	10-20
Industrial equipment/machinery	10-20
Aircraft	30-40
Electricity generators	50-70
Commercial/industrial buildings	40-80
Residential buildings	60-100

costs of technological alternatives due to innovation—are effective in promoting the expanded market penetration and use of more energy-efficient, GHG-reducing technologies. Some policies that support and enhance the effects of market signals, such as information provision and support for basic research and development, can be useful. In contrast, there are many more questions about the efficacy of conventional regulatory approaches, at least in developed market economies, where such policies are more likely to produce limited behavior changes or to incur excessive costs. There are good reasons to doubt the existence of a vast pool of cheap energy-reducing opportunities that offer a free lunch in reducing GHGs.

Although efficiency subsidies and tax credits may provide relatively strong incentives for the marginal

purchaser, they also can require large overall public expenditure per unit of effect, because consumers who would have purchased the product even in the absence of the subsidy will still receive it. In a time of fiscal constraints on public spending, the large expenditure required raises questions about the feasibility of subsidies that would be sizable enough to have the desired effect. Energy efficiency improvements can certainly be relevant for climate policy; however, it is also important to remember that primary fuels differ substantially in terms of their GHG emissions per unit of energy consumed. Policies focused on energy use rather than GHG emissions run the risk of orienting incentives and efforts in a direction that is not cost-effective. In particular, policies focused on energy efficiency ignore the other important way in which GHG emissions can be reduced: namely, by reducing the carbon content of energy. Economists generally prefer to focus policy instruments directly at the source of a market failure. Policies focused on carbon emissions—such as tradable carbon permits or carbon fees—will provide incentives for conserving certain fuels in proportion to their GHG content. These policies would raise the price of oil by a higher percentage than the price of natural gas, for instance, thereby targeting incentives for energy efficiency improvements to oil-fired furnaces more than to gas furnaces. In addition, policies focused on GHGs rather than energy per se would also provide incentives for the purchase of gas-fired rather than oil-fired furnaces.

There may be market failures other than the environmental externality of global climate change associated with energy efficiency investments. If the magnitude of these nonenvironmental market failures is large enough and the cost of correcting them small enough to warrant policy intervention, then an argument can be made for attacking these other market failures directly. Any attendant reduction in GHGs can then be viewed as a bonus—a no regrets policy. In fact, this argument is often used by proponents of energy efficiency policy in the context of climate change policy discussions. Therefore, it becomes crucial to investigate the magnitude of these other market failures—in particular, cases—and to assess which policies (if any) would be most cost-effective.

fective in addressing them. Policies that create clear incentives for changes in energy use and technology must be emphasized by raising the price of GHG emissions and targeting the institutional and other market failures that represent opportunities for cost-effective improvements in market performance.

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POWERING THE NEW ECONOMY

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# POWERING THE NEW ECONOMY

Energy Accomplishments, Investments,  
Challenges

September 27, 2000  
United States Department of Energy  
Washington, DC 20585

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DOE019-0012



In 1999, the Department of Energy and the White House Millennium Council launched a young artists exhibit to ring in the new century and celebrate the wonder of energy technology in the past, present and future. The young artists used the theme "honor the past, imagine the future" to depict their vision of energy technology and what it means to our lives. On the cover is "Vision of Energy" by Desiree Escobedo of Hawthorne Elementary School in San Antonio, Texas. Desiree's teacher is Diane Sosa. An online exhibit featuring 100 illustrations chosen from among 4,000 submissions can be viewed at [www.energy.gov/kidz/zone/kidztoc.html](http://www.energy.gov/kidz/zone/kidztoc.html).

This document is available on the web at [www.policy.energy.gov](http://www.policy.energy.gov).

# POWERING THE NEW ECONOMY

Energy Accomplishments, Investments,  
Challenges

September 27, 2000  
United States Department of Energy  
Washington, DC 20585

## A Message from the Secretary

This report—Powering the New Economy—updates and expands on the 1998 Comprehensive National Energy Strategy. The report highlights the Administration's energy accomplishments and investments, and examines the energy challenges facing the nation as we enter the 21<sup>st</sup> century. The economic policies of the Clinton/Gore Administration have helped to clearly and cleanly move us from the Industrial Age to the Information Age—giving the nation more jobs at higher wages, low unemployment, real increases in personal and corporate income, low inflation, more expendable income, and greater consumer choices.

At the same time, however, this economic success—and the energy requirements of the Information Age—has dramatically increased demand for energy supply and energy reliability, straining the nation's energy infrastructure.

How do we meet the challenge posed by economic growth and the increased energy demand it brings? We need, for example:

- Additional incentives to ensure we have adequate supplies of oil and gas to meet our near- to mid-term power and fuel needs;
- Expanded policies, programs and investments in energy efficiency, renewable energy, and clean fuels;
- Federal electricity restructuring legislation;
- Added investments in policies and technologies to enable the interconnected gas/electricity grids—the intergrid—to operate at higher levels of efficiency and reliability;
- Increased international cooperation and development of clean energy resources; and
- Additional investments in clean, distributed power technologies, and ways to eliminate the barriers to their use.

All of this work needs to be done in the context of a continuously improved understanding of how energy demands of the 21<sup>st</sup> century challenge the energy infrastructures of the 20<sup>th</sup> century, of how the New Economy is affecting the competition for the capital needed to improve and upgrade our energy infrastructures, and of how the government's incentive structure and statutory frameworks should evolve to meet emerging energy needs.

We are proud of our energy accomplishments and look forward to working with industry, consumers, workers, environmentalists, the Congress, and state and local governments to meet the energy challenges of the new century.

# POWERING THE NEW ECONOMY

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# POWERING THE NEW ECONOMY

## Energy Accomplishments, Investments, Challenges

### EXECUTIVE SUMMARY

A strategically focused national energy policy, integrated with economic, environmental, security, and technology policies, is critical to the well-being of Americans, our economy, and our way of life. To fuel the unprecedented economic growth seen during the Clinton/Gore Administration, the nation's energy resources have expanded to meet ever-growing demand. At the same time, we have met the environmental imperatives associated with increased energy production and use. This progress has been achieved through a sustained, bipartisan commitment to core principles:

- Reliance on competitive markets as the "first principle" of energy policy,
- Support for energy science and technology,
- Promotion of government/industry/consumer partnerships,
- Use of targeted incentives and regulations, and
- Facilitation of international cooperation.

Within this framework, the Administration has achieved many significant energy accomplishments and advanced a number of energy investments to:

- Promote energy efficient vehicles to reduce our reliance on imported oil;
- Promote efficient energy use in homes and buildings to reduce the nation's energy bills;
- Increase the competitiveness of U.S. industry by reducing its energy costs;
- Lower the costs of domestic oil and gas exploration through technology advances;
- Increase production and develop new sources of oil and gas supply through technology advances;
- Promote changes in government policies to increase oil and gas supply and encourage greater public/private partnerships to develop oil and gas resources;
- Encourage international cooperation on oil and gas issues and investments in oil and gas infrastructures and production at home and abroad;
- Increase the size and security of our "national oil insurance policy," the Strategic Petroleum Reserve;
- Improve the environmental performance of coal;
- Develop clean and innovative uses for coal to take advantage of its low cost and abundant supply;
- Develop next-generation options for nuclear power plants to promote safer, more affordable, and more environmentally-benign nuclear power for the future;
- Safely extend the life of existing nuclear power plants to meet current and growing electricity demand;
- Develop nuclear fusion as a clean, potentially limitless power source for the future;
- Safely dispose of commercial nuclear spent fuel to protect the public health and the environment in a responsible, safe, scientifically-sound manner;

- ☐ Economically generate more power from renewable energy sources to provide clean, abundant fuel for the future and reduce our reliance on imported and diminishing fossil fuel resources; and
- ☐ Cleanly power the nation's vehicles with renewable energy to improve the environment and increase our national energy security.

The economic success of the last several years, including the rapid growth of the Digital Economy, has also strained energy production and infrastructures, as demand for energy products and services has grown. This presents several preeminent energy challenges for the first decade of the 21<sup>st</sup> century, challenges largely identified in the Administration's Comprehensive National Energy Strategy, published in the spring of 1998.

### Challenge #1: Enhancing America's Energy Security

Our transportation sector is 97 percent reliant on liquid fuels, and economic growth has left world oil capacity only a few percentage points greater than world oil demand. Our national response includes both supply initiatives and demand-side technology development to lower oil requirements and increase production. To meet this challenge the Administration is developing ways to:

- ☐ Reduce overall demand for oil in transportation, industry, buildings and power generation, especially through increased efficiency in use;
- ☐ Increase domestic oil production through tax incentives and technology investments;
- ☐ Promote international investment in developing the world's oil resources;
- ☐ Reduce volatility in world oil markets through international cooperation and better oil market data;
- ☐ Meet the need for increased refining and production capacity; and
- ☐ Protect consumers against price spikes and possible shortages by exploring options for continued filling of the Strategic Petroleum Reserve, through a new Home Heating Oil Reserve, use of Low Income Home Energy Assistance Program funds, and loans to small businesses.

### Challenge #2: Increasing the Competitiveness and Reliability of U.S. Energy Systems

Electricity is increasingly the energy form of choice for myriad applications at home and at work. At the same time, the network of generation, transmission, and distribution facilities of electricity and the natural gas transportation system we use to fuel it, are strained by the increased demand for electricity and electricity services.

In addition, the digital New Economy is placing extreme demands on the infrastructure for increased power reliability and power quality. Increasingly the electricity, natural gas, and telecommunications infrastructures are linked, promoting opportunities for increased consumer services, at the same time these linkages add complexities to the system and the rules needed to govern it. To address these growing challenges, the Administration has:

- ☐ Proposed comprehensive federal electricity restructuring legislation;
- ☐ Proposed a significant energy infrastructure initiative to meet the technology needs of the

21<sup>st</sup> century electricity/natural gas intergrid:

- ☐ Hosted eleven regional electricity reliability summits to find ways to improve the reliability of our electric power supply;
- ☐ Created an Office of Energy Emergencies to anticipate, mitigate, and respond to the range of energy emergencies needs including electricity, natural gas and heating oil problems;
- ☐ Established an Interagency Task Force on Natural Gas to review and implement certain recommendations of the National Petroleum Council on natural gas supply and infrastructure needs;
- ☐ Proposed ways to eliminate key barriers to distributed generation, paving the way for the entry of these new technologies and systems into electricity markets.

### Challenge #3: Mitigating the Environmental Impacts of Energy Production and Use

Americans place high value on environmental stewardship, and expanding energy use challenges our ability to protect the environment. The Administration has consistently advanced environmental goals through technology development, incentives, and regulation. Many of the accomplishments and investments discussed earlier, such as those dealing with end-use efficiency in the transportation, industrial, and building sectors, directly provide environmental benefits. Other specific actions aimed at 21<sup>st</sup>-century environmental challenges include:

- ☐ Mitigating global climate change through domestic and international cooperation;
- ☐ Addressing global climate change through research and development;
- ☐ Promoting environmental protection through tax incentives and investments in energy efficiency, renewable energy;
- ☐ Promoting cleaner fuels;
- ☐ Supporting a vigorous program for solar, wind, and other renewable energy sources focused on R&D, pilot projects, and other initiatives;
- ☐ Advancing clean energy through a new International Clean Energy Initiative;
- ☐ Creating DOE's 15<sup>th</sup> national laboratory, the National Energy Technology Laboratory, to focus on technologies to meet the Nation's energy needs for fossil fuel use in environmentally sound ways;
- ☐ Enhancing carbon capture and sequestration programs.

### Challenge #4: Providing Diverse Energy Technologies for the Future

Today's technology investments are essential to meet tomorrow's energy needs. The pace of energy research and development needs to increase in line with the Administration's proposals submitted to the Congress over the last several years. The cumulative effect of lower appropriations levels will be felt in the years ahead. The Department of Energy has developed a comprehensive energy R&D portfolio analysis process, working with the private sector and the academic and scientific communities, to ensure that:

- ☐ Our energy investments reflect the Administration's strategic energy goals;
- ☐ DOE's energy research and development portfolio addresses emerging energy challenges;

and

- DOE's energy R&D budget requests reflect energy priorities and the investment levels necessary to meet our future energy needs.

## Conclusion

The economic policies of this Administration have helped ensure the nation's successful transition from the 20<sup>th</sup> to the 21<sup>st</sup> century—from the *Industrial to the Information Age*. We also have significant challenges ahead of us and look forward to working with industry, consumers, workers, environmentalists, the Congress, and state and local governments to meet the energy challenges of the new century.



**POWERING THE NEW ECONOMY**  
Energy Accomplishments, Investments, Challenges

## Prosperity and Security are Energy-Dependent

A strategically focused national energy policy, integrated with economic, environmental, security and technology policies, is central to the well-being of Americans, our economy, and our way of life. The Department of Energy has the lead responsibility for developing Administration energy policy and implementing the associated programs, but many other agencies have significant stakes in and play important roles in the process and the outcomes. This brief review of those outcomes is focused principally on Department of Energy policies and programs.

Balancing energy issues at the national policy level requires a continued recognition of the vital role of market forces; an understanding of energy's international strategic importance; and support for a linked set of common-good incentives, regulations, and research investments that must continuously evolve to meet current and future needs—to produce more energy, to use it more efficiently, to reduce its impacts on the environment, and to find additional and alternative sources of energy supplies.

Federal energy policies and research investments have paid big dividends over the last 20 years. We have the largest strategic petroleum stockpile in the world. Policy changes and technological advances have spurred oil and gas production on the Outer Continental Shelf and extended production on Alaska's North Slope. Technology investments have enabled oil and gas producers to dramatically reduce the size of the environmental footprint left by energy production to one tenth the size it was twenty years ago. We have also dramatically diversified our suppliers of imported oil to ensure that we are not overly reliant on one region of the world for our oil supplies.

In addition, the rapid development of energy efficient technologies and practices and the restructuring of our industrial sector have enabled the United States to decrease its energy use per dollar of Gross Domestic Product by around 40 percent since 1973, representing an annual energy savings of over \$400 billion. The average fuel efficiency of automobiles has gone from 13.4 miles per gallon in the 1970s to 21.4 today, saving over two million barrels of oil a day. New combined-cycle gas turbines for electric power generation can now achieve 60 percent efficiency, compared to less than 35 percent for most existing power plants. Nuclear power plants reached an unprecedented 85 percent capacity factor in 1999. In 1998-99, U.S. wind capacity grew from 1.5 to 2.5 gigawatts and increased worldwide by 4 gigawatts. Wind energy is providing cost-competitive power generation today; other renewables show tremendous promise for cost-competitive power generation in the relatively near term. Many urban and regional environmental and public health impacts of energy use have been mitigated through the technologies and policies that have addressed air emissions.

This progress has been achieved through a sustained, bipartisan commitment to core energy policy principles that spans many Administrations. These core principles reflect and represent the expertise and input of countless government, industry and public interest organizations. Despite this track record however, the potential for a more competitive and productive U.S. energy sector, and a more energy efficient U.S. economy remains enormous—and, in order to meet the ever-growing demand for energy while protecting the environment and improving our quality of life, achieving it remains essential.

The Clinton-Gore Administration has significantly advanced the nation's energy agenda during the 1990s. Despite some significant limitations imposed by appropriations levels and opportunities missed through legislative inaction, the Administration has developed a robust set of policies, investments, and proposals that provide a solid foundation for meeting the nation's energy challenges of the 21<sup>st</sup> century.

## The Results: A Strong Economy, Cleaner Environment, More Efficient Energy Use

Energy is a significant driver of economic progress and environmental challenges, inevitably tying measures of energy policy success to advances in those areas. The American public embraces low inflation, a balanced budget, good jobs at good wages, and decreases in air and water pollution, for example, as qualitative measures of economic and environmental success—and indeed they are. But these key indicators serve as important measures of successful energy policies as well.

Also, the perceived success of an energy policy often depends on where you sit—whether you are from an energy producing or energy consuming region . . . reside in a relatively smog-free environment or in a Clean Air Act non-attainment area . . . drive an SUV or take public transportation to work . . . run an energy intensive business or have a dotcom enterprise . . . work in a local services industry or compete directly in the global marketplace. These tensions require a significant balancing of stakeholder equities, public and private interests and outcomes, and add to the complexity of developing and implementing sound energy policy.

The Administration's careful balancing of these interests throughout the 1990s has enabled energy supplies to keep pace with demand and has given us these results for the economy, for the environment, for energy efficiency, and for consumers:

- From 1990 to 1999, the economy has grown by 32 percent after inflation and real disposable income has grown by 28 percent.
- Electricity generation has increased 22 percent, while sulfur dioxide (SO<sub>2</sub>) emissions have actually declined by more than 15 percent, and nitrogen oxide (NO<sub>x</sub>) emissions have increased by only a few percent (Figure 1—Economic Growth and Emissions from Electricity Generation):
- Total energy consumption increased 14 percent from 81.2 quadrillion btus to 92.7 quadrillion btus while the economy's energy intensity has declined by 12 percent since 1992. (Figure 2— Energy Consumption per Dollar of GDP.)

To fuel the economic growth of the last decade, domestic production and generation of natural gas, coal, nuclear, renewables and hydroelectric power has increased. Oil production is the only exception, although domestic production declines are expected to flatten out by 2005, ending many decades of decline. Also, over the last several years, the rate of decline in domestic oil production has been reduced significantly.

In addition, world oil production has increased substantially over the last decade and we have diversified our sources of oil imports to the point where we are currently supplied by over forty oil-producing nations (including the U.S.) The Western Hemisphere now supplies 27 percent of our oil in contrast to 14 percent in 1980. If we include domestic oil production, three quarters of our oil is supplied from the Americas.

There has been substantial volatility in oil, gasoline, natural gas and electricity prices in the last eight months but over the years, while the demand for energy has grown, real energy prices have come down, even when price spikes are taken into account. In real terms, residential prices for electricity have declined by 25 percent from their peak in 1983. In constant dollars, Americans paid close to 50 percent less for a gallon of gasoline in 1999 than they did in 1980. Even with price increases in 2000, consumers are still paying about 40 percent less for gasoline in inflation-adjusted terms than in 1980. Oil and natural gas prices have spiked sharply this year but in inflation-adjusted dollars still remain below peak prices of the 1970s and 1980s. And today's lower energy costs in real dollars are being paid at the same time the earning power of Americans has increased sharply (Figure 3 —Real Energy Cost and Income Trends.)

These are substantive and tangible results. While recent price volatility imposes hardships on many citizens and businesses and thus presents an important challenge, Administration policies overall have helped generate unprecedented economic growth . . . met increased demand for energy from all sources . . . diversified our sources of energy supply . . . decreased energy intensity . . . and, even with increased energy use, held steady or significantly reduced the release of major air pollutants.

## The Administration's Energy Policy Framework

The broad energy policy framework that has sustained this success over the last decade, and has been previously put forward in the Clinton-Gore Administration's "Sustainable Energy Strategy" (July 1995) and "Comprehensive National Energy Strategy" (CNES) (April 1998), is based on a few core principles that have been embraced by several Administrations:

- Reliance on, and stimulation of, competitive markets as the “first principle” of energy policy;
- Support for science and technology as the enablers for energy supply, efficient end use, environmental protection, and meeting future needs;
- Promotion of government/industry/consumer partnerships to accelerate demonstration and deployment of advanced technologies;
- Introduction of targeted incentives and regulations to advance the common good; and
- Facilitation of international cooperation to address security, environmental, and technology deployment goals.

Elaboration on several of these principles is found in two scientific reviews of energy-related technologies conducted by the President’s Committee of Advisors on Science and Technology: *Federal Energy Research and Development for the Challenges of the 21<sup>st</sup> Century* in 1997, and more recently, *Powerful Partnerships* in 1999. These two documents analyze the broad range of Federal energy technology investments and make recommendations on how to best utilize these technologies both domestically and internationally.

Finally, the Department of Energy, over the last several years, has engaged in numerous roadmapping exercises with industry, government and academic stakeholders, and has carried out two extensive energy portfolio analysis exercises, in which it charted its energy R&D investments against the high level strategic goals of the Comprehensive National Energy Strategy. This process has identified specific energy challenges and opportunities ripe for new strategic investments in energy technologies.

## Today’s Accomplishments, Tomorrow’s Investments

The principles outlined in the CNES and other strategic energy analyses, have been translated into specific actions taken by the Administration to address the full range of energy resources needed to power our economy. Before discussing these actions, the Administration’s energy accomplishments and investments must first be viewed in the context of overall energy supply and demand.

The nation’s energy options currently include oil, gas, coal, hydroelectric and non-hydroelectric renewables, fission, and energy efficiency (Figure 4—Energy Sources, 1999.)

The Energy Information Administration (EIA) reference projection for 2020 anticipates a 25 percent increase in total energy consumption. This implies increased use of all fossil fuels, with an especially rapid increase of 1.8 percent per year in natural gas use, even as renewables increase their contribution. It should be noted that the EIA reference projection assumes no significant new policy initiatives or technology breakthroughs in the intervening period.

Currently, energy demand in the United States is dominated by three key areas: transportation (27 percent); residential and commercial (35 percent); and industrial (38 percent) (Figure 5—Energy Sector Demand, 1999.) This demand is met by oil (40 percent); gas (23 percent); coal (22 percent); nuclear (8 percent); and hydro and non-hydro renewables (7 percent.)

The energy challenges we face today can be quite different for different sectors. For example, the transportation sector today is almost totally dependent on oil, while electricity generation draws significantly upon coal, natural gas, nuclear, and hydropower. Non-hydroelectric renewable resources will ultimately make significant contributions to both sectors.

The diverse and abundant energy sources reflect both the extent of the American natural resource base and the success of American energy policy. The projections, tied to expectations of continued robust economic growth as experienced in recent years, highlight the importance of the foundation laid by the Clinton/Gore energy policies, programs, regulations and initiatives. The following examples—while not a complete

list—illustrate the Administration's energy accomplishments and investments. Many of these investments have already produced results, others that have met major milestones, and still others that offer the potential for significant breakthroughs in the decades ahead. The Appendix provides a more detailed description of these and other accomplishments and investments.

## Energy Efficiency


Eighty-five percent of our energy comes from the combustion of fossil fuels, the largest contributors of greenhouse gases, sulfur oxide (SO<sub>x</sub>), NO<sub>x</sub> and particulate matter emissions. The more efficient use of energy in general, and of fossil fuels specifically, has provided us with substantial energy savings and environmental improvement over the last two decades, and will remain the single most important, near-term means of reducing energy costs, preserving our domestic energy resources, protecting the environment, and making U.S. technology competitive.


In the last two decades, the United States has increased industrial output by 50 percent, but total energy use by the industrial sector has increased by only 13 percent (from 1980-1999) over the same time period. From 1979 to 1995, the energy required for each square foot of commercial buildings was reduced by 20 percent. Over twenty years, efficiency improvements supported by Department of Energy funding in five building technologies (design software, electronic fluorescent lamp ballasts, low emissivity windows, advanced oil burners, and efficient refrigerator compressors) have resulted in present value savings of nearly \$33 billion and have kept carbon emissions 60 million metric tons lower than they would have been without these improvements.

To build on these advances and realize even greater efficiency gains, the Administration has developed and advanced policies to enhance and increase energy efficiency, and has made significant new investments in the technologies needed to make the most efficient use of our fossil energy resources.


### → Accomplishments and Investments in Energy Efficiency


... to promote energy efficient vehicles to reduce our reliance on imported oil

 **Partnership for New Generation Vehicles (PNGV):** The PNGV program is designed to develop an 80 miles per gallon (mpg) automobile by 2004, while maintaining or improving safety, performance, emissions, durability, comfort and affordability. Advances in light weight materials, aerodynamic resistance and hybrid propulsion are expected to help achieve the goal. The program is on-track and has met its year 2000 milestones, demonstrating the technical feasibility of 80 mpg family sedans. This year, Ford, General Motors, and Daimler-Chrysler displayed their concept vehicles which achieved 70-80 mpg. Numerous advanced technologies developed or enhanced through the PNGV program are already contributing to enhanced efficiency of vehicles in current production.  
([www.uscar.org/pngv/futurecongress2.htm](http://www.uscar.org/pngv/futurecongress2.htm))


 **Lightweight Materials for Automobiles:** DOE's efforts to develop lightweight materials for manufacturing auto parts have saved more than six billion gallons of motor fuel and reduced carbon emissions by over 15 million metric tons. Fiber reinforced composite materials, developed by DOE in concert with industry, will be used in the truck bed for the


Chevy Silverado in 2001. The Ford Prodigy unveiled at the 2000 Detroit Auto Show reduced the vehicle weight by 30 percent using lightweight materials. ([www.ms.ornl.gov/ott/MCMaterials.htm](http://www.ms.ornl.gov/ott/MCMaterials.htm))

 **High Efficiency Trucks:** DOE, in cooperation with industry partners, has developed diesel engine technologies that are both cleaner and more energy efficient, saving approximately 16 billion gallons of motor fuel and reducing carbon emissions by about 38 million metric tons. DOE's goal is to increase big diesel engine efficiency by 50 percent and reduce emissions by 50 percent more than current mandates. NOx catalysts have produced a greater than 50 percent reduction of NOx while plasma-assisted devices have exceeded 70 percent reductions on a small scale. Recent developments include multi-cylinder heavy-duty diesel engines that run interchangeably on M85 and diesel fuel, and models of NOx production during diesel combustion that are helping manufacturers improve the design of diesel engines. Improvements in engine control systems (using advanced sensors) have been a big factor in improving fuel economy. Turbocharger systems have also contributed to the fuel economy gains. ([www.ott.doe.gov](http://www.ott.doe.gov))


 **Clean Cities Program.** This voluntary, locally-based government/industry partnership is designed to accelerate the deployment of alternatively-fueled vehicles in both Federal and local fleets, including natural gas vehicles, with a goal of reducing the use of gasoline. Between 1993 and 1998, 139,000 alternatively-fueled vehicles were deployed, reducing gasoline and diesel fuel use by an estimated 380 million gallons through 1998 and reducing carbon emissions by an estimated 400,000 metric tons. Since then additional vehicles have been deployed. ([www.cities.doe.gov](http://www.cities.doe.gov))


... to meet dramatically increased electricity demand in low-cost, environmentally sound ways

 **Utility-Scale Gas Turbines:** The Advanced Turbine System Program began in 1992 to develop and test utility-scale turbines to convert gas or other fuels to electric power. These systems are ultra-efficient, affordable and have low emissions. The program goals of 60 percent efficiency in the combined cycle mode, a 10 percent reduction in cost of electricity, and less than 10 ppm NOx emissions, have all been met. The ATS program has moved to the demonstration phase. Siemens-Westinghouse is testing components of its ATS technology in Florida, and the General Electric 7H-ATS is ready for demonstration in New York. ([www.ott.doe.gov/hev/gas\\_turbine.html](http://www.ott.doe.gov/hev/gas_turbine.html))


 **Stationary Fuel Cells:** Fuel cells use a chemical reaction, much like a car battery, to produce electricity directly. There are four types of fuel cells being researched: Molten Carbonate (MC); Solid Oxide (SO); Proton Exchange Membrane (PEM); and Phosphoric Acid (PA). Present day fuel cell electrical generating efficiencies range from 36 percent to 40 percent. When use is made of the recoverable heat generated in the process, net fuel efficiencies in the 80 to 85 percent range can be achieved. Environmentally-friendly fuel


cells generate virtually no pollution and easily pass even the most stringent of today's emissions standards—such as those set by the State of California.  
([www.ott.doe.gov/oaat/fuelcell.html](http://www.ott.doe.gov/oaat/fuelcell.html))

 **Combined Heat and Power (CHP):** These systems capture waste heat and use it to heat and cool buildings or to provide steam for use in industrial processes resulting in total system efficiencies of 70 to 90 percent compared to the 33 percent average efficiency of conventional central power plants. Recent successes include the permitting of a CHP system for Malden Mills Industries, a textile plant employing 2,300 workers in Lawrence, MA, designed to provide steam and electricity, replacing older, inefficient steam boilers and reducing the need for electricity purchases, cutting pollutant emission over half. The system also includes a new ceramic liner technology designed to reduce NOx emission rates to within the state's guidelines. A natural gas microturbine installed by Walgreens drugstore in 1999 provides 33 percent of the building's electric, heating, air conditioning and hot water needs at more than 75 percent efficiency. The system includes an absorption chiller and desiccant dehumidification system powered by exhaust heat from the microturbine.  
([www.eren.doe.gov/der/chp/index.html](http://www.eren.doe.gov/der/chp/index.html))


 **Distributed Energy Resources:** Distributed energy refers to the production of electricity at or near the point of distribution or use, rather than at central power stations. DOE's distributed energy generation initiative goal is to develop the cooperation and technology necessary to enable these interdependent systems to provide at least 20 percent of the nation's new power by the end of the decade. Moving energy supplies closer to the point of end use through, for example, rooftop photovoltaic systems or microturbines, promises important economic, environmental, and reliability advantages. The direct economic benefits of such systems include efficient and cost-effective power resources, power in locations where there are no utility services (e.g. rural Alaska), and the sale of surplus power to meet electricity demand or provide peaking power. Distributed systems include combustion turbines, biomass-based generators, concentrating solar power and photovoltaic systems, fuel cells, wind turbines, microturbines, engines/ generator sets, and storage and control technologies. ([www.eren.doe.gov/der/index.html](http://www.eren.doe.gov/der/index.html))


... to promote energy efficient use in homes to reduce the nation's energy bills


 **Weatherization:** DOE and its partner agencies retrofitted 167,000 low income homes in 1998 alone, which will save 108 trillion btu and save occupants \$550 million in utility bills over the 20 year life of the installed energy-conservation measures. Over the life of the program, DOE has weatherized 4.7 million homes, saving \$1.80 in energy costs for every dollar invested and improving the quality of life for the residents.  
([www.eren.doe.gov/buildings/weatherization\\_assistance/](http://www.eren.doe.gov/buildings/weatherization_assistance/))

 **Federal Energy Management Program (FEMP):** The FEMP program reduces energy costs to the Federal government—the largest power user in the country—by advancing energy

efficiency and water conservation, promoting the use of renewable energy, and managing utility costs of Federal agencies. Between 1985 and 1999, the government achieved a 21.1 percent reduction in site-based energy intensity and the Federal energy bill was almost \$2.2 billion real dollars less than in 1985. Most recently, President Clinton signed Executive Order 13123 setting new energy goals for Federal facilities to reduce energy consumption in buildings by 35 percent, and energy consumption in Federal labs and industrial facilities by 25 percent, diminish greenhouse gas emissions by 30 percent, improve water efficiency, and increase use of renewable energy technology by 2010. ([www.eren.doe.gov/femp/](http://www.eren.doe.gov/femp/))


 Energy Savings Performance Contracting (ESPC): At no capital costs to the government, Energy Savings Performance Contracting (ESPC) offers a means of achieving energy reductions through alternative financing, in which private industry would bear the upfront costs of efficiency upgrades in exchange for a portion of the savings realized from those upgrades. Since June, 1998, a total of 34 delivery orders have been awarded, which are valued at approximately \$80 million. Ten Federal agencies have awarded at least one delivery order. The largest delivery order awarded so far has an investment value of approximately \$20 million to provide comprehensive energy retrofits at NASA's Johnson Space Center in Houston. ([www.eren.doe.gov/femp/financealt.html](http://www.eren.doe.gov/femp/financealt.html))

 Appliance Codes and Standards: To save energy and reduce both emissions and consumer utility bills, DOE sets national minimum energy-efficiency standards for commercial and residential equipment and appliances, such as lighting, heating and cooling equipment, water heaters, refrigerators, clothes washers and dryers. The residential appliance standards in place in 1999 are saving annually about 0.65 Quadrillion btu (primary), equivalent to the annual energy consumption of over 3 million households and annual energy savings of approximately \$4 billion. To date, approximately 65-70 percent of U.S. households have purchased one or more of the more efficient products covered by these standards. From 1990 to 2010, enacted standards will avoid cumulative emissions of 227 million metric tons of carbon equivalent and saved consumers \$49 billion. DOE has just issued new standards for fluorescent lamp ballasts, and in 2000 and 2001 DOE expects to publish standards for clothes washers, water heaters and central air conditioners. These residential standards, and the recently enacted standards for refrigerators, are expected to avoid greenhouse gas emissions of 13.5 million metric tons in 2010. ([www.eren.doe.gov/EE/buildings\\_appliances.html](http://www.eren.doe.gov/EE/buildings_appliances.html))


 Geothermal Heat Pumps (GHPs): GHPs discharge waste heat to the ground during the cooling season and extract heat from the ground during the heating season to more efficiently meet residential and commercial heating, cooling and hot water needs and help electric utilities meet peak demand. A typical system can reduce energy consumption by 23 to 44 percent and pay for itself in three to ten years. About 340,000 GHPs are being used for heating and cooling of residential, commercial, and institutional buildings throughout the United States today. Assuming average unit annual savings of \$300 to \$400, annual savings due to displacement of air-source heat pumps and other conventional equipment by GHPs is between \$100 million and \$140 million per year.





Savings from GHP units installed between 1995 and 1998 are estimated to be \$29-\$39 million. This program has been successfully completed.

 Building America: This program utilizes a "whole building" approach to saving energy in new houses. Several hundred homes built in different regions of the U.S. to date demonstrate the opportunity to design homes in ways that save 30 to 50 percent of the energy used in a typical new home, often with little or no increase in first costs. In the "whole building" approach, thousands of additional homes based on these demonstrations are planned by Building America partners.


... to increase the competitiveness of U.S. industry by reducing its energy costs


 Industrial-Scale Gas Turbines: The Advanced Turbine Systems (ATS) Program was initiated in 1992 to produce 21<sup>st</sup> century gas turbine systems that are more efficient, cleaner and less expensive to operate than today's turbines. The goals of the program for industrial class gas turbines include: 1) single digit emissions; 2) 15 percent improvement in efficiency; 3) 10 percent reduction in cost of electricity, and; 4) reliability and durability equivalent to today's engine fleet. Solar Turbine is leading a consortium to develop a 4.3 megawatt recuperated industrial gas turbine, which is being marketed as the Mercury 50. Several engines are undergoing testing: one at Solar Turbine's Harbor Drive Facility, one at Rochelle Municipal Utilities, and one at Western Mines in Australia. This program has been successfully completed.

 Reciprocating Engines: The new Advanced Reciprocating Engine System Program focuses on the development of an advanced engine with an efficiency over 50 percent and single digit emissions (current engines have efficiencies in the low 40 percent and emissions greater than 50 ppm) for the distributed generation market. Reciprocating engines are used in a variety of applications including gas, electric and water utilities, standby power generation, hospitals, manufacturing of all types and educational services and office buildings. Running on natural gas, these engines will produce at least 20-30 percent lower carbon dioxide emissions compared to oil- or coal-fired technologies. When heat is recovered from the system, the overall system efficiency often exceeds 85-90 percent. ([www.oit.doe.gov/power/recipro.html](http://www.oit.doe.gov/power/recipro.html))

 Advanced Industrial Materials: Materials limitations are a frequent barrier to increased energy efficiency—advanced materials technologies reduce energy use by as much as 25 percent per unit of output for some industries. Examples of advanced materials research include corrosion prevention on existing alloys, which could save more than 15 percent of the cost, and new membrane materials for high temperature chemical separations, which could save at least half of the energy currently used for today's energy-intensive separation processes. DOE, its materials labs, and university and industry consortia are addressing many of these high risk pre-competitive challenges that individual companies do not address. We have been successful at this undertaking with over 100 industrial partners using our advanced labs, the development of over a dozen commercialized advanced industrial materials, and another two dozen currently underway.

([www.oit.doe.gov/materials/](http://www.oit.doe.gov/materials/))

 **Industrial Assessment Centers:** Working through 30 universities, these centers have provided over 9,000 energy and industrial process audits to small and mid-size manufacturing firms, generating recommendations that are saving participating firms \$200 million a year in energy costs and an additional \$170 million in annual non-energy benefits. ([www.oit.doe.gov/iac/](http://www.oit.doe.gov/iac/))

 **Oxyfuel Firing for Glass Furnaces:** This industrial process to melt glass, developed with DOE assistance, is in commercial use in over 50 percent of glass furnaces and reduces a glass manufacturer's fuel use by 15-45 percent, NOx emissions by 80 percent, and particulates by 60 percent. The process also increases productivity by 25 percent. ([www.oit.doe.gov/glass/refractories.htm](http://www.oit.doe.gov/glass/refractories.htm))

## Oil and Gas Supply


Oil and gas provide 62 percent of the nation's energy. The United States remains heavily dependent on petroleum, which powers 97 percent of our vehicles and heats 11 percent of our homes. We are also relying increasingly on natural gas as the preferred source for cleaner, more efficient power generation.

The United States is a mature oil producing region and exploration and production costs are high relative to other oil producing regions in the world. On the natural gas side, we have abundant resources, and production and reserves are expected to increase over the next twenty years. Expanding gas consumption and associated production needs have been obscured somewhat in recent years because of warm winter weather and unusually high hydro and nuclear power output. Nevertheless, domestic drilling rigs directed toward gas prospects reached 800 in September, 2000, the highest level in over a decade, and gas well completions this year are on track to be the highest in fifteen years.


Complementing investments in oil and gas demand side and end use technologies, the Administration's policies and investments in oil and gas supply are designed to address the relatively high cost of oil production in the U.S., our continuing reliance on oil as a transportation fuel, and the projected increases in demand for natural gas for power generation, transportation, cooling and combined heat and power.


→ Accomplishments and investments to enhance our oil, natural gas and product supplies . . .

. . . by lowering the costs of domestic exploration and production through advances in technology


 **Reservoir Class Field Program:** An estimated two-thirds of all U.S. oil remains in the ground after primary or conventional recovery. The Reservoir Class Field Program is designed to increase this recovery. The program includes 32 projects. One project alone has already produced an additional 2.4 million barrels from a small field, and is expected to produce an additional 31 million barrels of oil and \$160 million in Federal revenue. Another project demonstrated advanced reservoir characterization and process design technologies in a previously idle lease in giant Midway-Sunset oil field, California. The demonstration has found 2 million barrels of recoverable reserves in the previously abandoned 40-acre lease. An additional 2.5 million barrels of reserves have been found in


another formation that had never produced in the lease. This program is expected to add 500 million barrels of cumulative production and reserves. ([www.fe.doe.gov](http://www.fe.doe.gov))


 **Drilling Technologies:** The Department continues to successfully develop advanced oil, gas and geothermal drilling technologies. Horizontal well reservoir-flow models recently developed by DOE have significantly improved coiled-tubing drilling efficiency and reliability. These systems now have a 50 percent smaller footprint (land affected by operations) than conventional drilling systems and can reduce drilling costs by almost 40 percent. Advanced drilling technologies have helped cut oil finding costs from \$20 per barrel to \$5 per barrel in the last 20 years. In addition, the Department is working with industry on improved polycrystalline-diamond compact (PDC) drill bits for various applications that will significantly extend drill bit lifetime and lower opportunity costs. Prior DOE research led to the development of the current PDC bit, which is today's industry standard. ([www.fe.doe.gov](http://www.fe.doe.gov))

 **Public Lands Technology Partnership:** DOE funds numerous projects with the Bureau of Land Management to develop solutions to those technical, regulatory and environmental issues preventing access to oil and gas resources on Federal lands. The Partnership has helped streamline land use regulations and processes, and ensure that sound science and technology advancements are incorporated in Federal land use planning, NEPA reviews, and policy planning. ([www.blm.gov](http://www.blm.gov))


... through advances in technologies to increase production, or develop new or alternative sources of supply

 **3D & 4D Seismic:** The deployment of 3D seismic technology has had a major impact on oil and gas exploration success. For example, one company has achieved a success rate of nearly 50 percent for its 3D exploration activities, versus 13 percent without 3D. Advances for fracture imaging and advanced drilling technologies, developed by DOE and the Gas Research Institute, led to record-breaking natural gas production in a horizontal well in the Greater Green River Basin in southwestern Wyoming. The project has stimulated additional industry drilling in this previously uncommercial reservoir. Meanwhile, 4D seismic imaging developed by DOE in 1994, has already been applied with outstanding commercial success in 21 Gulf of Mexico fields. ([www.fe.doe.gov](http://www.fe.doe.gov))


 **Gas to Liquids Technology (GTL):** The North Slope of Alaska natural gas resource in developed fields totals over 30 trillion cubic feet, and undiscovered resources are estimated at about 70 Trillion cubic feet. DOE is spearheading efforts to evaluate the technical and economic feasibility of converting this gas to a liquid suitable for transport in the existing Trans Alaska Pipeline System. Included is support for a novel gas to liquids technology that uses a ceramic membrane to separate oxygen from air, which is then reacted in a single step with natural gas to form a syngas that can be converted to a clean liquid fuel. Successful development of this technology could result in a 25-30 percent reduction in liquid production costs compared to existing technologies. ([www.fe.doe.gov](http://www.fe.doe.gov))


 **Methane Hydrates:** USGS scientists estimate that there are as much as 300,000 trillion cubic feet of natural gas in the form of natural gas hydrates in the United States, offshore and arctic—15,000 times the 1999 gas consumption of the United States. DOE, in collaboration with USGS, MMS, NRL, NSF and NOAA, has begun a multi-year program of research, development and demonstration to determine if these resources can be economically produced in a safe and environmentally responsible manner. ([www.hydrate.org](http://www.hydrate.org))


... by promoting changes in government policies to increase supply and encourage greater public/private partnerships to develop oil and gas resources

 **Enhancing Domestic Production via Royalty-Related Measures:** The Administration has sought to bolster domestic production through measures related to royalties that are collected from production on Federal lands:


- In 1995, the Administration and Congress jointly supported deepwater royalty relief to advance the development of new deepwater projects in the Gulf of Mexico. This program has proved to be very successful, and the Department of the Interior is considering some form of royalty relief measures as industry moves into ever deeper water. ([www.gomr.mms.gov](http://www.gomr.mms.gov))
- Small oil producers operating on public lands during periods of extremely low oil prices were allowed to suspend operations up to two years without losing their leases or plugging their wells. ([www.blm.gov](http://www.blm.gov))
- The Administration supported reform of the royalty program for oil and gas production from on- and off-shore Federal lands. Reforms included reduction of record-keeping and reporting requirements for Federal royalty owners. ([www.rmp.mms.gov](http://www.rmp.mms.gov))

 **Petroleum Technology Transfer Councils (PTTC):** Oil exploration and production is a technology-intensive business. At the same time, a significant amount of oil production is from small, independent producers who cannot afford to invest in advanced exploration and production technologies. In 1994, the Department of Energy established the PTTC, which transfer technologies to small producers through 10 technology centers located across the country. These centers conduct more than 100 technology workshops each year. In addition, the PTTC websites average over 77,000 user sessions per month, and the ten regional technology centers have thousands of industry contacts each year. ([www.pttc.org](http://www.pttc.org))


 **Elk Hills Sale:** On February 5, 1998, the Department of Energy, through the sale of the Elk Hills Petroleum Reserve, concluded the largest divestiture of Federal property in the history of the U.S. government. This \$3.6 billion sale completed a privatization process that began in 1995 when the Clinton Administration proposed selling Elk Hills as part of its efforts to reduce the size of government, return inherently non-Federal functions to the private sector, and prolong the useful life of the field. ([www.fe.doe.gov](http://www.fe.doe.gov))


 **Naval Petroleum and Oil Shale Reserve Number 2 (NOSR 2):** The Administration submitted legislation this year to transfer NOSR 2 in Utah to the Northern Ute Indian tribe.


The transfer of 84,000 acres will be the largest voluntary return of land to Native Americans in the lower 48 states in more than a century and will enable the Utes to produce natural gas on the Reserve, volumes of which, according to preliminary estimates by USGS, could be as high as 0.6 trillion cubic feet. Under the plan, 9 percent of any royalties from future energy resource production on the lands would help fund clean-up and disposal of uranium mill tailings at a site near Moab, Utah. ([www.fe.doe.gov](http://www.fe.doe.gov))

 **National Petroleum Reserve - Alaska (NPR-A):** On May 5, 1999, BLM held a lease sale which resulted in the granting of 133 leases for the northeastern portion of the NPR-A. Careful consideration was given during the pre-leasing process as to whether technology was available to allow those resources to be recovered with minimal adverse environmental impact. The NPR-A is estimated to contain between two and five billion barrels of technically recoverable oil, with approximately two billion barrels being economically recoverable at today's oil prices. ([www.aurora.ak.blm.gov/npra](http://www.aurora.ak.blm.gov/npra))


... by encouraging international cooperation on oil and gas issues, and investments in oil and gas infrastructure and production at home and abroad

 **Oil and Gas Loan Guarantee Program:** On August 17, 1999, President Clinton signed into law the "Emergency Oil and Gas Loan Program Act," Public Law No. 106-51. The Act provides \$500 million in loan authority for oil and gas producers who suffered severe economic hardships in the 1998-1999 oil downturn. Eligible companies must have experienced losses and/or had to lay off employees during this period. The board established to run the program has received applications for loans totaling over \$71 million. DOE has worked closely with the SBA, USDA and the Emergency Oil and Gas Loan Guarantee Board to assist the small, independent domestic oil and gas producers meet the capital access challenges of the energy marketplace—over the past year the DOE has conducted 10 Federal loan guarantee workshops around the country and is currently working with the Emergency Oil and Gas Loan Guarantee Board to revise its current loan guarantee program to ensure that it reflects the needs of independent producers. ([www.fe.doe.gov](http://www.fe.doe.gov))


 **Asian Pacific Economic Cooperation (APEC) Natural Gas Initiative:** This initiative seeks to accelerate investment in natural gas supplies, infrastructure and trading networks throughout the APEC region, and has been developed in close collaboration with the business sector. The initiative aims to reduce investor risk in APEC nations by: encouraging private ownership of natural gas facilities; ensuring sanctity of contracts; establishing autonomous regulators; promoting non-discriminatory treatment of foreign and domestic companies; fostering competition among all sources of energy, and; supporting the free flow of exports and imports of natural gas and natural gas-related products and services across borders.


 **Caspian Pipelines to Western Markets:** In the Caspian region, bilateral policy dialogue with Turkey, Azerbaijan, Georgia and Turkmenistan has fostered an investment climate to develop oil and gas resources and the pipelines needed to transport these products to

Western markets. This was highlighted when President Clinton witnessed the signing of intergovernmental agreements among Turkey, Azerbaijan and Georgia for the development of a critical pipeline system from the Caspian region to western markets.

 **Import Diversification:** To ensure that we are not overly reliant on oil imports from a single region of the world, the Administration has continued efforts to encourage oil production in diverse regions and nations of the world. Although our oil imports have increased, our sources of supply have changed significantly over the last two decades. Our imports now come from over 40 nations of the world. In 1999, we imported 4.95 million barrels per day from OPEC nations, down 20 percent from 6.19 million barrels per day in 1977.

... by increasing the size and security of the Strategic Petroleum Reserve, our "national oil insurance policy"

 **Strategic Petroleum Reserve Royalty-in-Kind Program:** The Administration implemented a unique initiative to add 28 million barrels of oil to the SPR using Federal royalty oil owed the Treasury by private industry for oil production on Federal lands. This program, when completed, will give us a Reserve of approximately 590 million barrels, the largest oil reserve in the world. ([www.fe.doe.gov](http://www.fe.doe.gov))

 **Strategic Petroleum Reserve (SPR) Life Extension:** The completion of the life extension program marked a major milestone for the SPR. Most SPR facilities were constructed in the late 1970s and early 1980s and were nearing the end of their 20-year design life. Under the life extension program, DOE redesigned and replaced critical systems and equipment that had deteriorated and aged, to maintain reliability and availability and to assure the Reserve could be drawn down within 15 days of a Presidential determination. As a result, the useful life of the SPR's facilities and drawdown systems has been extended through 2025, and operating costs will be reduced by \$12-\$15 million per year. ([www.fe.doe.gov](http://www.fe.doe.gov))

## Coal

The Administration supports coal as a key source of energy for domestic power generation and recognizes its importance to world economic growth. Coal use for power generation has increased by 17 percent over the last 10 years and currently supplies 55 percent of our electricity. We have more than 240 years of domestic supply at current rates of use. The Administration has focused its coal policy on enabling its continued use as a valuable resource by working to dramatically mitigate its environmental impacts. Coal-fired power plants generate the majority of our sulfur dioxide emissions and a significant share of nitrogen oxides, the two pollutants most closely linked to acid rain. In addition, coal-fired utilities generate significant volumes of solid combustion wastes, over 107 million short tons in 1998, along with significant greenhouse gas emissions.


Coal is also an abundant and relatively inexpensive energy source worldwide. China and India, for example, use coal for a significant portion of their power generation, as do many of the nations in Eastern Europe, further adding to concerns about the global impacts of carbon emissions and other environmental impacts of coal combustion and waste.

To encourage the continued economical and environmental viability of coal as a key fuel for power generation both domestically and abroad, the Administration has continued or enhanced a variety of clean


coal initiatives and launched a major new initiative—carbon sequestration—with a goal of eliminating carbon emissions from coal and other fossil fuel combustion. In addition, the Administration acknowledges the key role coal could play in providing alternative fuels and has invested in advancing technologies to expand innovative future uses for coal.


→ Accomplishments and investments in coal combustion . . .


. . . to improve the environmental performance of coal in order to maintain its desirability as a key energy source for domestic power production

 Clean Coal Technology (CCT) Program: The CCT program, jointly funded by government and industry, demonstrates full-scale technology to reduce environmental impacts and increase the efficiency of coal-fired electric generators. Based on the performance demonstrated in the CCT Program. ([www.fe.doe.gov](http://www.fe.doe.gov))

- About three-fourths of the U.S. coal-fired generating capacity has installed low-NO<sub>x</sub> burners;
- Reduced capital and operating cost have been demonstrated for a variety of innovative flue gas desulfurization systems, which coupled with advancements from the R&D program, have been a major factor in reducing the cost of sulfur removal from coal plants by 50 percent over the past 20 years. Advanced scrubbers can produce dry disposable wastes or valuable byproducts, and are capable of capturing multiple air pollutants; and
- Advanced power generation projects are providing the basis for increased efficiency resulting in reduced greenhouse gases and very low pollutant emissions.


 Advanced Coal Gasification and Combustion Systems: DOE is supporting development of high efficiency coal-fired power technologies, including advanced fluidized combustion and integrated gasification combined-cycle. These systems are expected to convert coal into electricity with efficiencies of at least 55 percent (current industry average is under 35 percent) at a cost 10 percent lower than today's technology. Emissions of air pollutants will be 90 percent lower than Federal pollution standards. Their high efficiency will also reduce emissions of carbon dioxide. These technologies are expected to be an integral part of the development of Vision 21 coal-fired power plants.

 Innovations to Existing Plants: A major goal of this program is to reduce the high cost of environmental compliance at existing coal fired power plants. The aggregate cost of compliance was \$1.9 billion in the United States in 1997, and environmental compliance costs will increase by seven-fold to over \$13 billion per year by 2010. Research is being conducted in the areas of control of fine particulate matter, mercury/air toxics, nitrogen and sulfur oxides, and utilization of coal combustion byproduct. The program is pursuing a 50 percent reduction in overall environmental compliance costs through the development of advanced technologies and integrated systems, which would reduce environmental compliance costs by over \$6.5 billion per year by 2010. ([www.fe.doe.gov](http://www.fe.doe.gov))

 Carbon Sequestration: Carbon sequestration is increasingly seen as an essential carbon mitigation tool for long term stabilization of atmospheric concentrations of greenhouse

gases. Based on the roadmap described in DOE's "Carbon Sequestration Research and Development," DOE is pursuing innovative approaches for separating, capturing, and storing (or reusing) greenhouse gas emissions, with the goal of beginning to deploy technologies by 2015 that can help offset U.S. emissions. Storage options include geologic formations, oceans, soils, and vegetation. ([www.fe.doe.gov](http://www.fe.doe.gov))

... to develop clean and innovative uses for coal to take advantage of its low cost and abundant supplies

 **Coal-derived Fuels Program:** Improved solid fuels and economically competitive transportation fuels from our Nation's vast coal resource base are expected near-term products of this program. A key emphasis in transportation-fuels development is the production of economic, high-quality, clean-burning diesel fuels from coal. The solid fuels program is focusing on precombustion control of potentially hazardous air pollutants from coal; converting one billion tons of impounded "waste" coal to clean fuel by 2005; and facilitating 8 gigawatts of coal/biomass cofiring by 2010. ([www.fe.doe.gov](http://www.fe.doe.gov))

## Nuclear

Nuclear energy's continued role in electricity production is important for our economic and energy security and may be an important component of the nation's global climate change response. Nuclear power plants generate approximately 20 percent of all U.S. generated electricity without emitting carbon dioxide, or the sulfur and nitrogen oxide pollutants associated with fossil fuel combustion. Between 1973 and 1998, the use of nuclear energy avoided 87.3 million metric tons of SO<sub>2</sub>, more than 40 million metric tons of NO<sub>x</sub>, and more than two billion metric tons of carbon dioxide (CO<sub>2</sub>.) The radioactive waste from nuclear power is carefully packaged, and currently stored safely at the power plant sites.

The U.S. is at a critical juncture in the continued operation of its nuclear power plants. Competitive pressures from electricity deregulation may well result in the shut down of poor performing plants sooner rather than later. Nevertheless, with the exception of a very few plants, nuclear power is competitive with other existing generators, and there has been an active market for purchase of nuclear plants with consolidation under fewer operators of multiple plants. There is also a regulatory hurdle in the path of continuing operation. All of our nation's nuclear power plants were licensed for 40 years of operation and licenses for operating plants will begin to expire in 2010. However, nuclear power plants can be granted an additional operating term of up to 20 years under Nuclear Regulatory Commission (NRC) regulations.


Although careful stewardship of existing assets will likely keep them running well into the first half of this century, there have been no new nuclear power plants ordered in the United States since the 1970s. This is likely to remain the case unless plant economics, and permanent spent fuel disposal are successfully addressed.


Advancing future nuclear power plant designs, the safety and life-extension of existing reactors, and the safe long-term storage of spent nuclear fuel are the focus of Administration investments in the nuclear power arena. To implement these policies, the Administration has launched three specific initiatives—the Nuclear Energy Research Initiative, the Nuclear Energy Plant Optimization Initiative, and the Generation IV Initiative.


→ Accomplishments and investments in nuclear power ...

... to develop next generation options for nuclear power plants to promote safer, more affordable, and more environmentally benign nuclear power for the future





 Advanced Light Water Reactor (ALWR) Program: The ALWR program was designed to ensure the viability of nuclear energy and to advance energy security and diversity. The plant designs developed by DOE and industry include the General Electric Advanced Boiling-Water Reactor (ABWR), the ABB-Combustion Engineering System 80+, and the Westinghouse AP600. Each of these NRC approved designs can be built and operated under a single license, significantly reducing the uncertainty regarding the cost and schedule of building the plants. Just after completion of the ALWR program, Taiwan elected to build two new ABWR plants. These plants are currently under construction.

 Nuclear Energy Research Initiative (NERI): NERI, initiated in 1999, will promote and advance concepts and breakthroughs in nuclear fission and reactor technology to address scientific and technical barriers to the long-term use of nuclear energy; advance the state of nuclear technology to maintain a competitive position in the domestic and overseas markets; and promote and maintain a nuclear science and engineering infrastructure. In FY 1999, the 46 NERI research awards went to 45 universities, laboratories, and industrial organizations. International collaborators in these awards included 4 universities, 5 industrial companies, and one government research and development organization. (neri.ne.doe.gov)

 Generation IV Nuclear Power Systems: The goal of this program is to develop the next generation of nuclear power reactors that are more economic, enhance proliferation-resistance, produce less waste, and have improved safety features. This new program, which started in 2000, is developing plans for collaborative research with other interested governments. An international workshop, in May, 2000, identified the characteristics and attributes of the next-generation reactors and drew input from industry, universities, and public interest groups. In FY 2001 a reactor technology roadmap will be developed to further define and focus the research efforts.


... to safely extend the life of existing nuclear power plants to meet electricity demand

 Nuclear Energy Plant Optimization Program (NEPO): The goal of the NEPO program, started in 2000, is to invest in the research needed to ensure that current nuclear plants can continue to deliver adequate and affordable energy supplies up to and beyond their initial 40 year license period by resolving open issues related to plant aging, and by applying new technologies to improve plant reliability, availability and productivity. (nepo.ne.doe.gov)

 Plant Relicensing: Three years ago, with state-by-state electricity restructuring well under way and uncertainty about nuclear plant relicensing, it was predicted that existing nuclear plants would shut down prematurely at an alarming rate and few, if any, nuclear plants would receive a renewed license for 20 years of additional operation. To date, NRC has renewed licenses for five reactors of two utilities, for a total service life of 60 years of operations—Calvert Cliffs, Units 1 and 2, and Oconee, Units 1, 2, and 3, have been

granted 20 additional years of operations. Three additional utilities have submitted license renewal applications and several other utilities have announced their intention to seek license extensions.

... to safely dispose of commercial spent fuel to protect the public health and the environment in a responsible, safe, scientifically-sound manner

 **Spent Fuel Disposal:** Decisions made many decades ago to develop nuclear energy for civilian use and to pursue a nuclear weapons program, committed the nation to perpetual custody of a large and growing inventory of radioactive materials. Spent nuclear fuel from commercial power plants constitutes the largest portion of this inventory. The Nuclear Waste Policy Act of 1982 created the Office of Civilian Radioactive Waste Management to develop a permanent, safe geologic repository for disposal of spent nuclear fuel and high-level radioactive waste. After the Department of Energy identified three potential sites, the Congress amended the Nuclear Waste Policy Act in 1987 and directed DOE to consider only Yucca Mountain, Nevada as a potential repository.


DOE is currently evaluating Yucca Mountain as a possible location for a geologic repository. The evaluation is based on rigorous scientific studies of the site and extensive development of engineered barriers. The completion of a repository will assure the permanent disposal of spent nuclear fuel from the nation's nuclear power reactors. A repository is central to Administration policy not only because of its implications for the future availability of nuclear energy, but also because it is a prerequisite to the cleanup of DOE's nuclear weapons complex and the disposal of its weapons-grade materials. A repository will also further U.S. international nuclear nonproliferation objectives.

The Administration has so far maintained the repository program on schedule despite budget shortfalls. Key accomplishments include:

- Issuing a Program Plan after a comprehensive reassessment of the Program designed to strengthen confidence in having an operational repository in 2010;
- Issuing a viability assessment in December, 1998 that assessed the status of scientific work at Yucca Mountain and identified the work remaining to complete the repository; and
- Issuing a Draft Yucca Mountain Repository Environmental Impact Statement.

DOE is positioned to complete a Site Recommendation Consideration Report by the end of 2000 that will describe the technical information germane to the Secretary's consideration of whether to recommend the site to the President.

... to develop nuclear fusion as a clean, potentially limitless source of power for the future

 **Advances in Nuclear Fusion:** In contrast to the nuclear fission process that underlies today's nuclear power plants, nuclear fusion seeks to replicate the energy-releasing processes of the sun on earth. Commercial electricity production is decades away, with many scientific and engineering challenges to be met, but the benefits can be very substantial. During the last decade, Department of Energy fusion facilities used by the national plasma science and engineering community have increased fusion energy nearly a thousand-fold, have identified advanced operating regimes for fusion devices, and have developed significant simulation tools. A new facility, the National Spherical Torus Experiment (NSTX) at Princeton, began operation in FY 1999 and has already, well ahead