

Transcript

Solar Energy Development Programmatic EIS Scoping Meeting held in San Luis Obispo CA, July 9, 2008

This Acrobat PDF file contains the transcript of the above referenced Solar Energy Development Programmatic EIS public scoping meeting. If you are interested in reading the scoping comments provided by a specific person or organization at this meeting, you may use Acrobat's search tool to locate the commenter's name/organization within the transcript.

UNITED STATES DEPARTMENT OF ENERGY AND BUREAU
OF LAND MANAGEMENT

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SOLAR ENERGY DEVELOPMENT
PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
(PEIS)

+ + + + +

PUBLIC SCOPING MEETING

+ + + + +

WEDNESDAY,
JULY 9, 2008

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The above-entitled meeting
convened at 6:30 p.m., at the Embassy Suites
San Luis Obispo, 333 Madonna Road, San Luis
Obispo, California, Halil I. Avci, Ph.D.,
facilitator, presiding.

PRESENT:

TIM SMITH
Bureau of Land Management

BRAD RING
Department of Energy

LINDA RESSEGUIE
Bureau of Land Management

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C O N T E N T S

PAGE

Introductory Remarks Dr. Avci	3
Presentations:	
Tim Smith, Field Manager Bakersfield Field Office of BLM	6
Brad Ring, Project Manager, DOE Golden, Colorado Office	7
Linda Resseguie, BLM's PEIS Project Manager	13
Lynn Billman Senior project leader, NREL	22
Overview of NEPA process - Dr. Avci	35
Q&A Session	44
Comment Phase	59
Adjourn	

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1 P R O C E E D I N G S

2 DR. AVCI: If you'll please take
3 your seats, we'll get started.

4 I have 6:30 p.m., according to my
5 watch, and this meeting is now officially
6 convened.

7 On behalf of the U.S. Department
8 of Energy and the Bureau of Land Management,
9 we thank you for attending this meeting.

10 This is what's called a Public
11 Scoping Meeting for a Programmatic
12 Environmental Impact Statement.

13 The Programmatic Environmental
14 Impact Statement that is the subject of
15 tonight's meeting is one that is being
16 prepared by the U.S. Department of Energy and
17 the Bureau of Land Management on solar energy
18 development in six Western states, Arizona,
19 California, Colorado, New Mexico, Nevada, and
20 Utah.

21 My name is Halil Avci. I'm with
22 Argonne National Laboratory, the organization

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1 that is supporting DOE and BLM in preparing
2 this PEIS.

3 At this time, I have a request for
4 you. If you have not done so already, please
5 turn off the sound on your cell phones and
6 pagers.

7 As you may have noticed already, I
8 have used several acronyms. I've used DOE
9 for U.S. Department of Energy, BLM for Bureau
10 of Land Management, and PEIS for Programmatic
11 Environmental Impact Statement.

12 This being a federal program,
13 invariably there will be others throughout
14 the evening that you will hear. We will try
15 to explain what they mean as we go along, but
16 if there is one at any time, that you do not
17 understand, please raise your hand and we'll
18 be happy to explain it.

19 I also would like everyone to know
20 that this meeting is being transcribed. An
21 official document will be prepared for the
22 record. That means everything that is said

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1 this evening will be recorded, and will be
2 entered into the official document. The
3 document will be placed on the project Web
4 site and will be available for viewing and
5 downloading by the public. Our court
6 reporter this evening is Troy Ray and he's
7 with Neal R. Gross & Company out of
8 Washington, D.C.

9 The main purpose of the meeting
10 this evening is for DOE and BLM to obtain
11 your input on the scope of the PEIS.
12 However, before we begin with the comment
13 phase of the meeting, we have a series of
14 short presentations to give some background
15 about the scope of the PEIS and proposed
16 activities.

17 After the presentations, there
18 will be a brief question-and-answer period.

19 Immediately after the question-
20 and-answer period, we will start the comment
21 phase of the meeting. I'm estimating that
22 the comment phase will begin about 7:30 p.m.

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1 Now as our first speaker, I'd like
2 to introduce Mr. Tim Smith. Tim is BLM Field
3 Manager for the Bakersfield Field Office here
4 in California. Tim, please.

5 MR. SMITH: Thank you. Thank you
6 very much, and I want to express my
7 appreciation to Argonne and Department of
8 Energy and to our national office for coming
9 out here and conducting these scoping
10 meetings. This is an issue and an
11 opportunity across BLM that's been happening,
12 and so it's good to have this type of effort
13 occur.

14 Just real briefly, the Bureau of
15 Land Management in the Bakersfield Field
16 Office we cover nine counties, and so San
17 Luis Obispo County is one of ours as well as
18 all the way up to Madera and down through
19 Kern and Tulare and several others.

20 But this is a good opportunity
21 for, I think, everyone to learn something
22 about solar, to find out where the agencies

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1 are going, and I really appreciate the
2 opportunity tonight. So I'll hand this back.

3 DR. AVCI: Thank you, Tim.

4 The next individual I'm going to
5 introduce is Brad Ring. Brad is project
6 manager in DOE's Golden Office with the Solar
7 Energy Technologies Program. Brad.

8 MR. RING: Thank you. I'd like to
9 also thank you for coming tonight and
10 participating in this process. I'd like to
11 take just a few minutes and go over the DOE
12 overall goals and the expectations from this
13 Programmatic Environmental Impact Statement.

14 The overall, the DOE goals are to
15 add energy supply from diverse sources, and
16 specifically making better use of renewable
17 resources. When this is accomplished, we'll
18 improve the quality of the environment by
19 reducing greenhouse gas emissions and
20 environmental impacts.

21 Another key component of this is
22 our national security. We feel that adding

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1 these diverse renewable sources to our energy
2 portfolio will provide secure, sustainable,
3 emission-free domestic energy, which is
4 important to our country.

5 The Solar Program resources in 208
6 was about \$170 million. The majority of that
7 went, 152 to research and development, and
8 the research and development was primarily
9 focused on photovoltaics, it was about 126
10 million, with concentrating solar power
11 having 26 million. Market transformation,
12 the 18 million that's shown there, was for --
13 or is for activities associated with the 25
14 Solar America cities, development of codes
15 and standards, Solar America showcases, solar
16 training across our nation, and the Solar
17 Decathlon.

18 The two technologies that I talked
19 about regarding the funding level, if you
20 recall, those are two -- we split them out as
21 two technologies. There's sub technologies
22 within that group and there is some overlap,

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1 but overall, we consider it two specific
2 areas.

3 One of them is photovoltaics,
4 which most people are aware of, which
5 converts solar energy, solar radiation
6 directly into electricity, and the second one
7 is concentrating solar power, which
8 concentrates the solar energy on to a fluid,
9 increasing the temperature and pressure of
10 that fluid, which is then used to drive, for
11 example, a standard steam turbine or other
12 mechanized method to produce energy.

13 Along with this, while we talk a
14 lot about concentrating solar power, I also
15 want to mention that DOE is focusing on
16 developing both of these technologies to the
17 point where they could be cost competitive
18 with utility markets. And how we do this is
19 we evaluate them based on what we consider --
20 it's called a LCOE, or Levelized Cost of
21 Energy, and that is all of the cost
22 associated with a specific system that either

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1 a home owner, a commercial enterprise or
2 utility is putting in all of those inputs
3 from permits, construction, operation and
4 maintenance versus what is derived from that,
5 how much energy comes out of that system.

6 And what we found is that we're
7 finding continued improvements in all of the
8 -- in both of these technologies, and they
9 are becoming competitive, which is good news.

10 And while this occurs, we're going
11 to see more, for example, on rooftops, more
12 for commercial enterprises, and that is our
13 goal.

14 DOE is co-leading the preparation
15 of this Programmatic EIS, because we are
16 focusing on utility scale projects, and those
17 are the large-scale projects which can
18 provide energy for tens of thousands of
19 homes. But to get that kind of power, it
20 requires intense solar radiation, and the six
21 states that are included in this process have
22 been found to have the best solar resources

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1 in the United States.

2 To make a utility scale project
3 does take a land mass, and it's approximately
4 5 acres for each megawatt. So you can see a
5 250 megawatt facility would take about 2
6 square miles, about two sections which is
7 over 1200 acres. Right along with this, BLM
8 manages over 119 million acres of federal
9 land in these six states.

10 What we expect to get from this
11 Programmatic EIS is the specific
12 identification of land that's appropriate for
13 solar deployment, you know, both from a
14 technically and environmentally sound
15 standpoint. We want to establish policies
16 that would apply to solar energy projects
17 that we support, best management practices
18 which would include the identification of
19 important, sensitive or unique habitats in
20 the vicinity of the proposed projects, and,
21 to the extent feasible, design the projects
22 to minimize or mitigate these impacts.

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1 It doesn't take away from -- each
2 specific project would be, would have its own
3 environmental analysis, and our goal is to
4 ensure responsible energy generation.

5 Additionally, we expect to get
6 better, or more accurate modeling for solar
7 energy development, and along with this type
8 of improvement in these technologies, the
9 jobs that would be created, and how the
10 technologies would mitigate the climate
11 change that we're seeing.

12 That's all I have. Thank you very
13 much for coming.

14 DR. AVCI: Thank you, Brad.

15 The next speaker is Linda
16 Resseguie from BLM's Washington, D.C. office.

17 She is BLM's project manager for this PEIS.

18 MS. RESSEGUIE: Good evening. I
19 want to echo what Tim and Brad said about
20 thanking you all for attending tonight.

21 This is really an important issue,
22 and it's very important to BLM, to hear the

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1 public comments during this scoping period.

2 The Bureau of Land Management is
3 an Agency within the Department of the
4 Interior that manages 258 million surface
5 acres. Most of our surface acres are located
6 in the Western United States and are
7 displayed on the map that's now showing on
8 the screen.

9 About 46 percent of our lands, or
10 119 million acres, as Brad said, are located
11 in the six state study area, and here, in
12 California, we have about 15 million acres
13 that we manage.

14 The BLM's multiple use mission is
15 to sustain the health and productivity of the
16 public lands for the use and enjoyment of
17 present and future generations. The Bureau
18 accomplishes this by managing activities such
19 as outdoor recreation, livestock grazing,
20 mineral development and energy production,
21 and also by conserving natural, historical
22 and cultural resources on the public lands.

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1 Solar energy is one of many energy resources
2 now being developed or considered for public
3 lands.

4 To ensure the best balance of uses
5 and resource protections for America's public
6 lands, the BLM undertakes extensive land use
7 planning. It carries out this planning
8 through a collaborative approach with local,
9 state and tribal governments, with the
10 public, and with stakeholder groups.

11 The result is a set of land use
12 plans that provide the framework to guide
13 decisions for every action and approved use
14 on our public lands. Many of BLM's existing
15 land use plans, however, do not address solar
16 energy development. The slide that's on the
17 screen now talks about two directives to BLM
18 that are important to this effort.

19 First is Executive Order 13212
20 that directs federal agencies to expedite
21 their actions, as necessary, to accelerate
22 the completion of energy-related projects.

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1 The second is the Energy Policy
2 Act of 2005. Section 211 of that act sets a
3 goal for the BLM to approve 10,000 megawatts
4 of nonhydropower renewable energy on the
5 public lands by the year 2015.

6 Now as I mentioned, BLM must
7 manage its public lands for a variety of
8 resource uses, including energy production.
9 The federal energy mix managed by BLM already
10 includes coal, oil and gas, geothermal, wind
11 and biomass, and soon it will include utility
12 scale solar energy.

13 BLM has previously estimated that
14 as much as two-thirds of the public lands may
15 have high potential for solar energy
16 production. Utility scale solar energy
17 projects on public lands are authorized by
18 BLM as rights-of-ways in accordance with the
19 requirements of the Federal Land Policy and
20 Management Act.

21 Now all activities proposed for
22 public lands, including rights-of-ways, must

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1 be consistent with the terms, conditions and
2 decisions in approved land use plans.

3 Before BLM can approve a solar
4 energy development project on public lands,
5 it must assess the direct, indirect and
6 cumulative impacts of such development and
7 must consider other resource values,
8 sensitive areas, and public concerns, all
9 accomplished through a NEPA process.

10 In the Notice of Intent announcing
11 the preparation of this PEIS, that was
12 published in the **Federal Register** on May
13 29th, BLM said that it was temporarily
14 suspending acceptance of new solar energy
15 applications, pending completion of the PEIS.

16 At the same time, we also
17 announced that we were going to continue to
18 process over 130 utility scale solar
19 applications that had already been filed with
20 BLM before that date. Those applications are
21 mainly located in Southern California,
22 Nevada, and Arizona. they cover more than 1

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1 million acres of public lands and they are
2 projected to generate, if constructed, to
3 generate 70 billion watts of power, enough to
4 power more than 20 million American homes.

5 During this scoping period,
6 however, we have heard from solar industry,
7 elected officials and the general public, and
8 what we have heard were concerns, deep
9 concerns about waiting to accept new solar
10 energy applications, and in response to the
11 high level of concern, we reexamined the
12 policy, what I call the "no new applications
13 policy," and a few days ago, we announced
14 that BLM would continue to accept new solar
15 energy development applications while the
16 PEIS was ongoing.

17 So we will be continuing to work
18 on the 130 applications previously received,
19 plus any additional new applications, while
20 we prepare the solar PEIS. And we're this in
21 order to address the growing demand for
22 renewable energy, while, at the same time,

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1 assuring appropriate environmental
2 protections.

3 The solar energy applications,
4 both existing, those already on file with
5 BLM, and any future applications that are
6 received during the PEIS process, will
7 proceed on a parallel track with the PEIS.

8 Go back one. Perhaps -- yes.
9 BLM's programmatic goals. Thank you.

10 Under BLM's current solar energy
11 development policy, applications are
12 processed on a first come, first served
13 basis, each with its own site-specific NEPA
14 process, and that is an Environmental Impact
15 Statement for the specific application, and
16 each with its own land use plan amendment
17 which would authorize the solar energy
18 project to be built.

19 So the applications that are
20 before us now, and any future applications,
21 again, would be processed one at a time, case
22 by case basis, with its own site-specific

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1 NEPA analysis, and that would include a
2 Notice of Intent, a public scoping period for
3 that project, so that the public would be
4 involved in individual projects through the
5 NEPA process.

6 However, BLM believes that by
7 looking programmatically at the issues
8 associated with solar energy development, we
9 will be able to develop a more comprehensive,
10 consistent, and efficient program approach by
11 which to address solar energy proposals on
12 public lands.

13 The Programmatic EIS will identify
14 public lands that are best suited to solar
15 energy development, mitigation strategies,
16 and best management practices to guide future
17 solar energy development.

18 And another thing we are looking
19 at in the PEIS is the need for possibly
20 additional transmission corridors to
21 specifically facilitate solar energy
22 development.

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1 We think that the Programmatic EIS
2 will be key to advancing understanding about
3 the impacts of solar energy development and
4 how best to deal with those impacts, and that
5 the resulting decisions will better foster
6 and support the nation's need for
7 environmentally sound solar energy
8 development.

9 Because BLM expects to amend land
10 use plans in the six state area, to adopt the
11 solar energy decisions that are made as a
12 result of the Programmatic EIS, these
13 meetings are also an important part of our
14 BLM planning process.

15 In our Notice of Intent, published
16 May 29th, we included proposed planning
17 criteria, and we are also asking for your
18 comments on our planning criteria at the
19 scoping meeting tonight.

20 One last thing I wanted to say
21 is that -- I wanted to remind the folks that
22 are here, that this is about, from BLM's

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1 perspective, this is about solar energy
2 development on BLM-administered lands.

3 We aren't in a position to address
4 specific applications because those will be
5 handled with their own NEPA analysis and
6 their own specific public scoping. This is
7 about the broader programs and policies, and
8 understanding the broader issues associated
9 with solar energy development. Thank you.

10 DR. AVCI: Thank you, Linda. The
11 next person who's going to speak is Lynn
12 Billman. Lynn is a senior project leader
13 with the National Renewable Energy
14 Laboratories, NREL, for short. NREL is
15 providing technical support for the PEIS with
16 respect to defining the solar energy
17 resources and technologies.

18 MS. BILLMAN: Hi. I also thank
19 you for your participation here tonight.

20 I'm just going to give you a very
21 brief overview of solar technologies that are
22 being included in the scope of this

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1 Programmatic Environmental Impact Statement,
2 a little bit about the solar resources that
3 we're looking at for this, and a couple
4 comments that pertain to how we look at the
5 penetration of solar into the marketplace for
6 the 20 year scope of the Programmatic
7 Environmental Impact Statement.

8 So we are, as they mentioned
9 before, we are looking only at utility scale,
10 defining that as about 10 megawatts or more
11 per project. There have been many, much
12 interest and comments about distributed
13 generation, putting PV panels, for example,
14 on rooftops. That is not within the scope of
15 this.

16 I'll mention a little bit about
17 the GIS type systems, Geographic Information
18 Systems, that are used to support the
19 development of the Programmatic Environmental
20 Impact Statement, and a mention about some of
21 the federal policies and the impact that they
22 can have on the future of solar development

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1 in the Southwest.

2 Everyone has their way of
3 categorizing solar technologies. Brad
4 mentioned photovoltaics versus more solar
5 thermal technologies. I'm going to speak to
6 these in the context of which ones are more
7 dispatchable. That means that a utility can
8 have access to electricity from that source
9 over a fairly broad, dependable period of
10 time, versus those technologies that are not
11 dispatchable, they only produce electricity
12 when the sun is shining.

13 And in the category of
14 technologies that can work reasonably
15 effectively with storage, that enable the
16 utility to use that electricity for a longer
17 period of time during the day, there are
18 parabolic troughs, power towers, and linear
19 Fresnel reflector systems.

20 And I would just simply mention
21 the pictures that go with those and then I'll
22 talk about each one a little bit

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1 individually.

2 The parabolic trough is in the
3 upper left corner. That's actually a picture
4 from Kramer Junction, California, which has
5 been around for 15 years. That particular
6 facility is 30 megawatts and it's part of a
7 354 megawatt collection of plants.

8 The power tower is the third one
9 over, and I'll explain a little bit about
10 that technology on the next slide.

11 The Liner Fresnel Reflectors is
12 the fifth one over and that's a relatively
13 new technology, especially here, in the
14 United States, and again, I'll describe that.

15 The technologies that typically do
16 not operate with storage include Dish engine,
17 dish/Stirling engine technologies -- that
18 would be the fourth picture over -- those are
19 individual units, monitoring units, that each
20 individual unit is about a 25 kilowatt
21 system.

22 Concentrating PVs, the second

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1 picture over, there are several types of
2 those that I'll mention. Flat plate PV is
3 the last picture in the bottom right corner.

4 You've seen many examples of that already.

5 One other thing I'll mention, I'll
6 talk about the concentrating technologies
7 first, and interestingly enough, most of
8 these systems will concentrate sunlight to
9 what we call 500 suns, that's about 500 times
10 the sunlight that you would get, you know,
11 from the normal, natural sun. Okay? Okay.
12 The concentrated solar categories, the
13 parabolic trough, as I say, they are a very,
14 very commercial technology here, in the U.S.,
15 and internationally. 354 megawatts have been
16 operating very reliably in Southern
17 California.

18 The newest system in the U.S. is
19 Nevada One, which is south of Las Vegas.
20 That's a 64 megawatt system. Central
21 receivers are generally envisioned for larger
22 power plants, up to 250 megawatts.

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1 There is certainly a system
2 performing in Spain. There's one proposed
3 for Southern California. Let's see. The
4 reason we've mentioned -- if you'll go to the
5 next slide. The reason we've mentioned
6 dispatchable power as being quite important,
7 is if you compare the utility load, if you
8 look at that red dotted line, that's a
9 typical utility load for the Southwest, where
10 electricity usage picks up at about 6:00 in
11 the morning and it stays quite high until,
12 you know, 9:00 or 10:00 in the evening,
13 before it drops off. Whereas the solar
14 resource is shown by the yellow-colored area,
15 and that only matches about half of the
16 daytime lower. Whereas when you can have
17 thermal storage, you can extend the value of
18 that electricity, of that sunlight, through
19 the rest of the hours that are actually being
20 used.

21 Okay. Let's go to the next slide.

22 For concentrating systems in the

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1 nondispatchable category, as I say, the
2 system on the left is a dish/Stirling -- oh,
3 I didn't explain.

4 Parabolic trough technologies, in
5 case you're not familiar with them, they use a
6 long tube of a heat transfer -- of a fluid
7 that can be heated to very high temperatures,
8 and around that, too, is a linear mirror that
9 is shaped as a parabola, focuses the
10 sunlight, heats the fluid in the tube, and
11 then that hot fluid goes to a generating
12 station, and it flashes water into steam
13 which drives a turbine. That's the basic
14 concept for how you get the electricity.

15 The dish/Stirling systems
16 concentrate the sunlight on to that little
17 receiver in the center that you see, and it
18 actually heats the fluid and drives the
19 piston. So it's a different type of an
20 engine technology. And as I mentioned, these
21 are really precommercial units, about 25
22 kilowatts. However, there's interest in

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1 putting a large number together. 400 of them
2 will get you 10 megawatts and we believe that
3 during the 20 year period of this study, that
4 those are certainly technologies that could
5 become commercial.

6 The picture on the right is
7 concentrator PV systems. Photovoltaics is
8 what PV stands for, and as Brad mentioned, in
9 that context you're not using the heat from
10 the sun, you're actually using the photons
11 from the sun, and in a concentrator PV
12 system, instead of heating a fluid at the
13 center where the sunlight is focused, you're
14 actually using a high-efficiency photovoltaic
15 cell. The major cost in these systems is the
16 PV cell, so if you can use a small area of
17 cell and concentrate the sunlight, you can
18 lower your overall cost of electricity.

19 These also are precommercial
20 technologies being tested at Sandia and
21 there's a lot of commercial interest
22 beginning in these systems, and again these

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1 are in the 3 to 25 kilowatt range.

2 Let's see. The next slide,
3 there's I think three pictures -- yes -- of
4 three different types, a repeated picture of
5 that reflective one, the refractive one --
6 there's a wide variety of ways to concentrate
7 sunlight, that people are exploring.

8 Okay. In the next slide, for all
9 of these concentrating technologies, they
10 depend on what we call the direct normal
11 portion of the sunlight. That's the sunlight
12 that hits the reflector at a 90 degree angle
13 and the rest of the sunlight is not really
14 captured.

15 So these can be used where there
16 is very bright sunlight available most of the
17 day.

18 I would also point out that this
19 is a typical kind of a map that we would get
20 from a geographic information system.

21 It shows the amount of solar
22 radiation on BLM lands only. That's why

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1 there's an awful lot of white spaces. Okay.

2 The data is gathered from a
3 variety of sources, public databases,
4 satellite data. Both NREL and Argonne, and
5 many other national laboratories have
6 extensive capabilities in using geographic
7 information systems to analyze the
8 applicability of solar systems in different
9 areas.

10 You can screen out, for example,
11 slopes that are too high to be stable. You
12 can screen our environmentally-sensitive
13 areas. So this is one of the tools that will
14 be used in the Environmental Impact Statement
15 process.

16 Okay. In the next slide, we go
17 away from the concentrated technologies into
18 the one nonconcentrated technology, and
19 that's PV flat plate technologies. PV
20 systems, as you may know, can either be fixed
21 on the ground or they can be set up to track
22 the sun, typically in one axis. There are

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1 dual axis trackers, but the single axis are
2 more cost-effective.

3 And this should be two pictures.
4 Yes. Nellis Air Force Base is the largest PV
5 array in the country, 14 megawatts. There is
6 a new array in California that is about 8 or
7 10 megawatts. It's just about the utility
8 range that we're speaking of.

9 And the other system is in
10 Portugal and that's a fixed lead plate
11 system.

12 The next slide is a similar map;
13 however, you'll notice the colors are not as
14 deep red. This is for global solar resource.

15 A flat plate system can use the sunlight
16 that comes directly at 90 degrees. It can
17 use sunlight that bounces off of the ground,
18 off of clouds. It can generate electricity
19 in cloudy conditions.

20 Okay. The next slide. I would
21 like to mention one of the key policy
22 parameters that would be considered in this

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1 Environmental Impact Statement process as we
2 look into the possibilities for solar in the
3 future, and that's the federal investment tax
4 credit. Right now, and for several years,
5 people who invest in solar energy systems
6 have been able to save 30 percent on their
7 taxes.

8 That particular federal tax credit
9 is set at this point to expire at the end of
10 this year. You may have heard in the news of
11 various machinations and discussions that
12 have gone on in Congress, and that issue is
13 not yet settled, as to where that's going to
14 go in the future.

15 However, it is a large benefit,
16 financial benefit to companies today that are
17 interested in investing in solar.

18 And if you'll show the next slide.

19 Part of the Environmental Impact Statement
20 process preparation involves looking into the
21 future as to what the impact of solar could
22 be over a 20 year period, on many things.

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1 Environment, on jobs, on the economy, and so
2 on.

3 And just to show you the impact of
4 one of the key policies, this investment tax
5 credit, this particular curve was calculated
6 using hundreds of factors, using some
7 modeling that we'll be doing to support this
8 process.

9 And if there is no extension of a
10 solar investment tax credit, the project is
11 that around 2030, solar might have penetrated
12 to the point of 6 or 7 gigawatts in the
13 United States. If you show the next slide,
14 Leo. If you want to assume -- you can make
15 whatever assumptions you want -- but if one
16 assumes that the investment tax credit would
17 be extended for another eight years, and
18 doesn't stay at thirty, but even declines, as
19 the technology gets into the marketplace,
20 that gives enough of a boost, that by 2030,
21 we could very easily see 40 gigawatts of
22 solar electricity in the country.

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1 So we just wanted to show that as
2 an example of the kind of analyses that will
3 be done to support the Environmental Impact
4 Statement. And that's all I have to share
5 with you. Thank you very much.

6 DR. AVCI: Thank you, Lynn. Now
7 I'm going to give you a little bit of an
8 overview of the NEPA process and the scoping
9 process. NEPA stands for National
10 Environmental Policy Act.

11 Now we've been talking about
12 preparing the Programmatic EIS, but first of
13 all, let's start with an EIS. I'm sure many
14 of you have seen, or have participated in
15 these types of meetings. But just as a way
16 of conception, an Environmental Impact
17 Statement process is a document that provides
18 a comprehensive evaluation of the
19 environmental and socioeconomic impacts of
20 the federal agency's proposed action as well
21 as a reasonable range of alternatives.

22 It describes the purpose and need

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1 of the project. It identifies the
2 environmental impacts and potential
3 mitigation measures.

4 And it analyzes both the short-
5 term and long-term impacts as well as
6 cumulative impacts. Those are the impacts
7 that you get, not only from what's being
8 proposed, but when you add all the other
9 impacts that are going on, all the other
10 activities that are going on in the same
11 general area. And of course it also
12 describes the public's input and concerns.

13 Now why is this EIS needed? Well,
14 the short answer is it's NEPA. NEPA requires
15 that federal agencies, whenever there's
16 proposed actions that have the potential to
17 significantly affect the quality of the human
18 environment, the federal agency is required
19 to prepare an Environmental Impact Statement.

20 Now the proposed action may be
21 site-specific, specific to a specific
22 location and technology, or it could be a

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1 broad programmatic action.

2 As in this case, it is a broad
3 programmatic action that involves setting up
4 solar energy programs for the two agencies.

5 Now if it is a specific, site-
6 specific EIS, then it's, you know, basically
7 for that site and technology. In the case of
8 the programmatic actions, it is called a
9 Programmatic EIS. Instead of evaluating
10 specific projects, it basically considers
11 generic and programmatic actions, and
12 potentially applicable mitigation measures.

13 Now we mentioned the reasonable
14 range of alternatives. What are the
15 alternatives that are being considered for
16 this Programmatic EIS?

17 Well, no action alternative is a
18 required alternative for NEPA. "No action"
19 means what would happen if the proposed
20 action did not take place? It doesn't
21 necessarily mean nothing happens. It's just
22 that the proposed action doesn't take place.

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1 And then there is the proposed
2 action. As you can see, the proposed action
3 for this PEIS is developing and implementing
4 Agency-specific programs that would
5 facilitate environmental response to utility-
6 scale solar energy projects.

7 A lot of this has already been
8 mentioned by the previous speakers. And for
9 BLM, it meant amending the individual land
10 use plans to adopt a new program. Now up to
11 last week there was a third alternative which
12 was called limited development alternative,
13 and as Linda Resseguie mentioned in her
14 presentation, that alternative is no longer
15 relevant for this PEIS, based on the decision
16 that BLM made last week -- lifting the
17 moratorium on new applications.

18 At this time, the Agency has not
19 decided if there will be a third alternative,
20 or the alternatives, the two -- the first
21 alternatives will be used. That decision
22 will be made at the conclusion of the scoping

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1 period.

2 Let's talk about the scoping
3 period. Now there are actually two types of
4 scoping. There is one, internal scoping,
5 where agencies internally get together and
6 evaluate what the proposed action is, what
7 might be the potential alternatives and the
8 certain impacts. At that point they publish
9 what's called a Notice of Intent in the
10 **Federal Register**. With the publication of
11 Notice of Intent, the public scoping period
12 begins.

13 The public scoping period is
14 generally between 30 and 60 days. In this
15 case, it started on May 29th, and it's going
16 through July 15th.

17 It is during this time that the
18 public is invited to provide input into the
19 EIS. The type of input that's being asked
20 is, you know, on the proposed action,
21 alternatives that are being considered,
22 significant issues to be analyzed, if there

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1 are any concerns that, you know, the public
2 or other agencies might have, possible
3 mitigation measures, any data that others
4 might have available, that could be useful in
5 the development of the EIS.

6 So only after this public scoping
7 period, that the decisions are crystallized
8 in terms of what goes into the EIS.

9 So it's in this vein that BLM
10 basically heard what the public was saying in
11 previous scoping meetings that we had, and on
12 the Web, that there was strong opposition to
13 the third alternative, and as a result,
14 instead of waiting until the end of the
15 scoping period, they've been asked, that they
16 would lift it.

17 So it's basically very much in
18 line with the intent of NEPA. That's what
19 NEPA is basically suggesting. That the
20 federal agencies consider public input in
21 their decision making, in estimating their
22 environmental impacts.

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1 This scoping period is not the
2 only time -- go to the next slide -- is not
3 the only time the public gets a chance to
4 provide input into this process.

5 When the draft EIS is published,
6 which is currently scheduled to appear in
7 spring of 2009, there will be another set of
8 public meetings, public hearings, and there
9 will be a certain period, generally 45 to 60
10 days period where the public will have an
11 opportunity to comment on the process.

12 And then also, when the final EIS
13 is published, currently scheduled to be
14 spring of 2010.

15 Okay. Now I've mentioned the
16 project Web site several times. I know some
17 of you have visited this Web site because you
18 have registered for this meeting on the Web
19 site. If you have not done so, if you have
20 not seen it, I would strongly suggest that
21 you visit the Web site.

22 The address is solareis.anl.gov.

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1 There's a wealth of information about the
2 program. It not only provides the
3 information on EIS process but all the slides
4 that are being shown today, all the posters
5 that you see around the room, are actually on
6 the Web site. You can go download them from
7 the Web site.

8 It also has an e-mail notification
9 system, that when you register with the
10 program and put your e-mail address on the
11 Web, whenever something happens with the
12 program you get an e-mail notification.

13 For example, when the decision
14 about the third alternative was made, there
15 was an e-mail sent to everybody, and if you
16 were on the Web site, you probably received
17 it. Or you should have received it. Okay.

18 Now there are basically three ways
19 to provide comments during this scoping
20 period. One, at the scoping meeting tonight,
21 via the Web site, or by mail.

22 Now the written comments, you

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1 know, could be some of this through the Web
2 site, but you can also send it to the address
3 shown on the bottom of this viewgraph.

4 You can also, you know, if you
5 have written materials with you tonight, you
6 can also give it to me or to any of the PEIS
7 staff, or at the registration desk before you
8 leave tonight.

9 Now before we begin the open
10 comment phase, as I mentioned earlier, we
11 will have a brief question-and-answer period.

12 This will probably last approximately 10 to
13 15 minutes.

14 What I will do is I will bring
15 the, this microphone to you, if you have a
16 question. You can address it to anybody on
17 the panel. I would ask, however, that you
18 please limit your questions to matters
19 related to presentations that have been made
20 up to this point, and the clarifying types
21 of questions.

22 If your question has the tone of a

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1 comment, please hold that until the official
2 comment period begins. Okay? So we'll start
3 with the questions at this time.

4 Anybody has a question. Raise
5 your hand. Okay. One here; second one
6 there.

7 MS. MERRIAM: Thank you. Do we
8 need to identify ourselves?

9 DR. AVCI: Please.

10 MS. MERRIAM: My name is Karen
11 Merriam and I'm from the local Santa Lucia
12 chapter of Sierra Club. Listening to Linda,
13 and I'm sorry, I can't pronounce your name.
14 Linda Resseguie?

15 MS. RESSEGUIE: Resseguie.

16 MS. MERRIAM: Resseguie. And Mr.
17 Moderator --

18 DR. AVCI: Halil Avci.

19 MS. MERRIAM: Halil. Hearing both
20 of your comments, I find I have a question
21 that ties to both, what you've both been
22 saying. I'm wondering, is -- if BLM is using

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1 a one-at-a-time processing, as you were
2 mentioning, applications, how will the
3 programmatic approach allow for analysis of
4 cumulative impacts of all the applications?
5 So how can you look at -- well, I think that
6 says what I mean. And I do have another
7 question, if that's permitted.

8 DR. AVCI: You want to address
9 first?

10 MS. RESSEGUIE: No. I want you to
11 answer it.

12 DR. AVCI: Okay.

13 MS. RESSEGUIE: The programmatic -
14 - one of the strengths of the programmatic, I
15 believe, is going to be looking at cumulative
16 impact, creating the reasonably foreseeable
17 plan of development over the life of the
18 PEIS, and looking at the potential cumulative
19 effects of solar energy development across
20 the six state study area.

21 Each individual application that
22 is being processed now, and will be processed

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1 during the time period while the PEIS is
2 being worked, is also going to have to
3 address cumulative effect, cumulative
4 impacts, and I think that that is one of the
5 -- if, if the PEIS were done first, those
6 individual NEPA analysis, site specific,
7 would be able to tier to the programmatic,
8 and that would make that process much more
9 efficient, because they would have the
10 benefit of this previous analysis.

11 They aren't going to have that
12 benefit but it will still need to be part of
13 the environmental analysis that goes into
14 each site specific. I'm not sure of what
15 methodology will be used but it will have to
16 be part of the individual site specific NEPA
17 analysis for those projects.

18 And I don't know if that's
19 responsive or not, but that was my sense of
20 what you were asking.

21 MS. MERRIAM: Yes; yes.

22 DR. AVCI: I will also take that

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1 as a comment for the PEIS, but just to follow
2 up with what Linda said, that that's really a
3 very important distinction between site
4 specific analyses and programmatic analyses.

5 On the programmatic scale, it will
6 be very difficult to say at this very
7 specific location, what the cumulative
8 impacts are, because we're working with a six
9 state area, and if you want to go basically
10 square mile by square mile, we'd never get
11 out of this PEIS in the time that we're
12 envisioning.

13 So it will be more on the general
14 sense in the cumulative impact discussion,
15 and the PEIS will be more in a general sense,
16 what would be the impacts if these types of
17 activities were taken in the same general
18 area and what would need to be considered at
19 the site specific level, which will be
20 basically tiering off on the programmatic
21 EIS.

22 MS. MERRIAM: And this will be

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1 measured against factors like demand, market
2 demand, and that sort of thing, eventually,
3 when you're deciding, looking at the overall
4 policy for development of projects?

5 DR. AVCI: There will be some
6 development scenarios as to, you know, what
7 level of development would be -- and if
8 that's the level of development, what the
9 cumulative impacts would be, but it would not
10 be, again, in specifically -- at specific
11 locations.

12 MS. MERRIAM: Yes. I'm looking,
13 as you were saying, at the broader --

14 DR. AVCI: Yes. The broader
15 scale.

16 MS. MERRIAM: The broader scale.
17 And I guess just a corollary to that was then
18 is that analysis also made with respect to
19 the, to other renewable resources? Like,
20 let's say, the development of wind or energy,
21 or the development of geothermal, and how
22 that's balanced out in terms of an overall

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1 policy for development of renewable?

2 DR. AVCI: Well, wind has its own
3 PEIS that was completed. Geothermal has a
4 separate PEIS that's in draft stage. So each
5 one of those are addressing impacts in a
6 separate sense. But when you're looking at
7 cumulative, of course you need to include
8 those also in your analysis.

9 MS. MERRIAM: So if there is a
10 process for integrating those PEIS --

11 DR. AVCI: The cumu --

12 MS. MERRIAM: -- together, so
13 that you see the overall picture?

14 DR. AVCI: The cumulative impacts
15 analyses includes all actions, regardless of
16 who's causing the action. It could be
17 federal. It could be public. It could be
18 anybody else.

19 And so in that case, yes, every
20 foreseeable future action would be considered
21 in the analysis.

22 We had one more in the back here.

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1 Thank you.

2 MR. NORMANDIN: Hi. My name is Al
3 Normandin, and I just represent myself. I
4 had a question for Linda. On the chart, you
5 mentioned that in 2005, 10,000 megawatts of
6 electric, renewable electric power would be
7 approved. Your chart said it was required.

8 I think you mentioned it was a
9 goal. Is it a goal or is it a requirement,
10 and how doable is it?

11 MS. RESSEGUIE: Just to go back,
12 the chart talks about 10,000 megawatts of
13 nonhydropower renewable energy approved by
14 the year 2015, and that's an excellent
15 question, because what the statute actually
16 says is that the Secretary should "seek to
17 have approved" --

18 MR. NORMANDIN: To seek. Oh,
19 okay.

20 MS. RESSEGUIE: And so it's -- I
21 call it "fuzzy language," and we consider it
22 a goal as opposed to a mandate. That's how

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1 we're characterizing it. But it was the
2 Secretary "shall seek to have approved."

3 MR. NORMANDIN: So when the chart
4 said it was required, it's not really
5 required. It's more like a goal, like you
6 said?

7 MS. RESSEGUIE: It is like a goal.
8 Congress -- we certainly got the sense of
9 the congressional direction, that Congress
10 would like us to do this. So we are striving
11 to accomplish the goal.

12 MR. NORMANDIN: Okay. Thank you.

13 MR. RUSKOVICH: My name's John
14 Ruskovich. I'm from the Carrizo Plains, and
15 I have a question for Brad Ring.

16 You're telling us about the
17 project at Kramer Junction; how great it is.

18 When you're advertising that project, why
19 don't you explain to the people that it is
20 not a solar-only project. That it is a
21 solar/ natural gas, so it can run 24/7. So
22 it does put out greenhouse gases just like

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1 Morrow Bay Power would do the same thing.

2 And why don't you also explain to
3 the people, that if this is such a good deal,
4 why did that company that built that plant,
5 and about five others, why did they go
6 bankrupt? Because this process is 14 to 16
7 cents per power, where PG&E produces it at
8 2.5 cents and sells it to the open market.

9 So can you explain to the public
10 why all of a sudden this is such a good
11 thing. If it's actually natural gas backed,
12 how can it be no greenhouse gases? You want
13 to see the document where it even says the
14 Department of Energy -- these are natural
15 gas-backed solar? It is.

16 MR. RING: I'm not sure that's
17 part of this discussion. I don't know the
18 specifics. I know that there is some fossil
19 -- I really don't know that system
20 completely. There is some fossil backup to
21 it but the majority of it is concentrating
22 solar power.

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1 DR. AVCI: I need to object. That
2 is a very specific project you're talking
3 about and it was mentioned in Lynn Billman's
4 presentation, that there are different types
5 of technologies, some dispatchable, some not
6 dispatchable. Some have storage; some don't
7 have storage.

8 So I think what you're saying, one
9 project needing a backup at certain times
10 because the sun is not shining during that
11 time, is well-recognized within the solar
12 energy community, and that's going to be
13 considered in the analysis.

14 Next, please.

15 MS. GROOT: My name is Henrietta
16 Groot. I know you're working on BLM land.
17 However, how are you going to coordinate with
18 the California authorities? California has
19 an integrated energy policy, and as long as
20 you're having transmission facilities from
21 BLM land elsewhere, how are you going to
22 integrate with the excellent California

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1 policy?

2 MS. RESSEGUIE: Let me try to
3 address your question. We are working with a
4 number of California agencies, including the
5 California Energy Commission, the CPUC,
6 California Department of Fish and Game. They
7 have actually formed a interagency working
8 group to assist us with this PEIS, and we've
9 scheduled regular meetings with them.

10 We're also taking into account the
11 work that California is doing on the
12 Renewable Energy Transmission Initiative, the
13 RETI. Also the Western Governors Association
14 Initiative pertaining to renewable energy
15 zones.

16 And the other thing we're taking
17 into account is the -- we call it the section
18 368, Westwide Corridor Study, that's ongoing.

19 So those similar efforts, and the agencies
20 that are working on those efforts are being
21 incorporated and coordinated with as we
22 undertake this PEIS.

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1 MS. GROOT: And this will be part
2 of the PEIS?

3 MS. RESSEGUIE: Their input will
4 be part of the PEIS. Yes.

5 DR. AVCI: One more.

6 MR. MALONEY: Hi. Tom Maloney of
7 the Nature Conservancy. Brad, you mentioned
8 a acreage-to-kilowatt sort of ratio that's
9 somewhat -- you made it sound like it was a
10 standard, and I'm wondering, across the
11 various technologies, what the impact on
12 footprint is, acreage, you know, covered, and
13 whether or not that will be specifically
14 assessed in the Programmatic EIS?

15 MR. RING: You know, that's an
16 estimate that's used. There's a range of
17 acreage per megawatt by the technology and as
18 the technologies progress or change, I've
19 heard different numbers from five, even to
20 seven or eight acres per megawatt, depending
21 if you have storage or other attributes to
22 your solar systems.

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1 So it would be addressed. It
2 would have to be addressed as part of the
3 whole -- at least as part of the project.
4 I'm not sure if it's addressed as part of
5 this PEIS. I'm not sure, but as a project,
6 it would.

7 DR. AVCI: I know there are quite
8 a few questions. If you have short ones,
9 we'll have two more. One here, and then one
10 there, please. Okay.

11 MR. BARBOUR: Hi. Greg Barbour.
12 This is a question for Linda. Of the
13 applications that the BLM has, what is the --
14 do you have metrics as far as how much time
15 it takes from applicant to permit?

16 MS. RESSEGUIE: No metrics
17 currently exist, Greg. But I can tell you
18 this. We have not yet approved any solar
19 energy development projects on BLM land. We
20 have one project, we call it the Ivanpah
21 Project, over towards Nevada -- it's in
22 California but near the Nevada state border -

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1 - that is the furthest along, and we
2 initiated a Notice of Intent, I think it was
3 last November, and we're expecting to have a
4 draft program -- or not programmatic -- a
5 draft Environmental Impact Statement out on
6 that project later this fall.

7 So that one has been about a year
8 from -- to draft. We don't have any template
9 out there because we're just getting started
10 with these. But my expectation is that it's
11 going to be easily a year or longer to do the
12 environmental, site-specific environmental
13 work for each project.

14 MS. BELL: Hi. Robin Bell, and I
15 have, I think, a really simple question, and
16 I apologize for being a total lay person in
17 this, and I'm just trying to grasp the
18 concept of programmatic EIS and how it
19 correlates to site-specific EIS.

20 Will the programmatic EIS have --
21 define your total program plus have
22 guidelines for the site-specific EISes? Is

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1 that how this would work?

2 MS. RESSEGUIE: Let me answer your
3 question by talking about the programmatic
4 Environmental Impact Statement that BLM
5 completed in 2005 for wind energy.

6 We did a similar approach, it
7 covered all of the 11 Western states, and
8 what came out of that was a record of
9 decision that established some best
10 management practices and mitigation measures,
11 and I think 52 land use plans were amended,
12 kind of all at once, to adopt those
13 standards, and subsequent to that, we also
14 came out with Bureau directives, a policy
15 that took all of these policies that were
16 decided, and made them uniformly applicable
17 to all BLM lands. So that a wind energy
18 developer in one state would have the same
19 standards applied to them that would be in
20 another state.

21 So it streamlines the site-
22 specific environmental work, and it provides

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1 consistency and certainty to developers about
2 what will be expected of them, and in that
3 way facilitates the development. People know
4 more what to expect from BLM as opposed to a
5 company coming to a particular field office,
6 and then having to sort through it all by
7 themselves. You get more variation that way.

8 So that's what we're hoping to get
9 out of the programmatic solar, is this
10 overarching guidance and policy that will be
11 applicable in all cases.

12 DR. AVCI: Okay. We'll start with
13 the comment phase now. Okay. Here's how
14 we'll proceed. If you'll go to the next
15 slide. Some of you registered online, and
16 some of you registered for the meeting at the
17 door when you came in tonight. At the time
18 you registered, you were asked if you wanted
19 to speak tonight, provide oral comments.
20 Those of you who said "yes," I have your
21 names in my hand. I will call you to the
22 podium to present your comments over here, at

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1 the podium.

2 After everyone who has registered
3 to speak has had a chance to speak, I will
4 ask if there is anyone who has not registered
5 to speak but would like to, after hearing the
6 presentations and other speakers.

7 Now in order to allow equal chance
8 for everybody that's speaking, every speaker
9 is requested to limit his or her comments to
10 three minutes, total. If you are one of
11 those speakers here at the podium, and when
12 you reach the two and a half minute mark, I
13 will be sitting here and I will be showing
14 you a yellow card, to indicate that you have
15 30 seconds to wrap up your comments. When
16 you reach the three minute mark, I will show
17 you the red card. That means your time is up
18 and you should immediately conclude your
19 remarks.

20 If you are not finished with your
21 comments at the end of three minutes, and you
22 need time to add to your comments, you will

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1 be given the chance to do that after
2 everybody who wants to speak has had a chance
3 to speak, at the end of the meeting.

4 During this time there will be no
5 sharing of time, and passing of left-over
6 time to another speaker.

7 Now is everyone clear on how the
8 comment period of this meeting will be
9 conducted? Are there any questions on the
10 process? Okay then. We will now begin the
11 formal comment phase of the meeting. When
12 you come to the podium, please get close to
13 the microphone and speak directly into the
14 microphone so the court reporter can hear
15 your comments and record them. Before you
16 begin your comments, please state your name
17 and affiliation.

18 The first speaker tonight will be
19 Tim Strobridge, followed by Greg Barbour, and
20 then Robin Bell. So we'll start with Tim
21 Strobridge, please.

22 MR. STROBRIDGE: Well, my name's

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1 Tim Strobridge. I didn't really write
2 anything specific to speak about. I'm just
3 going to speak off the top of my head. But I
4 do believe solar power is a good thing, and I
5 also believe that there are companies out
6 there that are hiding behind the solar name,
7 and they're not a good thing.

8 In the Carrizo Plains, for
9 example, there are two companies, one,
10 OptiSolar that wants to cover 10 square miles
11 of agricultural land with solar panels, and
12 put up cyclone fences, and prevent the
13 natural habitat of antelope and elk, and
14 other very valuable species to proliferate in
15 that area.

16 Ten square miles is a big area,
17 and there's also another company that is
18 hiding behind the name of a solar farm, which
19 is -- it's a thermal industrial site.
20 They're going to have cooling towers that are
21 115 feet tall. Their whole side is 56 feet
22 side. It's going to be an eyesore. It's

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1 going to make noise. They're going to
2 produce hazardous waste on a daily basis,
3 that has to be trucked out, and that
4 hazardous waste has to go somewhere.

5 Our community is going to have to
6 make room for this hazardous waste that
7 they're going to produce, and like I said,
8 solar is a good thing when it's put in the
9 right place, built with the right designs.
10 My personal feeling is solar belongs on
11 rooftops and not on ag land, and it has no
12 business there. Thank you.

13 DR. AVCI: Thank you, Mr.
14 Strobridge.

15 Next, Greg Barbour.

16 MR. BARBOUR: Hi. Greg Barbour.
17 I live in Atascadero. I sustain a living on
18 my property. I'm a manufacturer and a
19 product developer. I have extensive
20 financial and time interest in silicon-based
21 PV solar technology. And right now, the
22 industry, worldwide industry is capitalizing,

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1 getting the capital in place to manufacture
2 an extensive amount of silicon-based PV solar
3 cells.

4 I have a list of detailed comments
5 that I'll submit. I don't have time with the
6 three minutes to go through the whole list.
7 You know, just the "big picture." You know,
8 there's going to be online gigawatts, lots of
9 gigawatts of solar material's going to be
10 available to manufacturers and people who can
11 deploy these systems to whatever class solar
12 installation. My personal interest is going
13 into a residential plus class and a
14 commercial class, where it's about an acre.
15 But our business plan, we see that we're
16 going to need about 100 square miles of solar
17 space in the next 15 years, and that amount
18 of space, you know, if it's ideal, you know,
19 and it's just the ball park, is enough
20 energy, it's about 1.4 terrawatts of energy,
21 which is equivalent to the United States'
22 consumption of oil per year.

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1 So as a goal, you know, in my
2 numbers -- I saw the charts that Linda put up
3 and those are great, but they're -- I think
4 they're low-balling what could happen.

5 And just to give you background on
6 PV solar technology, it's been around for 50
7 years, it's a Siemens process, and it's just
8 creating polysilicon, which is an abundant
9 mineral, and there's no -- in the
10 manufacturing process, it is -- in a closed
11 loop system, it's toxic-free, and the
12 longevity of these solar systems are -- or
13 their solar cells are about 40 years.

14 And they require very minimal
15 sustaining costs, and this is one specific
16 section of the solar picture, but it's
17 technology that's already proven. But it has
18 extensive labor elements that is becoming
19 capitalized right now. So that the world is
20 capitalizing this technology to remove the --
21 so I can finish up, you know, at the end of
22 the meeting. But thank you.

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1 DR. AVCI: Thank you, Mr. Barbour.

2 Next, we have Robin Bell. And then
3 following Robin Bell, we'll have John
4 Ruskovich and Susan Harvey.

5 MS. BELL: Hi. I'm Robin Bell and
6 I have a home on the Carrizo Plains, and
7 we've got a lot of solar plant activity out
8 there. There's currently six solar companies
9 on the California Independent System Operator
10 queue, who have intentions of building in the
11 area. Only two companies have disclosed the
12 details.

13 And as Tim mentioned, there's 10
14 square miles of these combined two companies,
15 and it seems like when you're evaluating your
16 land of where these plants could go, a lot of
17 time could be saved if you evaluate sensitive
18 areas where they just shouldn't go at all.

19 For instance, these plants are
20 going to take up 10 square miles of an area
21 that California Department of Fish and Game
22 says has one of the highest concentrations of

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1 special status species in the state.

2 It just doesn't make any sense to
3 put it there. Look for some other places.

4 The other thing, it would be a
5 direct conflict with state programs that
6 reestablished the Tulio, and the prong-horned
7 antelope in this area. It's a -- this 10
8 square miles is an important migration
9 corridor for the, and the antelope are
10 actually there on a daily basis.

11 So that's a direct conflict with a
12 state program. It seems like we could save a
13 lot of time by establishing areas where it
14 will be a conflict.

15 Also, another thing we're facing
16 is a short cut where AUSRA is looking for the
17 U.S. Fish and -- or the Army Corps of
18 Engineers to claim jurisdiction over a
19 drainage ditch on their site. In that way
20 they can get a short cut to the U.S. Fish &
21 Wildlife conservation plan where -- I'm not
22 sure if I have all the wording right -- but

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1 where a comment is issued rather than a
2 conservation plan which would take four
3 years, and this just seems like an
4 environmental short cut. I don't see why
5 that should be allowed.

6 Also when these companies are
7 doing their environmental test, it would be
8 in a way that's unbiased. For instance, this
9 AUSRA company is -- has a company that's
10 doing tests directly under their supervision.

11 Well, we're finding a lot of
12 things that are skewed in that, in the human
13 area, such as sound samples at our homes.
14 Well, we can police that but who's going to
15 police the blunt-nosed leopard lizard and kit
16 fox studies? I think it should be structured
17 so that they're more unbiased studies.

18 Also, the solar thermal plant
19 shouldn't be in an area where there's a water
20 sensitivity issue, where water is a scarce
21 resource. Again, common sense.

22 Again, it shouldn't be -- these

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1 plants shouldn't be located in areas adjacent
2 to residences, where a small number of people
3 are going to have an unfair burden in
4 establishing renewable resources in this
5 country, where their community, their
6 environment, their visual resources, their
7 water and their property values are all
8 affected. That just doesn't seem to be fair.

9 Oh. And one last thing.

10 I understand that there's some
11 heat issues regarding solar plants, that
12 they're going to raise the temperature in the
13 community or in the environment, and I think
14 that should be really looked at. Thank you.

15 DR. AVCI: Thank you, Ms. Bell.

16 Next we have John Ruskovich.

17 MR. RUSKOVICH: My name's John
18 Ruskovich. I'm a rancher from Carrizo
19 Plains. My two neighbors have expressed the
20 size of the solar plants but what they forgot
21 to comment was how little energy they were
22 going to actually create on a large-volume

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1 scale.

2 Now a lot of your land -- you
3 know, I don't know who actually owns it, like
4 in Nevada, whatever -- but BLM does manage
5 for Nature Conservatie just south of us, to
6 bring that back into like how it was 150
7 years ago. Well, I don't think it's right
8 for BLM to even consider letting gigantic
9 solar plants come out on to areas that
10 they're working with other agencies to try to
11 save precious wildlife, and that is also for
12 the public's, you know, camping spots, or
13 whatever, to build these solar power plants.

14 That's the public's property.

15 If you're going to have solar, why
16 don't you put it on BLM land that they
17 control with the Department of Energy, that
18 also the oil companies lease, and are part of
19 the oil plants, like outside of Taft,
20 California, where your property lines dot all
21 over the Central Valley. That's where these
22 nauseous plants should be built instead of in

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1 agricultural lands, or in small communities
2 that BLM surrounds.

3 So just remember your neighbors
4 around you, when you're trying to consider
5 what you want to do by their impact. You're
6 not showing any of these solar power plants
7 that are 300 feet tall. And they have them.
8 They're on the History Channel and
9 everything else.

10 Some of these plants are totally
11 bizarre in size and shape, and they don't
12 produce very much. So think about your
13 neighbors around you.

14 Don't think it's a great policy.
15 Thank you.

16 DR. AVCI: Thank you, Mr.
17 Ruskovich. Next, Susan Harvey.

18 MS. HARVEY: Good evening. My
19 name is Susan Harvey and I'm the president of
20 North County Watch. North County Watch is a
21 501(3)(c) nonprofit organization committed to
22 sustainable development in north San Luis

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1 Obispo County. We are concerned about
2 development, and other land use issues, that
3 impact the environment, natural resources,
4 conversion of ag lands to other uses, and
5 quality-of-life issues.

6 I feel like a person who's just
7 arrived at the bus station, only to see that
8 the bus left like 30 seconds ago. I'm really
9 disappointed to find out that you're going to
10 be accepting applications, and while this
11 process is going on.

12 We support your efforts to take a
13 comprehensive look at the role and impacts of
14 alternative energy choices on BLM lands,
15 including identifying policies that minimize
16 damage, and protect natural and cultural
17 resources for solar projects, and to not
18 process applications for national monuments
19 in other lands in the national landscape
20 conservation system. I assume that's still
21 in place.

22 Our experiences with proposed

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1 facilities on the Carrizo Plain, these
2 facilities are not located on the monument,
3 but the issues they raise are universal.
4 Concerns we have about the siting of
5 alternative energy plants in remote areas
6 include lack of nearby resources and labor
7 for construction of the facilities, the
8 impact of massive construction projects in
9 remote areas can have a very detrimental
10 effect on the habitat and local communities.

11 This is evident when looking at
12 the numerous proposals for facilities that
13 you have here, and when you speak about 130
14 applications generating 70 million megawatts,
15 and these are all presumably in -- going to
16 be -- they're dealing with areas that are
17 very remote.

18 Alternative energy facilities
19 should be located within the communities they
20 serve, to promote local control of energy
21 needs. Local community choice minimizes
22 impact to large interconnected electrical

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1 grids. Facilities being proposed in the
2 Carrizo Plain will feed power lines that will
3 ship the power to the San Joaquin Valley.

4 Completion of the projects are
5 likely to require the upgrade and expansion
6 of two substations. So we're talking about,
7 when you're talking about like needing
8 transmission lines, that there's tremendous
9 kinds of things like that that could -- I
10 mean, potentially, they're amazing to me,
11 that all of these things just kind of fall
12 like dominoes, and suddenly, there we are.

13 A special concern are the impacts
14 to sensitive desert areas like the Carrizo
15 National Monument. Deserts are very slow to
16 repair from assaults on the environment.

17 Potentials for increased
18 deficiency of facilities located in desert
19 areas need to be thoroughly assessed and
20 judged in relation to other economic factors
21 and noneconomic factors. What is the true
22 cost benefit of the extra efficiency compared

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1 to locating small-scaled plants on industrial
2 rooftops in the San Joaquin area?

3 Sensitive lands need to be
4 protected. These lands should not be thought
5 of as potential industrial sites. Large-
6 scale development is incompatible and
7 inappropriate. I'm attaching a short article
8 from the IEEE spectrum that provides a
9 cautionary example of the need to look at the
10 whole picture -- local, regional and beyond.

11 Assess the needs; assess the impacts.

12 And I have two questions from the
13 presentation today. I'm curious about tax
14 credits. It's been -- there was once a solar
15 facility in the Carrizo Plain, and after the
16 tax credits ran out in ten years, they sold
17 it off and it disappeared.

18 So are you going to be looking at
19 -- how long are the tax credits going to
20 last? Are you going to be assessing,
21 rehabilitating the lands when the life of the
22 plant leaves? And how long does approval

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1 last if the plant isn't funded, meaning if
2 you approve of a plant and it doesn't get
3 funded, is that approved permit -- is it in
4 perpetuity, or does it have a life? And I'm
5 sorry, I didn't even watch you. Thank you.

6 DR. AVCI: Thank you.

7 MS. HARVEY: A lot of good those
8 cards did.

9 (Laughter.)

10 DR. AVCI: I think I'm going to
11 have to start employing a different
12 methodology. Okay.

13 Next, we'll have Peter Schwartz.

14 MR. SCHWARTZ: I have nothing to
15 say.

16 DR. AVCI: Okay. Then we'll start
17 -- next, we'll have Polly Cooper, and she'll
18 be followed by Henrietta Groot.

19 MS. COOPER: My name's Polly
20 Cooper. I'm a local architect. Linda, you
21 mentioned something about criteria, that you
22 were also requesting some sort of input

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1 about, and I didn't catch what those criteria
2 might be. So if you have a chance to clarify
3 that, it would be helpful. I think maybe
4 they were generalized land use or something.

5 I'm wondering if the programmatic EIS has
6 any section that would evaluate the different
7 types of solar technologies relative to
8 particular issues. I think it's been brought
9 up about water use in certain areas is a real
10 issue, and some of these technologies use it
11 and some don't. So I'd like to know if
12 that's part of it.

13 And I would like to congratulate
14 people who've mentioned that they are doing
15 everything that they can to conserve and to
16 generate their own power, because I heard
17 people say they think solar is a good idea,
18 yet we know that it doesn't come absolutely
19 free. But it's us that are driving the
20 requirement for this kind of a development,
21 and so many of these things really are
22 industrial scale, and some are going to be

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1 put in places that aren't in our own
2 backyards.

3 So we're forcing things to happen
4 and it's our responsibility to use 20 percent
5 of what the standard diet of this country has
6 been requiring. We are wasting almost the
7 world. We're causing global warming. We're
8 driving this kind of development. We are at
9 risk here, in particular -- I came down
10 Cuesta Grade to come to this hearing, and it
11 was clogged for miles, for some minor
12 accident, and that's supposed to be an
13 evacuation route for this area. So there are
14 so many impacts from energy use, and I just
15 want to encourage people to look at their own
16 habits, and are you shading your windows now
17 that it's summer? because if you're not
18 there's something -- well, you may just be
19 hot. But if you're using electricity to air
20 condition yourself, perhaps there's something
21 wrong there. Maybe those questions can get
22 addressed.

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1 One other thing is I don't know if
2 there's any way -- there must be, some place,
3 that these alternative wind and solar
4 possibilities are measured against continued
5 and expanded coal use, and nuclear power,
6 because I think they'll come out shining, but
7 we -- it's a reality in this country, that
8 there's this insatiable appetite. So it's a
9 real interesting dilemma that we're in right
10 now. Thanks.

11 DR. AVCI: Thank you, Ms. Cooper.

12 Now we have Ms. Henrietta Groot.

13 MS. GROOT: My name is Henrietta
14 Groot. I'm affiliated with the Unity With
15 Nature group of the local Quakers. Thank you
16 for inviting our comments. I would urge you
17 to make it a very strong rule, that you will
18 not impact any areas of particular
19 significance -- suggest national monuments,
20 state parks, any kind of local park, any kind
21 of environmentally-sensitive area, any kind
22 of land that can be beneficially used as ag

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1 land. And so you should not locate anything
2 off these projects, in these areas, nor next
3 to it, because if you put it next to these
4 areas we'll have impacts in the Carrizo
5 Plains anyway.

6 What needs to be used for your
7 project is areas that are already degraded,
8 such as old oil fields. You have some of
9 those.

10 (Laughter.)

11 MS. GROOT: Now who benefits from
12 all of this? I would hazard to guess that
13 it's the utility companies that are going to
14 put up these projects. So I feel you need to
15 track what their profits are as compared to
16 the benefits from rooftop energy generation.

17 In other words, why put a project
18 in the middle of the desert, if it is easier,
19 better, more financially feasible to buy a
20 whole bunch more of rooftop PVs? I know you
21 are BLM, and you have to do what you have to
22 do. But rooftop energy generation could

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1 certainly be a mitigation for whatever damage
2 you do.

3 Also, I hope you will make an
4 effort to evaluate the loss of energy by
5 distant transmission, because the closer the
6 source of power is to where it's needed, the
7 less loss of energy. If you're going to
8 transmit way away to San Joaquin Valley,
9 you're going to lose a lot of energy, and
10 that should be made clear in your projects,
11 in your PEIS.

12 And I would also hope that at some
13 point you compare the various kinds of
14 renewable energy sources. In other words,
15 don't just keep wind energy in one pigeonhole
16 and solar in another pigeonhole. Make an
17 effort to compare the benefits, please.

18 Thank you.

19 DR. AVCI: Thank you, Ms. Groot.

20 We have now come to the end of the
21 list for people who have registered to speak.

22 At this time, is there anybody who has not

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1 spoken so far and would like to speak?

2 Please raise your hand. Anybody else? Okay.

3 Since we don't have you as a
4 registered speaker, when you come to the
5 microphone please clearly state your name and
6 your affiliation for the benefit of the court
7 reporter, and you'll also have three minutes
8 to speak, as like everyone.

9 MS. STROBRIDGE: Good evening. My
10 name is Mary Strobbridge. I'm a resident of
11 San Luis Obispo County and an interested
12 person in what's happening in the Carrizo
13 Plains. I do want to start off saying that
14 I'm not opposed to solar energy. However, I
15 want you to realize that solar energy isn't
16 always environmentally friendly. There is
17 collateral damage that sometimes overrides
18 the need for solar energy.

19 The Carrizo Plains. A lot of
20 times, people here in this county think that
21 the Carrizo Plains -- they think of it as
22 barren wasteland. It is not a barren

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1 wasteland. It is environmentally diverse.
2 It's a beautiful area. It's also the gateway
3 to the Carrizo National Monument, and with
4 these plants coming in, that are proposed,
5 coming in, the AUSRA plant and the OptiSolar
6 plant, it would destroy the aesthetics and
7 the environment in the Carrizo Plains, and it
8 would destroy, actually, the way the Carrizo
9 Plains looks as people come in to see the
10 Carrizo National Monument.

11 Some of the things that we are
12 concerned about in the Carrizo Plains is
13 water usage. The governor has declared a
14 drought -- I guess you want to call it a
15 warning -- but a drought. Here, in
16 California, AUSRA will be using 20,000
17 gallons of water a day. Agricultural land
18 that'll be used is approximately 10,000 acres
19 with the solar plants that are being
20 proposed.

21 That's a huge loss of agricultural
22 land in this time when we are short of food

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1 and there are wars being fought over food.
2 As far as habitat and environment, if you
3 have not already read the Fish and Game
4 report, please do so. It's an absolutely
5 incredible report about what will happen to
6 the Carrizo Plains if these solar plants come
7 in. And of course the community out in
8 Carrizo Plains have lived there, some, for
9 generations. Some of us who have family out
10 there are reasonably new in the last seven to
11 ten years. But we love the Carrizo Plains.

12 And also the lady asked who was
13 sponsoring or funding the plants. They're
14 funded by venture capitalists working with
15 PG&E, and I hate to say this, but Al Gore
16 also works for one of those venture
17 capitalists. And so I was really
18 disappointed with him.

19 But I think that we need to think
20 about -- otherwise, this, almost a gold rush
21 -- but a solar rush to get solar energy, and
22 I think that there's being damage that is

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1 going to be done. I believe that solar
2 energy should be met at the point of need,
3 and that is at each resident, or each
4 business, before we go and we take
5 agricultural lands and destroy the
6 environment. Thank you.

7 DR. AVCI: Thank you.

8 Is there anybody else who has not
9 spoken so far, who would like to speak?

10 (No response.)

11 DR. AVCI: Is there anybody who
12 has spoken and would like to add to his or
13 her previous comments?

14 Again, when you come to the
15 podium, please state your name and your
16 affiliation, and you have three minutes.

17 MR. BARBOUR: Three minutes; not
18 enough time. But we'll see what we can do.
19 Greg Barbour, resident of Atascadero,
20 sustain my property, and a product developer,
21 and I'd like to make a -- I guess a request.
22 You know, for a business plan to deploy the

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1 amount of solar that is necessary to offset
2 the energy demands of industries like
3 automobile, transportation, electricity for
4 the home, there's an enormous amount of
5 energy required.

6 Oil has a massive amount of
7 energy, and we're competing with that. You
8 know, for me to design a system, and a
9 package, so that it's cost-effective, so that
10 we can deploy this in spots wherever it's
11 appropriate, we've got to have these
12 templates, and we've got to know what the
13 requirements are.

14 We have to have this boilerplate -
15 - hey, this is what the rules are. The
16 "rules of the road." And we've got to have
17 the "big picture" in mind. And the "big
18 picture" is, you know, a terrawatt of solar
19 energy. And the energy that I'm focusing on
20 is keeping it simple, PV solar, silicon-based
21 PV solar. It's a very environmentally-
22 friendly manufacturing process, and the

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1 materials, in the end, are all recyclable.
2 It's aluminum, copper and silica, and it
3 could be recycled.

4 But, you know, in order to
5 effectively deploy this system, we have to do
6 it at a reasonable cost.

7 And you mentioned how the solar
8 credits are going to expire this year. A lot
9 of the cost in the solar assistance is the
10 deployment, the time it takes to get the
11 permit, the time it takes to do the
12 installation, and there's a lot of overhead
13 that gets piled on top of these installation
14 systems.

15 So, you know, I'm working on a
16 plan, so that it's -- we've got -- hey, we've
17 got this system, we could drop it where it's
18 needed, and to give you an idea of the
19 current cost of solar cells, is \$2.36 per
20 watt, and within two years, it's going to
21 come down to about a dollar a watt, because
22 the supply and demand curve.

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1 We're getting more supply of this
2 material, and that's going to drop the prices
3 of the material. So, you know, demand is
4 going to come up. So it's a inherently
5 deflationary product, and especially with the
6 global economy now getting on line to measure
7 up to our standards of living where they're
8 consuming oil like we used to. We have to
9 plan ahead, to offset, you know, that need.
10 And I will submit my comments. I've got to
11 "massage" them a little bit but I'll submit
12 them, and if you guys have any more
13 questions, you can feel free to call me, or
14 e-mail me, what have you. Thank you.

15 DR. AVCI: Thank you. Anybody
16 else who would like to add to his or her
17 previous comments, or would like to speak for
18 the first time?

19 Do we have anybody else who would
20 like to come up?

21 (No response.)

22 DR. AVCI: Okay. In that case, I

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1 would like to thank all, thank you all for
2 coming. Special thanks to those who provided
3 comments. Just a reminder that the comment
4 period for the PEIS runs through July 15th,
5 2008. If during this time you have
6 additional comments, or you have comments for
7 the first time, you can send them to the
8 address shown at the bottom of this slide, or
9 you can go on the Web site, solareis.anl.gov,
10 and provide your comments that way.

11 I wish you all a safe trip home or
12 wherever your destination might be.

13 It is now 8:13 p.m. according to
14 my watch, and this meeting is officially
15 adjourned.

16 (Whereupon, at 8:13 p.m., the
17 meeting was adjourned.)
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