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BEFORE THE  
CALIFORNIA ENERGY COMMISSION

In the matter of, )  
 ) Docket Nos. 17-IEPR-13  
 ) 17-MISC-03  
2017 Integrated Energy Policy )  
Report (2017 IEPR) )

**IEPR STAFF WORKSHOP ON  
ENVIRONMENTAL INFORMATION FOR ENERGY PLANNING**

CALIFORNIA ENERGY COMMISSION  
FIRST FLOOR, ART ROSENFELD HEARING ROOM  
1516 NINTH STREET  
SACRAMENTO, CALIFORNIA

WEDNESDAY, AUGUST 2, 2017

1:00 P.M.

Reported By:

Julie Link

## APPEARANCES

CEC Staff Present

Misa Milliron

Scott Flint

Presenters Present

Jim Strittholt, Conservation Biology Institute (WebEx)

Georgeann Smale, Bureau of Land Management (WebEx)

Emily Zvolanek, Argonne National Laboratory (WebEx)

Public Present

Russ Teal (WebEx)

Emily Leslie, Defenders of Wildlife

Kate Kelly, Defenders of Wildlife

Steve Mills (WebEx)

John Zemanek (WebEx)

## INDEX

	Page
Welcome and Announcements	
Misa Milliron, California Energy Commission	4
Staff Work Background and Case Studies	
Scott Flint, California Energy Commission	6
Demonstration of California Environmental and Land Use Reporter	
Jim Strittholt, Conservation Biology Institute	32
Demonstration of Section 368 Energy Corridor Mapping Tool	56
Georgeann Smale, Bureau of Land Management	
Emily Zvolanek, Argonne National Laboratory	
Public Comments	73
Adjournment	80
Reporter's Certificate	81
Transcriber's Certificate	82

1

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

1  
2 AUGUST 2, 2017

1:00 P.M.

3 MS. MILLIRON: Let's get started. My name's  
4 Misa Milliron. I'm staff at the Energy Commission in  
5 the Siting Division. I work in the Transmission Office.

6 And I want to welcome you to this IEPR Staff  
7 Workshop on Environmental Information for Energy  
8 Planning.

9 Just a couple of announcements before we get  
10 into the agenda and one is just a safety announcement.  
11 And for those of you who are not familiar with the  
12 building, the closest restrooms are out diagonally, out  
13 of each door of the hearing room.

14 If there's an emergency and the building is  
15 evacuated, follow the staff to the appropriate exits.  
16 We'll reconvene at Roosevelt Park, which is diagonally  
17 across the street from the building. Proceed calmly and  
18 quickly, following employees with whom you're meeting to  
19 safety exit the building.

20 This workshop is being recorded. A copy of the  
21 recording will be available on the website a few days  
22 after the workshop, and we'll notify you via list  
23 serves.

24 Information on our work on this topic will be  
25 sent to those who have joined the dedicated list serves.

1 And there's a handout on the table, in the foyer, with  
2 instructions on how to join this one and find our  
3 webpage. That information is also included in one of  
4 the PowerPointss that's going to be shown today, for  
5 those of you that are on the WebEx.

6 For those of you in the hearing room, if you  
7 wish to make public comments or ask questions during the  
8 designated periods, please come forward to the podium  
9 adjacent to the tables in the front. Please speak  
10 directly into the microphone on the podium so that those  
11 on the WebEx will be able to hear what you have to say.

12 For those participating by WebEx, you will be  
13 muted until the designated comment or Q&A periods. We  
14 do plan to pause for questions after each presentation.  
15 And there's also a public comment period at the end.

16 We'll call on participants in the room first and  
17 then call on WebEx folks. We'll unmute the phone line  
18 for each WebEx participant as we call on them. Go ahead  
19 and use the raised hand feature in WebEx to notify the  
20 host that you'd like to participate. You just click on  
21 the hand icon in the participant's panel, and we'll  
22 notify you when you're unmuted.

23 When your question's been addressed, please go  
24 ahead and click that hand icon one more time to lower  
25 your hand.

1           You can also submit questions at any time, using  
2 the chat feature in WebEx.

3           For written comments, please see the revised  
4 notice, both online and on the table, in the foyer, for  
5 instructions. There was a mistake in the initial one  
6 that was posted online, with regard to the location to  
7 send paper comments, paper or e-mailed comments. So, if  
8 you plan to submit that way, please check the notice  
9 carefully and make sure you've got the one that's posted  
10 up online there, now, or take a handout.

11           Comments from this workshop are due on October -  
12 - I'm sorry, August 16th.

13           And, finally, we'd appreciate your signing in  
14 the sign-in sheets out front, even if you've already  
15 signed in with security, or you can leave a business  
16 card with me. Thanks so much.

17           I'm going to go ahead and turn it over to Scott  
18 Flint with the Energy Commission.

19           MR. FLINT: Hi, everyone. I'm Scott Flint. I'm  
20 with the California Energy Commission. I'm the Program  
21 Manager in the Transmission Office, and I work primarily  
22 on energy and transmission planning activities with  
23 others, here at the Commission.

24           I'd like to welcome you to joining us this  
25 afternoon for this workshop. I'll just briefly run

1 through the agenda. We'll have a discussion of the  
2 background of this proceeding, which is entitled  
3 Environmental Information for Energy Planning. And it's  
4 also jointly billed as part of our IEPR, Integrated  
5 Energy Policy Report development for 2017. So, this  
6 workshop fills both of those bills.

7 We'll have a presentation on background and a  
8 case study that the Energy Commission is proposing to  
9 work on related to using environmental information for  
10 energy planning.

11 We'll have a demonstration of the California  
12 Environmental and Land Use Report Writer that works in  
13 conjunction with Data Basin. And that will be given by  
14 Jim Strittholt from the Conservation Biology Institute.

15 And then we'll have a demonstration of the  
16 Section 386 Energy Corridor Mapping Tool, by Georgeann  
17 Smale and Scott Whitesides from the Bureau of Land  
18 Management, and Katie Szoldatits and Emily Zvolanek from  
19 Argonne National Laboratory.

20 So, that will be our set of presentations for  
21 the day. We'll stop after each presentation to  
22 entertain questions. And then, at the end we'll have  
23 public comment, microphones open for public comment both  
24 here, in the hearing room, and on the WebEx. So, that's  
25 how we'll go today.



1           So, let me see, let me just make sure I can work  
2 the slides again. Thank you.

3           So, like it or not, believe it or not we'll all  
4 here today because of climate change. And just to prove  
5 that fact, it's at least 103 in Sacramento and there's a  
6 heat wave all over the Pacific Northwest for this week.  
7 So, we set that up just to reinforce the point.

8           When I say we're here in response to climate  
9 change, we're here to do the work of the Energy  
10 Commission, in this case energy planning and  
11 transmission planning, related to meeting the State's  
12 ambitious greenhouse gas goals, which are currently  
13 taking us to an RPS of 50 percent by 2030, and a  
14 greenhouse reduction goal of 40 percent below 1990  
15 levels by 2030. So, those are fairly new policy goals  
16 promulgated by the Legislature and the Governor's  
17 Executive Order, and challenging us to meet the 50  
18 percent RPS, which will help us meet those greenhouse  
19 gas goal reductions.

20           A little overview from last year's Integrated  
21 Energy Policy Report. California's energy system as a  
22 whole, that means fuel development from cradle to grave,  
23 and utilization, and generation, and transportation, and  
24 all of the elements of the electrical system are 80  
25 percent of the State's greenhouse gas emissions.

1           For the electrical sector, which primarily deals  
2 with generation, that's a different story, greenhouse  
3 gas emissions are already 20 percent below 1990 levels.  
4 And that's largely attributed to the increase in  
5 renewable energy and the decrease in carbon -- in coal-  
6 fired generation that's happened primarily in the last  
7 ten years. And a lot of that new renewable energy has  
8 come online just in the last five or six years, in  
9 California.

10           In the accompanying Environmental Performance  
11 Report that was published with the Integrated Energy  
12 Policy Report last year, the report indicated that there  
13 had been lots of improvements in the system for many  
14 environmental metrics, including air quality and water  
15 use.

16           But for the aspect of land use, there's actually  
17 been an increase in footprint, disturbance and potential  
18 biological impacts related to the deployment of large-  
19 scale renewable energy. Solar and wind sites are quite  
20 large and take up a lot of space on the landscape.

21           And this just further reinforces the need for a  
22 well-informed and continued long-range planning for both  
23 generation and transmission deployment in California to  
24 meet those ambitious goals.

25           The Energy Commission has led and participated

1 in a variety of energy planning processes since 2005,  
2 and they're listed here. And, the first and second  
3 Renewable Energy Transmission Initiative Processes, or  
4 RETI processes, and the Joint Renewable Energy Action  
5 teamwork on the DRECP, the stakeholder-led San Joaquin  
6 Valley Identification of Least Conflict Lands Study.

7           During those processes California agencies,  
8 local governments, tribes and stakeholders have gained  
9 experience with planning approaches that seek to  
10 identify the best areas for renewable energy development  
11 and transmission line development. And these continued  
12 planning activities have helped the State meet and will  
13 help the State meet its renewable energy and climate  
14 goals.

15           Over the years, we've done a lot of work that  
16 includes collection of statewide, both regional and  
17 statewide datasets, environmental data to support  
18 renewable energy development, and even transmission, the  
19 analysis of that and potential impacts on the  
20 environment and associated conservation and mitigation  
21 efforts related to the development of that  
22 infrastructure.

23           These processes have built upon each other to  
24 facilitate expansion of data development and the  
25 beginnings of development of some web-based tools to

1 help understand and utilize that information in planning  
2 processes as we move from region to region in the State.

3           In each of these processes the landscape-scale  
4 planning takes into consideration a wide range of  
5 potential constraints and conflicts, including  
6 environmental sensitivity, conservation, and other land  
7 uses, tribal and cultural resources, and more when  
8 considering future renewable energy development.

9           The California Energy Commission is continuing  
10 to build off this body of work to facilitate  
11 environmentally responsible renewable energy and  
12 transmission development to help meet the goals of SB  
13 350.

14           A common theme for all of this work, for most of  
15 this work, not all of the efforts but most of them since  
16 2008 have been a collaboration with the Conservation  
17 Biology Institute, or CBI, for two things. One is  
18 really to help build ecological models, science-based  
19 datasets, incorporate conservation planning assessment  
20 and expertise, and create customized science  
21 interpretation tools and educational support for  
22 participating in these -- for enabling folks to  
23 participate in these planning processes, including  
24 agency staff and stakeholders.

25           Two primary things that we work on closely with

1 CBI; science-based data development and then, also,  
2 utilize their Data Basin platform, which is a web-based  
3 mapping platform that is not just your typical data  
4 platform. It's a web-based mapping and analysis tool  
5 that enhances knowledge sharing by integrating science,  
6 mapping and people.

7           So, there are a lot of unique features that  
8 we've talked about in other processes and folks will see  
9 during this process. If you participate closely with us  
10 in the development of the pulling together of the  
11 datasets that we'll talk about in a bit, and assembly of  
12 a decision support tool that we're working on through  
13 this process, you'll see the benefits of this system up  
14 close and personally.

15           So, it's a huge collaboration value. The  
16 service was already existing, built by CBI  
17 independently. And during our work with them on  
18 developing the scientific basis for our planning  
19 activities, we also took advantage of the unique  
20 collaborative functions of the system to be able to  
21 communicate with stakeholders and allow stakeholders to  
22 play with data, play with maps and be better involved --  
23 comment on data, maps and processes and to be better  
24 involved in these processes. And we will continue to do  
25 that work and make things available on Data Basin.

1           So, for each of the efforts that we've talked  
2 about earlier, the RETI, the Desert Renewable Energy  
3 Conservation Plan, the San Joaquin Valley planning  
4 effort, and now work that we're doing on California  
5 offshore wind, we have worked with CBI to develop  
6 individual gateways on a Data Basin platform. And a  
7 gateway is the branding or labeling that's brought to  
8 bear on a particular process, project, or geographic  
9 area so that data can be assembled that's topical to  
10 that planning effort or that area, and the results of  
11 that planning process can be shown, and folks can find  
12 it easily. And it's an organizational thing that helps  
13 organize the data and the results, so people can find  
14 it.

15           Data Basin is a large set of data that folks use  
16 internationally and so these gateways help focus folks  
17 to participate in these processes.

18           So, we have one gateway that we developed for  
19 each process so far, and these are available here at the  
20 URLs that are indicated under each one. This is  
21 important because what we're doing in this process now  
22 is combining a lot of those datasets that we've  
23 developed in these other process and updating them, and  
24 bringing them together for use in one statewide planning  
25 tool.

1           So, as we work through this together, and that's  
2 the purpose of this process is to vet how we assemble  
3 that data and information, and to vet how we put the  
4 tool together, and how it reports out the environmental  
5 and land use information that we have in there. And  
6 then, how we might best use it in planning processes is  
7 what we're getting together for, and want your input on  
8 as we go along.

9           So, since we're still building some of those  
10 things, one thing that is available right now is a lot  
11 of the underlying datasets that we'll be using and  
12 talking about. And although they're not assembled in  
13 one place, yet, they exist in these other -- they exist  
14 on Data Basin and are accessible through these gateways  
15 for each of the respective planning processes. So,  
16 folks can start evaluating the datasets, right now, that  
17 we'll be looking at in this process and be using as data  
18 that the Land Use and Environmental Planner tool draws  
19 from.

20           If folks were with us in the Renewable Energy  
21 Transmission Initiative 2.0 process, you'll remember  
22 that the charge of the Environmental and Land Use  
23 Technical Group was to start assembling these datasets  
24 and looking at these available datasets to assess their  
25 ability to assist us with this high-level look at

1 planning for generation and transmission in the State.

2           And as part of that work, with working with CBI,  
3 again, put together -- started to put together an  
4 Environmental Report Writer that would -- we called it  
5 that. It's basically an interface tool that allows  
6 people to query the data in a visual manner, in a couple  
7 of different ways. And we're going to see a  
8 demonstration of that today, when Jim presents that to  
9 us in a bit.

10           But suffice it to say we started that during the  
11 RETI environmental process, but we really did focus on  
12 building the datasets. And we'll go through the  
13 datasets a little bit more, also in this presentation.

14           But the recommendation of the technical group  
15 report, from the RETI 2.0 process, suggested that we  
16 continue to develop this data, assemble it in a logical  
17 fashion, and work together to complete the Environmental  
18 Report Writer tool that we're talking about, that lets  
19 people use this dataset to participate in various  
20 statewide planning processes for energy and  
21 transmission. So, that's the charge of our work on  
22 environmental information for energy planning.

23           When the data is ready and the Environmental  
24 Report Writer tool is ready we expect it to be  
25 potentially used by industry, project developers, and



1 utilities for landscape-level, high-level site  
2 assessment. Used by stakeholders to evaluate potential  
3 suggestions or inputs in the various planning processes  
4 for energy generation and transmission planning. And to  
5 be used by agencies engaged in planning to provide an  
6 environmental context to help identify and communicate  
7 potential environmental implications of development in  
8 certain areas of the State.

9           So, I think, again if you were with us in RETI  
10 2.0, you saw this -- you saw, but weren't able to use on  
11 Data Basin this alpha, I'll call it an alpha level of  
12 development of the tool. But it's here in a screen shot  
13 and we're going to look at it in a bit and see how it's  
14 been updated since then.

15           And next steps from the RETI 2.0 Environmental  
16 Group Report were to continue to refine and complete the  
17 draft statewide data models and datasets, develop a user  
18 interface and controls to allow users to load their own  
19 GIS layers for assessment. Revise the Report Writer's  
20 report format, including presentation and organization  
21 of information. Add functionality to this tool to allow  
22 it to evaluate land use and general plan data.

23           And we have made progress on all those areas and  
24 we will see that today.

25           So, coming back to the new proceeding that was

1 opened by the Energy Commission staff, under the Siting  
2 Environmental and Transmission Division, is this  
3 Environmental Information for Energy Planning. So,  
4 there's a docket there that you can sign up for to  
5 receive more information about the work that's going on  
6 during this process. And there's a little discussion  
7 there and write up about our intent of what we want to  
8 do through this process. So, we're covering that as I  
9 go along.

10 One of the things that we want to do, as well as  
11 building the Environmental Report Writer tool that  
12 follows on from the RETI 2.0 environmental work, we also  
13 want to -- we're thinking of and laying out a case study  
14 that would look at the other elements of RETI and follow  
15 on from those where we identify some real-world  
16 situations of potential transmission need, and actually  
17 run the tool as it's being developed, to look at those  
18 areas and see how the tool and the environmental data  
19 perform to inform us on the environmental implications  
20 of thinking about it. Either reconductoring or working  
21 on specific areas of transmission constraint, adding new  
22 elements to the transmission system in the existing  
23 right-of-way or even, potentially, expanding existing  
24 right-of-way to accommodate new transmission needs.

25 So, the RETI 2.0 Report identified some specific

1 areas of the state that may have transmission  
2 constraints as we move to our 50 percent by 2030 RPS  
3 goal.

4           And just to throw out some numbers, there were  
5 two elements looked at in RETI 2.0. One was the IEPR  
6 Demand Forecast, which is done by the Energy Commission,  
7 and the Pathways Modeling that has been done for looking  
8 at what additional incremental increment of energy we  
9 might need to reach those 2030 50 percent goals.

10           And I won't go into this in detail, but if you  
11 go to the RETI Report, you can read it there. But in  
12 the IEPR Demand Forecast, a low of 9,400 additional  
13 megawatts to meet the goal, to a high of 20,300  
14 megawatts to meet the goal, so that's with a midrange of  
15 15,000. So, that's a pretty wide range of potential new  
16 generation that might be needed to get us to 50 percent.

17           In the Pathways Model, looking at both a  
18 straight line forward from where we are in developing  
19 renewables to an early electrification scenario, the  
20 range is 19,600 megawatts to 29,000 megawatts, so,  
21 again, a pretty large range.

22           But the two converge a bit around the mid and  
23 high level of the demand forecast and the low of the  
24 straight line of the Pathways Model.

25           So, if you look at both of them, both of the

1 models, the two estimates are derived from totally  
2 different assumptions, so they're not directly  
3 comparable. But if you look, the whole range could be  
4 from as low as 9,400 megawatts to as high as 29,000  
5 megawatts that we need to plan for to get us to 50  
6 percent.

7           Of course, that depends on a lot of things,  
8 other things happening. And a lot of things are  
9 happening and things are constantly changing. So, these  
10 assessments will continue to be looked at. And, of  
11 course, in the upcoming 2017 IEPR, the Environmental  
12 Energy Policy Report, there will be a new demand  
13 forecast as part of that.

14           But I'm just pointing that out so folks realize  
15 that we may still need -- to get to those levels, we may  
16 still need some additional transmission. So, we're not  
17 done planning for transmission yet, in California. And  
18 whether other conclusions of the RETI report, whether we  
19 bring the transmission -- well, whether we build in-  
20 state renewables or bring in renewable energy from out  
21 of state, from the other western states across the  
22 Western Region, in some of the areas of the State we'll  
23 run into the same transmission constraints of energy  
24 needing to run through those lines to meet California's  
25 demand.

1           So, again, if you look back at the RETI Report,  
2 just to summarize, there's areas -- so, in addition to  
3 looking at demand, the RETI Report identified areas of  
4 potential transmission constraint that folks should be  
5 looking at as to where we might need new transmission to  
6 reach the goals.

7           And those areas are identified here, on this  
8 slide. The main ones where there may be issues. So, in  
9 Northern California the report discusses the Oregon  
10 Intertie, which is essentially at transmission capacity  
11 now.

12           The San Joaquin Valley, where as little as 5,000  
13 additional megawatts could trigger upgrade needs for  
14 transmission there.

15           And again, depending on what level of -- what we  
16 need to achieve the goals, 5,000 megawatts is not a lot,  
17 is not out of the question, potentially, given these  
18 modeling efforts that were discussed in RETI.

19           Couple that with the San Joaquin Valley planning  
20 work we did, which showed a significant amount of low  
21 environmental conflict lands in the San Joaquin would  
22 lead us to some potential future where we may need -- if  
23 we look there, we may be looking at the possibility of  
24 new transmission, at least upgrades in certain areas.

25           And then the primary area of concern was the

1 desert area south and desert area north, with a set of  
2 constraints that interact through these four areas that  
3 are listed here on the slide, Imperial Valley, Riverside  
4 East, Victorville, Barstow and Tehachapi.

5           And so, depending on where either distributed  
6 energy or additional utility-scale energy is built, and  
7 the paradigm of what areas get built out first or what  
8 areas get focused on that are listed there, as little as  
9 2,000 to 4,000 new megawatts could trigger some  
10 transmission upgrades.

11           But in other scenarios, if it's evenly  
12 distributed, 5,500 to 8,500 megawatts would trigger some  
13 need for upgrades, certain sets of upgrades.

14           So, these are detailed and laid out in the RETI  
15 Report, if you'd like to go to that and read through  
16 them.

17           But again, whether this energy is built in the  
18 desert, which is a place in the State that has high  
19 resource potential, and good energy resource for solar  
20 and wind, whether it's build in-state or whether we  
21 bring more in from out-of-state that will come in  
22 through the same set of transmission lines. So, at some  
23 point, depending on how much we need, these constraints  
24 would be triggered.

25           So, we propose to take the information out of

1 the RETI Report, update it with any new information we  
2 have on pending transmission projects, and decisions by  
3 the ISO for the latest transmission plan. Look at  
4 assumptions that come out of the -- or, the results that  
5 come out of the latest demand forecast, and reevaluate  
6 the -- briefly reevaluate the concepts that were  
7 presented in the RETI Report to see which remain  
8 priority ones that may cause -- may be constrained by  
9 transmission that's out there. And we want to actually  
10 drill into those areas a bit.

11           And the result of what we're working on here is  
12 not to determine what the appropriate transmission is  
13 there, but just to look at some potential areas that  
14 might need to be upgraded to be able to run the tool, to  
15 see if the tool and the data that we put together  
16 deliver the kind of results we want for high-level  
17 planning. So, that will be the focus of our case study.

18           But we will be using and following on from RETI  
19 in these real areas of potential constraint.

20           So, so far in the Environmental Information for  
21 Energy Planning work, we did a staff workshop to kick it  
22 off, in April of 2017. So, we reviewed some of what  
23 you're going to see on the next couple slides.

24           We had a Lead Commissioner workshop on  
25 Interactive Data Platforms, which goes to the value of

1 the data and the kind of platform that we're putting  
2 together. We're working with CBI on Data Basin. That  
3 enables us to have an interactive tool that lets us work  
4 with this data. So, we discussed that.

5           And we are mixing this work with the IEPR work  
6 because we do intend -- the IEPR is driving this work.  
7 The last several IEPRs have talked about the value of  
8 large-scale landscape planning, the value of the data  
9 and the tools that we've been putting together. And  
10 have, as the opening slide showed, recommendations that  
11 we continue to develop and deploy this information for  
12 continued planning activities.

13           So, we are discussing some of our results of  
14 this work in the 2017 IEPR. That's why they're  
15 associated so closely together.

16           So, one of the first things that we're doing,  
17 that you'll see shortly, that we're doing to help  
18 integrate these things, so I showed you the separate  
19 gateways, earlier, that have information on them, but  
20 we'll be doing a couple of things.

21           One is we'll be rolling out this statewide  
22 energy gateway that pulls all of the information  
23 together. We will be integrating the data and results  
24 of those other planning activities. So, you'll be able  
25 to go to this one site and access those four or five



1 other planning activities that are ongoing.

2 We're also developing this gateway to house the  
3 results of this process that we're doing now, and the  
4 Environmental Report Writer tool that we're building.  
5 So, you would go here to access that.

6 And also, this is the landing place where you  
7 can access the California Climate Console, which is also  
8 a product that we've been developing with CBI. And we  
9 use that as an overlay with some of our transmission and  
10 generation planning activities in these various efforts.

11 So, soon you'll be able to go here and get  
12 access to all of that information and to the pieces that  
13 we're currently building. So, this will be the place we  
14 work from through this process.

15 So, the datasets that we pulled together, we're  
16 just in a nice summary graphic here to show you we've  
17 developed quite a bit of information for the Desert  
18 Renewable Energy Conservation area, which are the  
19 deserts areas there in the lower right on the map. So,  
20 those have a consistent set of data elements developed  
21 for them.

22 The San Joaquin Planning effort is there,  
23 approximately in the middle of the State.

24 And the RETI 2.0 process focused on these areas  
25 with high renewable resource value, and also two other

1 areas of the State that show high renewable resource  
2 value from various planning processes. And that  
3 includes the North Sacramento Valley, what you see there  
4 just above San Joaquin, in just the red outline. And  
5 then, the darker red outline up in the corner, which is  
6 the Modoc Plateau.

7 In the North Sac Valley some potential wind  
8 resources and, of course, PV, photovoltaic solar. In  
9 Modoc the same thing, some potential wind and  
10 photovoltaic solar.

11 So, part of this process, Environmental  
12 Information for Energy Planning process is working with  
13 CBI and others. We're working with partner agencies on  
14 a couple of other projects that are going on within the  
15 State to develop this consistent set of data elements  
16 for these two new areas so that we can fill those in,  
17 and then be able to use the tool across all these areas.

18 So, we talk about statewide energy planning, but  
19 these areas that are shown on the map are going to be  
20 the ones with the most data, and they are the areas with  
21 the highest resource potential value for generation.

22 So, work that we've done. Since our kickoff  
23 report we have environmental datasets, we have land use  
24 datasets, and we have energy datasets that will be key  
25 data that works within the report writing tool. And so,

1 we've worked on updating these datasets you see here in  
2 red. We continue to update those and work with them as  
3 we move through the process.

4           So, what you're seeing here is what I'd call the  
5 consistent list of common data elements. So, these are  
6 the data that we have available in all those areas. And  
7 if you haven't been tracking our work, please notice  
8 that some of these are not individual datasets. Some of  
9 them are actually data layers built from multiple  
10 datasets.

11           So, something like essential habitat  
12 connectivity areas contain multiple datasets. Something  
13 like the terrestrial landscape intactness dataset  
14 incorporates many datasets into a data layer that is  
15 more useful, powerful and useful than the individual  
16 datasets, alone.

17           So, when you have time to look at these on Data  
18 Basin, and we go through some of them in more detail  
19 you'll start to see how multiple datasets are  
20 integrated.

21           But part of what we'll test in our Case Study  
22 and be looking at is does this common set of data  
23 elements capture the right things and at the right level  
24 for those high-level planning exercises, for both  
25 generation and transmission planning.

1 Land use, we're working on land cover, and land  
2 use information, and agricultural land use. And related  
3 to agricultural use is always an issue in deploying  
4 renewable energy.

5 And so, we're looking at making sure we build  
6 that data into -- build that dataset so we have it to be  
7 able to use in planning activities statewide.

8 And then there's an error on this slide here.  
9 So, the energy data that we have here so far listed is  
10 not all necessarily private datasets. We used some  
11 shorthand here and didn't capture it well, so we need to  
12 correct this slide.

13 But the example I want to give is not all data  
14 will be downloadable from Data Basin. Although we're  
15 striving to make most of it available and downloadable  
16 from there, some things just aren't.

17 And one example is the transmission line and  
18 substations information that the Energy Commission  
19 maintains. That's not going to be -- it will be  
20 viewable, with some limitations, and some control by us  
21 in Data Basin and on the maps that we produce, and in  
22 the tool. But they won't be downloadable from Data  
23 Basin because folks with a need can get it from CEC, but  
24 it requires a nondisclosure agreement be signed.

25 So, we're not passing that responsibility on to

1 Data Basin. And there probably are a few other  
2 datasets, select datasets that the agencies treat the  
3 same way. But for the most part, most of them will be  
4 available either at the agency, and/or through Data  
5 Basin. So, that was the intent there.

6 So, for this particular workshop, comments,  
7 written comments are invited. They're not required, but  
8 they're invited. And they are due, typically, two weeks  
9 from the date of the workshop, which would be August  
10 16th. And we would expect comments just on what we've  
11 presented today. And anything that you take from here,  
12 and go back and look at Data Basin, for instance, and  
13 want to comment on that about on what we covered, that's  
14 good, too.

15 So, there will be plenty of time in this process  
16 to work with the agencies and CEC on the data and  
17 development of the Report Writer tool. So, we don't  
18 expect folks to comment A to Z on that, but you're  
19 invited to comment as you wish based on today's  
20 workshop.

21 I think Misa already mentioned if you haven't  
22 been back to the site, the notice was revised. So,  
23 please get the latest notice, with the appropriate  
24 information to submit the comments.

25 So, we'll have more questions later, but if you

1 start looking at data, some things to start thinking  
2 about; which relevant datasets are missing from the  
3 application or would make it more useful?

4 And what are some different use cases that would  
5 be best for testing the functionality and value of the  
6 application?

7 So, just start thinking about those and keep  
8 those in mind while we go through Jim's presentation,  
9 which is coming up next.

10 So, thank you. And if you have any questions on  
11 this part, we'll open it up for that now.

12 Misa?

13 MS. MILLIRON: We have a question on the WebEx  
14 from Russ. Your line's unmuted if you want to go ahead  
15 and ask your question.

16 MR. TEAL: This is a very exciting project.

17 MS. MILLIRON: I'm sorry, could you speak up a  
18 tiny bit and identify yourself?

19 MR. TEAL: Oh, my name is Russ Teal. Can you  
20 hear me okay?

21 MS. MILLIRON: It's still pretty faint in the  
22 room here. Is there a -- let me try and play with our  
23 controls a little bit. Okay, can you try again?

24 We'll try. It's still rather faint, but we can  
25 hear you.

1 MR. FLINT: We'll listen closely.

2 MR. TEAL: It's a shorter question regarding how  
3 granular is the data in terms of using it for  
4 distributed renewable energy under one megawatt?

5 MR. FLINT: I'll let Jim address that a little  
6 bit, too. But the data is probably -- well, the data is  
7 of different granularity, so that's one thing to  
8 consider. So, some of it may be more useful and some of  
9 it may be less useful for that.

10 But generally, we probably need to do a little  
11 more work and refinement on the data to have it really  
12 do a good job at that.

13 I'll let Jim talk a little bit about that. Jim  
14 has another project that is actually looking at that,  
15 the use of similar data and similar tools for  
16 distributed generation.

17 Jim, are you -- Jim Strittholt, are you on?

18 MR. STRITTHOLT: Yeah, I'm here. Can you hear  
19 me okay?

20 MR. FLINT: Yeah, thanks, Jim. This is Scott.

21 MR. STRITTHOLT: Yeah.

22 MR. FLINT: Can you just give us a little  
23 outline of the difference between what's here and what  
24 you did for that other project?

25 MR. STRITTHOLT: They're similar. We've changed

1 -- in some of the datasets that we use there's different  
2 resolutions or different ways of aggregating it,  
3 especially with some of the models. That's one way to  
4 change the granularity.

5           You're right, all these kinds of applications  
6 that attempt to integrate a variety of different  
7 datasets there's a wide range of level of spatial  
8 detail. And that's why we try really hard to make sure  
9 that all of that information is transparent so people  
10 can use it appropriately.

11           So, yeah, you're going to have a variety of  
12 different things.

13           MR. FLINT: And we just want to -- this is  
14 Scott, again. We just want to remind folks that, again,  
15 our intent with this particular set of information tools  
16 is the high level look. It's not intended to be site  
17 specific or take the place of site-specific work when we  
18 get to that level of permitting a project.

19           But it is definitely going to be useful in  
20 letting you know what you're going to encounter there  
21 and what you're going to probably need to focus on when  
22 you do go to actually site a project. So, that's -- I  
23 hope that helps answer your question.

24           MR. TEAL: Great, thank you.

25           MR. FLINT: Thank you.



1 Any other questions?

2 MS. MILLIRON: I'm not seeing any other  
3 questions on the WebEx. Are there any questions in the  
4 room?

5 MR. FLINT: Thanks, Misa. No questions on  
6 WebEx, no questions in the room, so we'll move on to Jim  
7 Strittholt from Conservation Biology Institute.

8 And he's going to be doing a demonstration live  
9 using Data Basin and some of this information that we  
10 just talked about.

11 If folks -- I know folks in the room here might  
12 have a hard time seeing. Jim and I talked about that.  
13 And if you want to go up and huddle around the screen,  
14 please feel free to do that because you'll get a better  
15 look at what's he's presenting. On the results panel  
16 that's on the left side, it's going to be hard to see,  
17 so feel free to move around.

18 MR. STRITTHOLT: Can you see my screen okay?

19 MR. FLINT: Yeah. Folks on WebEx, you're good  
20 and you also avoided the heat by not coming to  
21 Sacramento.

22 We can see your screen, Jim.

23 MR. STRITTHOLT: Okay, great. Well, good  
24 afternoon everyone. And I intended to be with you in  
25 person, but I just couldn't make it. And believe it or

1 not, it's hotter in Corvallis, Oregon today than it is  
2 in Sacramento, which probably is a first.

3           What I'm going to show you, this is still under  
4 development. It's not full-featured, yet. But there is  
5 enough of it that's operational that I think it would be  
6 a good time to share it with everyone.

7           So, I'm going to show a couple of new things, as  
8 Scott was mentioning earlier, from kind of the alpha  
9 version we did with the RETI 2.0 path. And it sets up  
10 like this. And again, a lot of the stuff is going to  
11 look a bit skeletal right now because we have to add in  
12 a lot of the, kind of the help menu descriptions.  
13 That's why you see a lot of white space over on the  
14 left.

15           But this is how it is being developed. So, all  
16 of the controls and the results from this particular --

17           MR. FLINT: Jim?

18           MR. STRITTHOLT: Yeah, go ahead.

19           MR. FLINT: Sorry to interrupt. But if you can  
20 expand your screen for folks, I think you need to do it  
21 on your end by hitting those two arrows at the top row,  
22 on the WebEx screen.

23           MR. STRITTHOLT: Did that help?

24           MR. FLINT: So, then the part --

25           MR. STRITTHOLT: Is that helping or not? I just

1 increased my resolution. Does that help you guys or  
2 not?

3 MR. FLINT: That helps a bit but we need to  
4 eliminate the -- we can see the participants and  
5 everything. If we get rid of that block, it will be  
6 bigger for folks.

7 MR. STRITTHOLT: I don't --

8 MR. FLINT: Are you seeing any of the WebEx  
9 controls?

10 MR. STRITTHOLT: I'm not. The only WebEx  
11 controls that I see is the drop down from the top. My  
12 screen is totally vacant of anything except for the  
13 reporter.

14 MR. FLINT: Are you sure it's not us? Okay.

15 MS. MILLIRON: Okay, let me try and do it over  
16 here.

17 MR. FLINT: Okay, it was us. Thank you, Jim, we  
18 got it.

19 MR. STRITTHOLT: Okay. Okay, is this too  
20 coarse? I've zoomed in, but when you do that it's going  
21 to make the visuals a little bit coarse. Does this work  
22 okay for you guys or not?

23 MR. FLINT: It's fine. Folks here can -- most  
24 people are on WebEx. Folks here have moved up to the  
25 screen, so I think we're okay.

1           MR. STRITTHOLT: Okay. Does this work as well,  
2 or do you like it better at 125. I can go back out, if  
3 you'd like.

4           MR. FLINT: No, this is good.

5           MR. STRITTHOLT: Okay, I'll start with this.  
6 Okay, so as I was saying, so the way we've got this  
7 organized is all of the controls and the results that  
8 you see from the tool will be on the left side of the  
9 screen, where it's currently got a lot of white space  
10 because we have to fill it in yet.

11           And then, on the left side -- or, the right side  
12 of the screen you're going to see kind of general map  
13 orientation information. So, you can see the State of  
14 California. Down in the lower left are going to be  
15 different base maps that you can choose to illustrate  
16 whatever you want. It will default to this one.

17           In the upper right you'll see just the zoom  
18 tools. You can zoom with the magnifier. You can even -  
19 - zoom specific areas, if you'd like. You can even use  
20 your wheel on your mouse, if that's what you prefer.  
21 I'll do that once and back again.

22           And then in the upper left corner of this map  
23 viewer you're going to see a little stack of folders, or  
24 maps. And these are the datasets that we currently have  
25 loaded in the application. And you'll see there's quite

1 a list.

2           And as Scott was mentioning earlier, we have  
3 different categories of data. Most of what you're  
4 seeing on this list is environmental information. And  
5 I'm going to go through a few of these. I'm not going  
6 to show you every one of these. To give you a feel of  
7 what that looks like.

8           We have some boundaries, some DRECP and San  
9 Joaquin Valley boundaries. If I click them on, you can  
10 kind of get that picture. And we currently have some  
11 energy datasets, as well.

12           We will be adding some of the land cover  
13 datasets that Scott mentioned in his slides a few  
14 minutes ago. Those things are still being processed.

15           And we can add other datasets, as well. That's  
16 why it's important for folks to review and see what you  
17 think is glaringly missing. And, of course, over time  
18 things will be added as needed. As we get into the  
19 other regions that Scott showed earlier, with the  
20 Northern Sacramento Valley, or the Modoc Plateau there  
21 will be regional datasets that will be added as well.

22           In fact, if you look at the list here, you'll  
23 see a lot of these are statewide datasets, but you'll  
24 also see some, like down at the bottom, that will say  
25 DRECP. There's three of them, currently. And then you

1 have one that's the San Joaquin Valley and there may be  
2 more coming. And those are specific to those regions.

3 And so, we have statewide datasets, as well as  
4 regional datasets. And what happens when we step it  
5 down to the regionals, we get more granularity, to get  
6 back to one of the original questions that was asked.  
7 And those are relevant to those particular regions, of  
8 course.

9 Okay. Some of the datasets are descriptive in  
10 nature. If I click on these, you can see the  
11 transmission lines or the substations. You can turn  
12 them on and off. You can see, as I do that, there's a  
13 legend down in the lower right corner of the map and it  
14 does allow you to have some transparency controls. But  
15 it will not let you change colors and such. That's a  
16 Data Basin feature.

17 And this is an extension application. It is not  
18 using Data Basin technology. It's a different  
19 technology. But I'll get to that in a little bit as  
20 well.

21 Some of the datasets, like I said, are very  
22 descriptive in nature. Sometimes they're lines, points.  
23 Here's important bird areas from Audubon. And again,  
24 you can change transparencies and such, if you'd like.

25 Also, as Scott mentioned, some of the datasets

1 are more sophisticated. They're not just descriptive.  
2 They involve a lot of assembly and integration of a lot  
3 of other datasets to develop a kind of a more synthetic  
4 product.

5           Like, if I look at conservation values for  
6 DRECP, let me zoom in here, you'll get an idea that --  
7 okay, this was actually a combination of lots of  
8 different data that went together to create this map or  
9 this dataset. And I'll show you another example in a  
10 moment, in a Data Basin context, so that you can  
11 understand that a bit better.

12           So, also I wanted to mention, and you'll note,  
13 you may have noticed that way up in the upper right  
14 there is a log-in button. And the vision for this, it's  
15 not wired together just yet, but it's in development, is  
16 that you can either create an account here or use your  
17 existing Data Basin log-in account. And this way it's  
18 not an application that's a one-off, where you come in,  
19 you do your stuff and you leave, and it's all gone.

20           You'll come in, create your account and you'll  
21 be able to save your information and come back any time  
22 you want. It's a bit of a -- it's a much more enhanced  
23 functionality. Because if you're going to use this to  
24 look at a variety of different things, you don't want to  
25 lose it as you go. You want to be able to connect it,

1 and keep track of it all, and manage it on your own.

2           And those log-ins also allow you to have high  
3 levels of privacy. So, this will be your private  
4 workspace, with your work, and your analyses that no one  
5 else gets to see unless you choose to share it with  
6 them. So, that's coming.

7           If I can use the analogy, the parts of the  
8 engine are all built. This part has to be wired back  
9 in.

10           Okay. So, how do you start? And we're trying  
11 to make this as easy to operate as possible. So, that's  
12 the objective here. There's a lot that's going on in  
13 the back room that the users don't need to get all  
14 entangled in, and make it complicated. We thought it  
15 was going to be really important to make this as  
16 streamlined as possible, but also very rich and  
17 informative. And that's what we're trying to accomplish  
18 in building something like this.

19           So, it works like this. You hit "define areas"  
20 button and you have two choices. You can draw a  
21 polygon, a line, or assign a point, or you can add a  
22 shape file from wherever you happen to be working. And  
23 I'm going to show you examples of each of these in just  
24 a few minutes.

25           And if I were to go ahead and draw a shape,



1 let's say I want to work down here. And let's say I can  
2 turn on something for background, I'm going to turn on  
3 transmission and substations. And I'm going to put in  
4 the 368 corridors. So, I just put that as background.

5 Again, I could change my base map if I want kind  
6 of an imagery version. I'll go back to my original.

7 And let's say, this is just for example  
8 purposes, I'm interested in a new transmission line or  
9 an upgrade on an existing transmission line, what would  
10 I do? You click the line tool. You would set a buffer  
11 distance of whatever you want. I'll just leave it at a  
12 mile. We're going to be adding other units here  
13 shortly. Right now, it's just miles. But we can do  
14 meters, kilometers, feet and miles. Those will be the  
15 four choices. It will be a little drop down here. And  
16 you draw your line.

17 So, let's say I want to go, from here to here.  
18 And now, I've got a new line. Again, I can turn off all  
19 the base information if I want. Let's just say that's  
20 my line. And once I'm satisfied with that, I just hit  
21 run.

22 And all it's going to do is it's going to take  
23 that shape, and it's done, and it's running it against  
24 all of the different datasets that it encounters. And  
25 we broke it up into three tabs. There's the

1 environmental tab, which is exposed first. There's land  
2 use that I mentioned, that the data are coming soon.  
3 And then here's the energy tab.

4 If I click the energy tab, you'll see the  
5 various energy datasets that were in the original stack  
6 that I started with.

7 If I go to environmental, it will go through a  
8 whole list of different datasets and gives you  
9 background information. This one is what's the current  
10 protected status? These are restricted protected lands  
11 within that buffered distance.

12 The majority of it is unassigned, which means  
13 that it's not restricted. It's almost -- it's 69  
14 percent of the area. If I hover over the bar, it gives  
15 me the actual numbers of acres, if I choose.

16 If I wanted to look at other pieces of  
17 information, let's say I'm interested in its intactness.  
18 And this is a model that we've developed, so it's not  
19 just a single dataset. I can show you the results of  
20 the model by clicking the little flag. You'll see it  
21 coming up and here's the legend.

22 Very high integrity or intactness would be dark  
23 green. To very low intactness is dark blue. It  
24 defaults with a certain level of transparency to kind of  
25 help you begin to see relationships for things.

1           And if I want to know, well, what is this  
2 dataset and can I get it? So, for the majority of the  
3 datasets in this type of application there's another  
4 icon here, and this is you view it in Data Basin. If I  
5 click that, it brings it up in Data Basin.

6           Well, now we're in a different application  
7 altogether, but it has all the information about this  
8 dataset. How it was built, what went into it, there's  
9 all these attachments with explanations, and you can  
10 download it onto your desktop, if you want.

11           So, the idea, again, is to be highly transparent  
12 in what we're doing, especially with the datasets of  
13 this nature, which are very synthetic.

14           And if you click on "open" in "map", it will  
15 open up a database in "viewer", which is a different  
16 thing. But it actually allows you to really dive in  
17 deep and look under the hood, and you can look at a  
18 variety of how this model was built. There's a lot of  
19 exploration tools at your fingertips, so you're not left  
20 in the dark about, well, how did that come about? Why  
21 is that green? And why is that blue? Those features  
22 are all provided for you here.

23           If I want to see what this particular cell is,  
24 we were down here, and it's actually going to give you  
25 values for everything as you go, the numbers and so on.

1           Each one of these little boxes is actually its  
2 own map. And so, if I wanted to look at kind of the  
3 intermediate products for this thing like -- I'll give  
4 you an example. This is "linear development." It's  
5 going to actually render a new map. It's spinning up,  
6 now, and it will display it on the screen.

7           So, if you wanted to look at the ingredients, as  
8 they are assembled, you have it at your fingertips now.  
9 So, there shouldn't be any black box nature to any of  
10 this stuff.

11           So, that's how that's done. And again, you can  
12 download it, read about it, whatever you want to do.  
13 So, this is Data Basin.

14           Now, I'm going to go back. I'm going to leave  
15 that and I'm going to go back to the Reporter, because  
16 here it is again. Okay. And you can continue to go  
17 through a variety of -- is there any designated critical  
18 habitat? Here's a list of all of the California CNDDB  
19 data. This is the heritage data that you encounter with  
20 this buffer distance.

21           We have information on important bird areas. I  
22 showed you that earlier. Let's look at some of that.  
23 Here's important bird areas. There's none in the area,  
24 great. Okay.

25           Since we're in DRECP, you have other datasets

1 that you can explore. Here's "conservation value" and  
2 here's the accompanying map with it. Oh, it's an area  
3 that's kind of mixed bag and here's histograms for it.  
4 Most of it's moderately high conservation value in this  
5 particular corridor. Well, what might be there would be  
6 another logical question. What species might I  
7 encounter that I'd need to plan for?

8 Well, if you look at the species that are  
9 covered in DRECP, these are the ones you may encounter.  
10 Desert Tortoise, Mojave Fringe-Toed Lizard, and you can  
11 read the rest. And it gives you a full listing and also  
12 gives you the area based on their modeled distribution  
13 data.

14 So, it's all at your fingertips to help various  
15 -- to help you make whatever decisions you need to make.

16 Now, one of the other features I wanted to show  
17 you here -- I'm going to turn this off so it's a little  
18 easier to see. And I'm going to zoom in. And let's say  
19 this is all -- I'm trying to show a functionality. I'm  
20 not saying this is what you would naturally do.

21 So, let's say, you know, I want to modify this.  
22 Maybe I want a different version of this. You'd go back  
23 to "define areas" and you hit an "edit" button. And you  
24 say, okay, I don't want it to go that route, I want it  
25 to go this way, instead. I want it to come up to here

1 and I want to bypass that. And you say, okay, I want to  
2 save that. I've changed my route. I can run it again  
3 and it's going to come through and it's going to give  
4 you, okay, here are the species you're going to see.  
5 It's going to give you all new results for that new  
6 shape that you just described.

7           And once this is fully wired, you'll be able to  
8 save that into your personal workspace and say, oh, here  
9 was option A, here was option B, here is option C, and  
10 then you can keep a record.

11           Now, when you're through with whatever you're  
12 examining and you say, okay, now I want to keep this and  
13 I want to take it to another -- either put it into a  
14 report, or I want to examine some of the statistical  
15 data in Excel. I want to hit the "download" button.  
16 So, I go down here and I hit "download" and it gives you  
17 two choices.

18           I can go to an Excel spreadsheet or I can go to  
19 a PDF. I'll just click the "PDF" and let it spin up.  
20 It's going to present it on one of my other monitors, so  
21 I'll drag it across when it's done. It's done.

22           Okay, so I'm going to drag across what I'm  
23 seeing on my other screen, so you can see mine. So,  
24 hang on, I'm working on it. It's being -- there we go.  
25 Can you see that okay?

1           So, I'm going to go to single-page, just to give  
2 you a look. So, it gives you a sample map of where you  
3 were. Whoops, I went too fast. Sorry, guys. I'm going  
4 to do page down, instead.

5           And this is not fully developed, yet, because we  
6 want to add a lot more explanatory text. So, what am I  
7 looking at and what does "GAP status one" mean?

8           Well, in this case it's described. But in some  
9 of the other pages you'll see it's kind of missing some  
10 of that important summary information.

11          So, here's the summary for that. Here's  
12 intactness. Here's designated critical habitat, how  
13 many acres and which species you encountered. So,  
14 there's lots of results that are just spun up for you on  
15 a variety of topics.

16          Here's a list of the potential species in their  
17 areas. You get the idea.

18          So, if you went the other route, if I said, no,  
19 I want it in Excel, it's not going to look the same, but  
20 it's going to be the actual values. I'm going to click  
21 this on and I'll drag it across so you can see it. It's  
22 going to be handled in a series of tabs.

23          So, the first tab was that sample map, protected  
24 areas, numbers. Now, you'll see it all in an Excel type  
25 format. You won't see the graphical elements, but

1 you'll see the actual numbers behind it. And then you  
2 can do whatever you want to do with it to satisfy  
3 whatever reporting you'd like to do. Okay.

4           So, let me go ahead and let me show you a couple  
5 more things and then I'll stop and take questions. Oh,  
6 I know one thing I wanted to share with you. So, let me  
7 zoom out. Sorry, hopefully, I won't make you seasick  
8 when I do this. I'm going to turn these two things off.

9           And let's say I want to upload a dataset instead  
10 of drawing one. I have a shape file. I've been working  
11 in this area and I want to evaluate what I've been  
12 working on. So, you go back to "defining areas" and you  
13 click on "add a shape file". And it's going to come  
14 back with a warning and saying, okay, you're now going  
15 to do something different, I'm going to throw out what  
16 you were working on.

17           Now, if you had saved the things you had just  
18 drawn you don't care, right, because it's sitting in our  
19 folder and you can just call it back up later, if you'd  
20 like. But right now I'm just going to get rid of it and  
21 I'm going to say, okay. And it's going to say, okay,  
22 upload your shape file.

23           So, what you're not going to see -- I'm going to  
24 show it to you and then I'm going to pull it away. Let  
25 me do it this way, maybe this will work. Let me try



1 this.

2           Okay, so I pulled up another panel on my  
3 computer and you can see a couple of shape files. I'm  
4 going to grab the actual zipped file. I'm just going to  
5 drop it and go, and I'm done.

6           So, now I have -- in this particular file was  
7 some Inyo County planning areas. And now, I can select  
8 one or more of these to evaluate. Let's say I want this  
9 one, and I'm just picking some at random. This one, and  
10 this one, and this one and I'm going to run it again.

11           And so, this will show a couple things. It's  
12 actually evaluating all of them and you're going to get  
13 separate results for each one of them. So, this comes  
14 in handy when you want to compare places. I have  
15 several candidates that I'd like to look at and see what  
16 the results might be.

17           Now, which ones of these; do any of these hit?  
18 I think they're all out of designated. Great, no  
19 designated critical habitat was hit. What about species  
20 stack? Okay, which species might they hit? And it  
21 gives you a listing for all the ones of each of those  
22 shapes and then you can do some planning with it.

23           Oh, this one is a lot lighter. In fact, I think  
24 one doesn't have much in it. Oh, shape A, which is up  
25 here, didn't have any compared to some of these others

1 that had more. That kind of thing, it allows you that  
2 level.

3 And again, if I do the download, this might take  
4 an extra moment or two because there's more being  
5 packaged up. It's done, so let me drag it across again.  
6 Hopefully, I can do this right.

7 Here's the PDF, again, version. It shows you  
8 the four, labels them. But what I wanted to show you is  
9 so, now, you're looking at them together and it makes it  
10 easier for you to do your comparison. This is the land  
11 management status for each one of those. They're not  
12 all the same, right?

13 Here's what the intactness looks like, the  
14 profiles for each of those sites.

15 And then based on those, you can make whatever  
16 decisions need to be made, where you do any site  
17 planning, or more detailed planning, or whatever. So,  
18 that's the idea there.

19 One last thing I wanted to mention and I think  
20 I'm done and then I'll take questions. Is that for some  
21 of these you're going to notice that there may be two  
22 versions. And let me show you an example of what I  
23 mean.

24 So, here's essential connectivity maps for the  
25 State. We also have data on connectivity linkages and

1 conditions within DRECP, in this case. This is a  
2 stepped-down version of the other one, so you just need  
3 to be aware. And all of this will be fully reported, so  
4 it's clear, but there will be cases sometimes where you  
5 see, well, wait a minute, which one do I use? I have a  
6 statewide version and then I have a regional version.

7           Typically, it's best to go with the regional  
8 versions because it's more refined. But you have both  
9 at your disposal and you can use whichever one you  
10 choose.

11           Scott, did I forget anything or are we good?

12           MR. FLINT: No, Jim, I think that's good for  
13 now. Just one thing to point out on that, the statewide  
14 versions are in there for -- you know, there might be  
15 some areas that aren't immediately going to have a step-  
16 down connectivity assessment, for instance, so the  
17 statewide dataset's there so you can still assess  
18 habitat connectivity, but you'll be doing it, again, at  
19 a higher level.

20           But it gives you something to look at related to  
21 that important habitat element.

22           MR. STRITTHOLT: Right. Questions then? I'm  
23 going to hit a refresh and just reload it from scratch  
24 and start with this is what you get when you start the  
25 applications.

1           MR. FLINT: And so, this is Scott Flint. I just  
2 want to preface questions by saying -- so, we're  
3 probably between an alpha and beta version.

4           MR. STRITTHOLT: Yeah, that's right, that's  
5 where we are.

6           MR. FLINT: A lot of significant work has gone  
7 into here, but as Jim pointed out, some of the areas  
8 need more work.

9           We will be adding datasets over time to those  
10 other areas that I'd shown on the slide.

11           But as far as the Report Writer tool, itself, I  
12 think we want some help with how we display the results  
13 on the left panel and what's most useful for people, and  
14 how the report formats and comes out, and what's most  
15 useful for people.

16           And a lot of the attributing and explanation is  
17 missing, as Jim said earlier. So, that's a lot of work  
18 that we want to do together, I think, in this process.

19           And then the CEC will be doing the work to let  
20 folks evaluate on how -- in our Case Study, how well  
21 this information provides the high level planning look  
22 for some specific areas that were identified in RETI  
23 2.0.

24           So, those are the things that we would want to  
25 focus on, I think, really, focus on going forward. And

1 I think part of that is also evaluating do we have the  
2 right set of the common data elements, at the right  
3 resolution, or what should be our next steps on that?

4 So, I think those are three primary things we  
5 want to do going forward as a group.

6 So, I just wanted to throw that out there before  
7 people started asking questions about the Environmental  
8 Land Use Report or tool that Jim just showed.

9 So, now, I'll go to Misa and see if we have  
10 questions on the WebEx?

11 MS. MILLIRON: We have one on the WebEx from  
12 Russ. You're unmuted.

13 MR. TEAL: Hi, this is Russ Teal, again. Is the  
14 GIS data used in Data Basin available for other GIS  
15 projects?

16 MR. STRITTHOLT: If I heard the question, it got  
17 a little faint towards the end more, the question was,  
18 is the dataset in Data Basin available to be used in  
19 other systems?

20 MR. TEAL: Yes.

21 MR. STRITTHOLT: Okay, yes. So, in fact, let me  
22 go back to Data Basin. So, here's Data Basin and here's  
23 the intactness layer, for example. You would just  
24 download our GIS layer package or zip archive and you'd  
25 put it on your desktop, if that's what you'd like to do.

1 MR. TEAL: Great, thank you.

2 MR. STRITTHOLT: Uh-huh. Other questions?

3 MS. MILLIRON: I'm not seeing other hands raised  
4 online. I just wanted to remind folks that we do have a  
5 handout of all the datasets and links to where you can  
6 find most of them, posted online and outside on the  
7 table. So, if you want to dive more deeply into these  
8 datasets, that's available.

9 And anybody else in the room? It looks like we  
10 have one question in the room. Please introduce  
11 yourself and come to the podium.

12 MS. LESLIE: Can you hear me? It seems like  
13 it's working.

14 MR. STRITTHOLT: Yep.

15 MS. LESLIE: This is Emily Leslie with Defenders  
16 of Wildlife.

17 MR. STRITTHOLT: Oh, hi, Emily.

18 MS. LESLIE: Hi. This is really impressive work  
19 here. Thank you for presenting.

20 My question was, is the -- so, the datasets that  
21 are there, that get used in the construction of the  
22 report, are they modifiable at all? Like, could a user  
23 add another dataset to be included in the report?

24 MR. STRITTHOLT: Ah, a very good question.  
25 Right now, this next version, no. Is it possible in the

1 future? Yes. But we're not there, yet.

2           And there's got to be -- and this is where it  
3 gets a little tricky, right? If you want this to be a  
4 standardized way of reviewing things, so that has to  
5 have that level of integrity, but we also are  
6 introducing the feature of log-ins and your private  
7 workspace, and that adds a whole other level of  
8 potential utility. Where you would create your log-in  
9 and then you would add two of your own datasets, but  
10 they'd be in your directory and not -- you wouldn't be  
11 mucking up the standardized version, in other words.  
12 That's down the road. It is a doable thing.

13 Technically it's a doable thing.

14           MS. LESLIE: Okay, it sounds good. Thank you.

15           MR. STRITTHOLT: Uh-huh.

16           MR. FLINT: And there are other ways to think  
17 about doing that, too. If I'm right, Jim, the other way  
18 that could be built is the way that the Climate Console  
19 works, where you can actually generate your picture and  
20 then take it into Data Basin and add more datasets and  
21 examine it there, right?

22           MR. STRITTHOLT: Yeah. Well, the basic  
23 functionality that we're displaying, which is really  
24 managing a variety, one or more shapes, and being able  
25 to buffer them and assessing the intersections, that's

1 really the operation that's taking place.

2 We have that as a premium tool in Data Basin,  
3 now. So, you could create anything you want and run it  
4 against the stack.

5 What you won't get is you won't get a kind of a  
6 standardized way of reporting it out because we're  
7 trying to keep it really simple, so users don't have to  
8 invest so much energy into operating it.

9 So, to go back to the original question, we  
10 already have that feature in Data Basin, and it's a  
11 premium feature that people can draw stuff. It's not as  
12 straight forward as this. This is really boiling it  
13 down to make it super easy for folks to use.

14 MR. FLINT: Well, I don't see any more questions  
15 here in the room, so we'll move on to our next  
16 presentation on the agenda. Thank you, Jim.

17 MR. STRITTHOLT: You betcha. Thanks, guys.

18 MR. FLINT: So, next we have a demonstration of  
19 the Section 386 Energy Corridor Mapping Tool. The BLM  
20 has a tool that they use for their work in the 368  
21 Energy Corridors Program.

22 So, a couple of long-term things to think about,  
23 one of our charges in RETI was we were working on this  
24 tool for California, but how do we integrate it west  
25 wide? So, that is something further down the road on



1 our list of things to do, once we have the thing up and  
2 running here. And we do participate routinely in the  
3 WECC Environmental Group and we'll be doing that more  
4 regularly going forward.

5 And where they're reconstituting all of those  
6 committees and we do have a representative there. So,  
7 the opportunity's there and the timing will be right  
8 soon to start that.

9 I think the same thing working with our partners  
10 at BLM about integrating more tools and data will  
11 probably be in the future, also.

12 With that, I'll turn it over to Georgeann. I  
13 think you were going to lead off the presentation, is  
14 that correct?

15 MS. SMALE: Thanks. Can you hear me?

16 MR. FLINT: Yes, you sound good.

17 MS. SMALE: Thanks. And Emily Zvolanek, with  
18 Argonne, actually has the slides, so we want her to  
19 share her screen. And we just have a couple  
20 introductory slides and then we'll do a demo.

21 So, I believe it's just going to be Emily doing  
22 the majority of the demoing of the tool. Myself, I'm  
23 Georgeann Smale. I'm in the Washington Office of the  
24 BLM. And I'm not sure if I see Scott Whitesides. He's  
25 the Project Manager for the Section 368 Regional

1 Reviews. But I'll run through this introduction.

2 Emily, can you go ahead and advance? So, our  
3 tool is available online. We just have the web link on  
4 the next slide. There you go. And that's how you get  
5 to the 368 Mapper. And if you forget where it is, just  
6 Google Section 368 or Google West-Wide Corridor, either  
7 one, and the first site that comes up is the Argonne  
8 website that hosts the Mapper.

9 Just to catch everyone else, make sure  
10 everyone's up to speed and oriented to the Section 368  
11 Corridors, I just have one slide, the next slide with a  
12 little bit of background.

13 I believe this audience probably is familiar  
14 with these corridors, but for a very brief overview --  
15 oh, this is interesting.

16 The Section 368 Corridors were -- Congress  
17 directed the agencies to create these energy corridors  
18 under the 2005 Energy Policy Act. And we did do a  
19 programmatic Environmental Impact Statement.

20 And in 2009, the BLM and the U.S. Forest Service  
21 designated corridors on their respective lands. BLM has  
22 about 5,000 miles of energy corridors and Forest Service  
23 nearly 1,000 miles. There are 131 corridors total.  
24 Their width is variable. In California, they are two  
25 miles, generally, but elsewhere they're generally about

1 1,500 feet wide.

2           The corridors are the preferred, but not  
3 mandated, location for future energy projects. And that  
4 would be oil, and gas, and hydrogen pipelines, and  
5 electric transmission and distribution.

6           So, they were designated in 2009, but the  
7 agencies were sued over that designation and we reached  
8 a settlement agreement in 2012. And under the terms of  
9 the settlement agreement we are periodically reviewing  
10 the corridors on a regional basis.

11           So, those periodic regional reviews, our  
12 regional reviews started last year. And we broke the 11  
13 Western States up into different regions. And we are  
14 pretty much completed with the first regional review.

15           And just to update anyone on the phone who may  
16 have been part of that or commented, we did actually  
17 collaborate with RETI and did get some of our corridor  
18 information into the RETI 2.0 Report and some of the  
19 RETI 2.0 Report into our Region 1 Report.

20           That report is in draft right now. It's going  
21 through a final review within BLM. And then, we're  
22 going to release that draft report for a 30-day comment.

23           And the time frame for that release is hopefully  
24 late summer, early fall. And that's the update I have  
25 for that regional review.

1           We'll show you the regions. This slide will end  
2 and we'll go right into the demo and we'll show the  
3 regions I'm talking about, Region 1.

4           And then, the next regional reviews are starting  
5 internally. And we are looking to consolidate some of  
6 the regions. And we just got the word that we are going  
7 to move forward with this. So, we're planning on doing  
8 Region 2 and Region 3 review combined. And we'll be  
9 starting internally, in September, and we'll have a  
10 project schedule up sometime in September, up on the  
11 website for that.

12           So, that's the summary of the corridors and the  
13 regional reviews. And with that, I'm going to turn it  
14 over to Emily.

15           MS. ZVOLANEK: Thank you, Georgeann. Yes, as  
16 Georgeann said, my name is Emily Zvolanek and I'm  
17 working -- or, I'm at Argonne, working with BLM on this  
18 project. And so, you can either access the Mapper via  
19 the link that is in the PowerPoint slide, that everybody  
20 should have access to on the webinar's website. Or, as  
21 Georgeann said, you can Google the Energy Corridor  
22 Information Center. And if you do that, this is the  
23 home page you'll see.

24           And if you go to this "maps and data" tab,  
25 you'll be able to launch the Mapper directly.

1           So, the first time that you launch the Mapper,  
2 you will -- the Flash screen will show up and you have  
3 the option to either register or to continue without  
4 registering and logging into the site.

5           And the main difference between the two is being  
6 able to view the infrastructure data that's proprietary,  
7 that we have a contract with.

8           So, if you create a log-in and register, you'll  
9 be able to see the transmission line substations and  
10 pipelines that we've contracted with Platts to display  
11 in the Web Mapper.

12           If you don't do that, you'll still be able to  
13 see every other dataset we have in the Mapper. You  
14 know, environmental data, non-Platts infrastructure  
15 data, like the EIA power plant data. You'll still be  
16 able to see land management information and other  
17 compatible and incompatible land uses. So, there's  
18 still a lot without registering.

19           But I want to show you the infrastructure data,  
20 so I'm going to log in. It's a very simple registration  
21 process. And then once you log in, this is the default  
22 page.

23           As Georgeann mentioned, there are six regions.  
24 Did you want to say anything else about the regions,  
25 Georgeann?

1 MS. SMALE: Well, they're in blue. They're the  
2 regions -- and, Emily, if you can zoom in a little bit?  
3 The southwest, the desert southwest is Region 1, so  
4 that's the regional review that we're getting close to  
5 completing.

6 Regions 2 and 3 are -- I'm referring to them as  
7 the Four Corners States, plus a bit of Nevada. So, you  
8 can barely see the headers there. But Region 2 is the  
9 Mexico, part of Colorado, et cetera. And Region 3 is  
10 the other half of Colorado, Utah, a little bit of  
11 Nevada. So, that's the next regional review we're going  
12 to do. And that's it, thanks.

13 MS. ZVOLANEK: Okay, thank you. And so, one of  
14 the benefits of this tool is that it's available to all  
15 stakeholders, and one of the reasons for that is that on  
16 the website there is an ability to comment on specific  
17 corridors based on their location and their milepost  
18 location.

19 And so, stakeholders can use this tool to focus  
20 their -- if they have a concern, to help them focus and  
21 pare down the location of their concern, and then input  
22 that into the comment form.

23 But to get back to the Mapping Tool, so we have  
24 our basic, you know, zoom in and zoom out pan tools at  
25 the top here. And then, but one thing that is useful is

1 we have bookmarks for all of the corridors. So, if you  
2 are interested in a specific corridor, for example -- or  
3 a specific region, it will take you to the general area  
4 of that region.

5 If you are interested in a specific corridor,  
6 you can also -- you know, instead of having to zoom  
7 around, yourself, and try to find it, it will -- the  
8 bookmark will take you exactly to the full extent of the  
9 corridor that you're looking for.

10 On the left here we have the table of contents  
11 that has all of the data sources. You know, you can  
12 either -- it's quite -- we've tried to make it quite  
13 comprehensive based on inputs from the various BLM and  
14 Forest Service field offices. So, there's a lot of data  
15 in here.

16 So, you can either go through and look at it on  
17 your own or, if there's something specific that you are  
18 looking for, you can type it into this search box.

19 So, you know, for example National -- I can  
20 spell it -- you know, if you're looking for National  
21 Trails, just type in "national" and it will appear, the  
22 historic trails, study trails and scenic trails.

23 But it includes, as I mentioned, a lot of data.  
24 But it's a lot of data that's focused on siting factors  
25 related to energy transmission. So if, for example,

1 under "ecological resource areas" we have Desert  
2 Tortoise critical habitat and we have -- I know sage  
3 grouse is not really an issue in Southern California,  
4 but in other states that are in the Section 368 area,  
5 the sage grouse data. We've got the Mohave Ground  
6 Squirrel.

7           We have a significant number of specially-  
8 designated areas, like areas of critical environmental  
9 concern, the various trails, national monuments, wild  
10 and scenic rivers, wilderness areas, wilderness study  
11 areas. We've also included the protected areas  
12 database.

13           And so another thing you'll notice next to the  
14 title of the data, there is these little buttons. And  
15 if you click on the little book button, fully populated  
16 metadata will appear in a separate tab, which will give  
17 you, you know, at least the source of the data and how  
18 old it is.

19           Most of the data in the Mapper is data that  
20 we've not necessarily compiled at Argonne, but we've  
21 gotten from BLM field offices and other people who  
22 specialize in a specific dataset, like the trails. And  
23 so, we've got the metadata so that other people who  
24 visit the site can tell where the data came from.

25           You may have noticed that when I checked



1 something in the table of contents that they all showed  
2 up down here in the layers box. Things might not  
3 necessarily pop up in the order that you want them to,  
4 so you can actually move things and adjust things, if  
5 you want to.

6 Also, aside from moving layers, you can adjust  
7 the transparency. Most things are defaulted to 50  
8 percent opacity, so you can make them more or less  
9 transparent based on what's useful for you.

10 MS. SMALE: And, Emily, this is Georgeann.  
11 Again, this is primarily to help the stakeholders  
12 comment during the regional reviews. And this is  
13 useful, when you zoom in sometimes layers can interfere.  
14 Can you zoom in a little closer and show some of the  
15 mileposts?

16 MS. ZVOLANEK: Yes. And so, yes, because this  
17 corridor is so long the mileposts show up at the full  
18 extent. But each corridor has mileposts associated with  
19 it that run the extent of the corridors.

20 So, if a stakeholder is looking to identify an  
21 issue, you know, on the comment form they can say  
22 there's specific issues between mileposts 94 and 99, for  
23 example, which makes it easier for the people working on  
24 the reviews to identify the area that someone has an  
25 issue with or a potential issue with.

1           So, one thing that I want to show you, or  
2 there's several things. So, defaulted is a street-base  
3 map. We also have imagery and topo-base maps, and then  
4 and open street map base maps, which is useful if you  
5 want to print from "print a map" from the Mapper.  
6 Because of some copyright or legal reasons, the only  
7 base map that will show up is open street map base map,  
8 if you want to export your map as a PDF. If you're just  
9 looking at the Mapper, though, you can use any of them.

10           I'm going to zoom in on the Genesis Solar Energy  
11 Project just to show you some more examples of the  
12 functionality of the Mapper. I'm going to turn on the  
13 transmission data, if I can find it. Here we go.

14           So, one of the things that I think is useful  
15 about our tool is the info box, in that you can get a  
16 lot of additional information, aside from just where  
17 something is physically located, by clicking on the info  
18 tool and then clicking on a feature in the map.

19           So, for example, after I clicked on the  
20 transmission line we can see, you know, who owns it, or  
21 who owns the substation, who owns the transmission line,  
22 the voltage, whether it's operational or not and also,  
23 most importantly, the accuracy. Because if you're not  
24 familiar with the Platts transmission data, the accuracy  
25 can vary, but they always have a rating.

1           And if we zoom in a little bit more, you can  
2 actually see how in this case the transmission line, you  
3 can even see it on the aerial imagery. And you can see  
4 how it connects right into the power station.

5           And you could also get similar, whatever  
6 information is stored in the GIS data, you can get that  
7 from any layer. So, from the power plant layer, as  
8 well, we see that the Genesis Solar Project, the total  
9 megawatt generation.

10           I'm going to zoom out a little bit just to get  
11 the corridor back into the Mapper, because another  
12 useful feature of the Mapper is this view abstract tool.  
13 Now, once you've clicked on this button and you click up  
14 the corridor, and a separate tab will pop up the  
15 abstract that is related to each corridor.

16           And these corridor abstracts were developed to  
17 provide an initial analysis of the Section 368 Energy  
18 Corridors. And they're designed to help determine  
19 whether the energy corridors are achieving their  
20 intended purpose. The abstracts are intended to assist  
21 the Federal land managers and stakeholders in  
22 identifying specific environmental concerns, and other  
23 challenges such as pinch points, for each Section 368  
24 Energy Corridor, and provide a condensed record for  
25 each.

1           So, right now, we have the Region 1 abstracts up  
2 and these are the drafts that were publicly released for  
3 the initial comment review period. And updated  
4 abstracts will be released when the Region 1 report is -  
5 - will be added after the Region 1 report is released.

6           But you'll see that if you scroll through an  
7 abstract, there is additional maps at each abstract,  
8 along with a lot of information detailing, basically,  
9 everything going on in and within the near vicinity of  
10 these corridors.

11           And since we have a close up view of the  
12 mileposts, again this is where the -- if I go to the  
13 "getting involved" page and the online input form. This  
14 is the comment form. And so, this is where knowing the  
15 mileposts really comes in handy. You can indicate if  
16 you have a specific topic relating to your comments.  
17 And in the input section you can say, you know, where  
18 exactly, what milepost is your area of concern located.

19           And you can see, you can get them from the  
20 Mapper.

21           And so, very super quickly I wanted to show you  
22 just that they exist, three other tools that you'll see  
23 look very similar, that we've also created to help  
24 assist the BLM with their planning or potential planning  
25 purposes.

1           So, we've got the Solar Energy Environmental  
2 Mapper that was created for the Solar PEIS that was the  
3 ROD came out in 2012.

4           We also have a Wind Energy Mapper that was  
5 worked on for the BLM, for the same region as the WECC  
6 area, the 11 Western States. Looking at things that  
7 could hinder wind energy development, and we have the  
8 data in here.

9           And both these have detailed reporting functions  
10 that Section 368 Mapper currently does not have.

11           And then there's also the Energy Zones Mapping  
12 Tool that has a repository of over 250 layers pertaining  
13 to energy development for all types of energy,  
14 renewable, standard, coal, nuclear, hydro, all of the  
15 above. And has some pretty interesting modeling  
16 capabilities.

17           But that is all that I have and all I wanted to  
18 show you.

19           Georgeann, do you have anything else to add?

20           MS. SMALE: No, that was good, thank you. I  
21 think we're ready for questions.

22           Scott, can you -- Scott or Misa, can you help us  
23 out and if we have any?

24           MR. FLINT: Yeah, we'll do that. Thank you,  
25 Georgeann and Katie. Oh, sorry, Emily.

1 MS. ZVOLANEK: That's okay.

2 MR. FLINT: So, any questions for the BLM or our  
3 Argonne folks?

4 Misa's checking the WebEx.

5 MS. MILLIRON: And I'm not seeing any right now,  
6 no raised hands and no questions in the chat box. But  
7 we do have one in the room, so please come forward.

8 MS. LESLIE: Hi, this is Emily Leslie with  
9 Defenders, again.

10 I wanted to ask -- first of all, thank you, this  
11 is really several very useful tools here. Thank you for  
12 all your hard work.

13 And then I wanted to ask is the transmission  
14 data that you're showing here, of existing  
15 infrastructure, downloadable or shareable across  
16 platforms? Like, could we look at this data in Data  
17 Basin?

18 MS. SMALE: No. And that's because we have to  
19 contract with the companies in order for us to even  
20 access it. And so, that is pretty much the only thing  
21 in the Mapper that we are not allowed to distribute to  
22 other people.

23 MS. LESLIE: Right, that's what I was guessing  
24 but just checking because it's something that people  
25 always want. Okay, thanks.

1 MR. FLINT: I think that was it for questions.

2 So, thank you.

3 MS. ZVOLANEK: Great. Well, thank you.

4 MR. FLINT: Thank you very much for that  
5 presentation, very nice. Now, I've got a lot more stuff  
6 to play with this afternoon unless it gets so hot the  
7 electricity goes out. Thank you.

8 So, back to our agenda, just a couple things,  
9 before we move to public comment, to close out the  
10 discussion.

11 One thing that I forgot to mention and I want to  
12 go back and, if you have your slides there, it's not  
13 important, but if you want to look at it later, now, on  
14 the Case Study approach we -- I talked about multiple  
15 areas in the RETI Report, and on the slide it lists a  
16 whole bunch of areas. We don't intend to do all of  
17 those areas in our Case Study. We're going to do some  
18 preliminary work and then pick a couple out.

19 So, we might look in a couple of areas and a  
20 couple of those, and maybe a couple of areas in the  
21 Desert Constraint Area, and maybe somewhere else, but  
22 we're not going to look at all of those areas. I just  
23 wanted to let people know that.

24 The RETI Report does prioritize where they think  
25 action would be needed first, so that would be part of

1 the input into how we select. Plus, information we get  
2 while we update information about transmission projects.

3 So, I forgot to mention that and I just wanted  
4 to hit that one.

5 So then, just one last reminder, a little bit  
6 about next steps and the schedule. So, we talked about  
7 the written comments pertaining to this workshop, August  
8 16th. And please go see the revised notice that has the  
9 correct instructions for filing for that.

10 Just in general, where do we go next? So, as I  
11 said earlier, we're between alpha and beta so we've got  
12 some work to do. We want to do that with this group as  
13 we go forward.

14 Many of the datasets are available now. They're  
15 accessible through the different gateways, for the  
16 different projects that are listed in the slides that we  
17 have led or participated in for energy planning.

18 And we will be consolidating the access to those  
19 soon, so it will be a little easier to access. But  
20 folks can look at datasets right now. If you want to  
21 wrap your hands around them and really understand them,  
22 that's available now.

23 As far as the Report Writer, itself, when it's  
24 available we will convene a webinar, so we'll do it by  
25 webinar. We'll walk through it again, and the features,



1 and what's changed, and talk to folks about how they can  
2 access it. Because we want to work with people and give  
3 them a chance to have hands on to get some good feedback  
4 going forward in the process. So, that's probably in  
5 the October time frame, this year, that that might be  
6 available to start that. Maybe a little earlier, but  
7 let's just think about October time frame.

8           And then, we want to work collaboratively  
9 through the first quarter of 2018 on completing the  
10 elements of the datasets and the tool, so that it can be  
11 available with its full functionality in March or so, of  
12 2018.

13           So, that's kind of where we go next with that.  
14 It's nice not to be in a big hurry to do something. And  
15 this year I don't anticipate November or December  
16 workshops that collide with the holidays, hopefully.  
17 That will be the first time in six years, so that's  
18 good. But I'm sure some will come up, but it won't be  
19 this.

20           So, that's a rough overview of a map of the  
21 timeline going forward, so I just wanted to get that in  
22 there.

23           So, now, we'll open it up for -- so, if anyone's  
24 made a comment, a comment already that's part of the  
25 public record. But if you want to make a specific

1 comment at this time, during the public comment period,  
2 we'll open that up and we'll go -- let's go first in the  
3 room, this time.

4           So, anyone in the room with a public comment,  
5 please come to the podium and identify yourself. And we  
6 do have at least one so --

7           MS. KELLY: Good afternoon. Kate Kelly with  
8 Defenders of Wildlife. This is not so much a comment,  
9 as a thank you, as the tool is starting to roll out it's  
10 really exciting to see and really appreciate the hard  
11 work that's gone into it. I think it's going to have  
12 great utility, not only for renewable energy planning,  
13 but for land use planning at the landscape level, and  
14 the local level statewide, and particularly for local  
15 jurisdictions that may not have the bandwidth to develop  
16 such a tool.

17           So, I'm really encouraged to see it and I'm  
18 thankful for the work that you guys have been doing on  
19 it.

20           MR. FLINT: Thank you, Kate.

21           No other hands in the room, so Misa's checking  
22 the WebEx.

23           MS. MILLIRON: I've got a public comment from  
24 Steve Mills. Go ahead.

25           MR. MILLS: Good afternoon. Can everybody hear

1 me?

2 MR. FLINT: Yes.

3 MR. MILLS: Okay, good. Again, my name is Steve  
4 Mills. I've noted there's a lot of enthusiasm today for  
5 what's being called landscape level energy planning and  
6 geospatial data platforms, and the like.

7 But at this point the approach is just theory,  
8 it's never actually been field tested. I guess one  
9 limited exception could be San Joaquin Valley, but  
10 that's an area where there's a super abundance of  
11 ruined, salt-contaminated land that can no longer be  
12 farmed, so it's not a real test as far as how best  
13 fit/least conflict would actually work in our deserts,  
14 or really anywhere else.

15 And, certainly, landscape-level planning has  
16 never been shown to work across the states. I think we  
17 have 105 million acres of micro-environments.

18 And if the DRECP and RETI 2.0 are any guide, a  
19 landscape level approach would most certainly not  
20 preserve or State's human and natural communities.

21 For starters, their declared purpose is to site  
22 a whole lot of new, big renewable energy projects. And  
23 their underlying ethos is that no matter what damage  
24 these projects would inflict on the local population and  
25 the local habitats, geographical winners and losers have

1 to be chosen anyway.

2           So, it's no surprise that they use a landscape  
3 level approach to zoom out from actual conditions on the  
4 ground and to rationalize away all the ecological and  
5 social damage that these big projects would create, as  
6 well as all the inconvenient environmental science about  
7 what's actually happening. For instance, to  
8 groundwater, sub-basins, wildlife connectivity corridors  
9 and habitats.

10           I wrote a letter to the CEC about all of this,  
11 date June 7, 2017. It's 19 pages. I just don't have  
12 time to go into that level of detail.

13           I note that Mr. Flint said today that landscape  
14 level planning is not intended to supplant site-specific  
15 detail. But the purpose of landscape level planning is  
16 to pre-anoint certain regions for utility scale and  
17 transmission development. In fact, that's really the  
18 whole premise behind the DRECP.

19           And so-called landscape level planning has not  
20 been transparent and collaborative, other than for large  
21 interest groups that are bent on imposing large-scale  
22 projects on local human and natural communities that  
23 will be the ones that will have to pay the ultimate  
24 price for them.

25           And I think worse yet, landscape level planning

1 doesn't even consider whether we even need a bunch of  
2 new renewables and transmission. The entire premise is  
3 that we do.

4 Well, we actually have an increasing glut of  
5 renewable energy in the State. According to a June 22,  
6 2017 *Los Angeles Times* article curtailments of solar and  
7 wind production for the first quarter of 2017 were more  
8 than double the same period last year. And existing  
9 power plants run on average at slightly less than one-  
10 third of capacity and are being retired early.

11 On top of that, California has even paid other  
12 states to take excess generation off our hands.

13 The Office of Ratepayer Advocates noted in their  
14 comments, in PUC Proceeding 15-02-020, that the IOUs are  
15 on track to meet their RPS requirements and won't have a  
16 procurement need until 2023.

17 I'd also note that the EPA recommended, in a  
18 February 23, 2015 letter, that the REAT agencies, which  
19 were the people behind the DRECP, reevaluate the amount  
20 of renewable energy that may need to be produced in the  
21 plan area.

22 So, neither the DRECP nor the RETI 2.0 directly  
23 study that issue at all and it doesn't look like that  
24 will be addressed in this process.

25 And my question is what kind of planning is

1 that?

2 We urge that the Commission not be taken in by  
3 all the hype around landscape level planning and that  
4 they take a fresh and realistic look at what it would  
5 really mean for the economic and environmental future of  
6 the State. Thank you for listening to my comment.

7 MR. FLINT: Thank you.

8 Misa, any other comments?

9 MS. MILLIRON: We have one more comment on the  
10 WebEx, John Zemanek. I hope I pronounced it right.  
11 Please introduce yourself?

12 MR. ZEMANEK: Yes, I'm John Zemenek. Your  
13 pronunciation was pretty darn close.

14 These tools are really fascinating, very  
15 sophisticated and I'm very impressed with them. But I  
16 did want to make kind of a landscape scale comment about  
17 IEPR's bias towards landscape scale analysis. IEPR's  
18 very big on the DRECP and RETI 2.0. I hear about those  
19 processes a lot in these WebExs.

20 I don't hear, however, any real critique of how  
21 well these landscape level methods do or don't work.  
22 And the fact is that landscape level, the DRECP came in  
23 for lots of criticism from many different informed  
24 sources. It was very zoomed out and it did not do a  
25 good job of comprehending what was happening on the

1 ground.

2           It also took a very unenlightened approach to  
3 where wildlife corridors actually are, and how they  
4 work, and how they hold up or don't hold up when they  
5 get fragmented.

6           RETI 2.0 doesn't provide any real siting or  
7 environmental analysis. It does assign a hypothetical  
8 mega-wattage of new utility scale projects in designated  
9 geographical areas. For instance, the 5,000 megawatts  
10 of new projects assumed for Victorville/Barstow TAFA.

11           It does all of this on a kind of a what if  
12 conceptual basis for study purposes, only. There's no  
13 real environmental vetting in RETI 2.0.

14           San Bernardino County has repeatedly gone on  
15 record with the Energy Commission and the other REAT  
16 agencies as strongly opposing siting decisions that tend  
17 to follow when landscape level planning determines the  
18 decision.

19           Zoomed out data and under-refined analysis,  
20 coupled with a blind spot as to how large projects can  
21 affect local communities lead to bad siting decisions.  
22 And I think that's a fundamental point that the County  
23 has been trying to make, with no apparent response from  
24 the Energy Commission or the other REAT agencies.

25           IEPR, in my opinion, should be identifying and

1 remedying these flaws, rather than replicating and  
2 building on them. Terrestrial intactness maps should be  
3 the jumping off points and not the end points.

4           The IEPR process is, in my opinion, infected  
5 with the assumption, which again doesn't seem to undergo  
6 any real examination that the price we have to pay to  
7 meet our energy goals is habitat destruction caused by  
8 utility scale renewable energy.

9           I wish these points would be considered and  
10 addressed in an open, non-defensive way. I just have  
11 had difficulty hearing any real response to these  
12 things. Instead, we hear more and more about various  
13 processes and tools that are part of the landscape level  
14 process, but not a lot of comment or real examination  
15 about the utility and perhaps the limits on use of  
16 landscape level analysis, itself.

17           Thank you. I appreciate you listening to my  
18 comments.

19           MR. FLINT: Thank you.

20           Is that it?

21           Okay, I think that's the end of the public  
22 comment and thank you, folks, for those comments.

23           With that, if there are no other questions, I  
24 think we are closed for the day. Thank you for taking  
25 your time to participate in the workshop. And we got



1 you out to travel home just at the hottest part of the  
2 day. Sorry about that. Thank you.

3 And keep checking the website for upcoming work  
4 and notices on the progress of the tool. Thank you.

5 (Thereupon, the Workshop was adjourned at  
6 2:59 p.m.)

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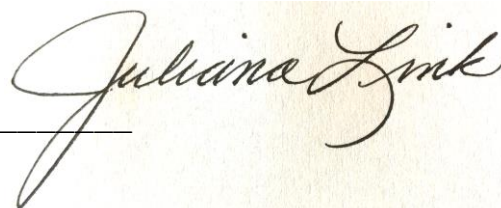
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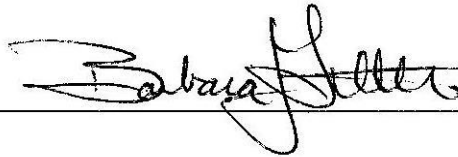
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